

Owner: Living Better A/S  
No.: MD-24010-EN  
Issued: 15-03-2024  
Valid to: 15-03-2029

3<sup>rd</sup> PARTY VERIFIED

**EPD**

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804





**Owner of declaration**

Living Better A/S  
Borupvej 1c  
DK-7330 Brande  
CVR: 32 31 72 86



LIVING BETTER

**Issued:**

15-03-2024

**Valid to:**

15-03-2029

**Basis of calculation**

This EPD is developed and verified in accordance with the European standard EN 15804+A2.

**Programme**

EPD Danmark  
[www.epddanmark.dk](http://www.epddanmark.dk)



- Industry EPD
- Product EPD

**Comparability**

EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

**Declared product(s)**

The EPD covers 4 specific product variations from Living Better A/S. The declared products are listed below as specific model types of doors.

- Terrace door, outward opening, wood/aluminium
- Terrace door, outward opening, pine wood
- Sliding door, with 1 moveable sash, wood/aluminium
- Sliding door, with 1 moveable sash, pine wood

Number of declared datasets/product variations: 4

**Validity**

This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

**Use**

The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

**Production site**

RODA, UAB, Gireles g. 20 in Kaiiadorys, Lithuania

**EPD type**

- Cradle-to-gate with modules C1-C4 and D
- Cradle-to-gate with options, modules C1-C4 and D
- Cradle-to-gate and module D
- Cradle-to-gate
- Cradle-to-gate with options

**Use of Guarantees of Origin**

- No certificates used
- Electricity covered by GoO
- Biogas covered by GoO

CEN standard EN 15804 serves as the core PCR

Independent verification of the declaration and data, according to EN ISO 14025

- internal
- external

**Declared/ functional unit**

1 m<sup>2</sup> of Terrace- and Sliding doors

Third party verifier:

David Althoff Palm, Dalemarken AB

**Year of production site data (A3)**

2022

Martha Katrine Sørensen  
EPD Danmark

**EPD version**

1

**Life cycle stages and modules (MND = module not declared)**

Product		Construction process			Use							End of life			Beyond the system boundary	
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X



# Product information

## Product description

This declaration describes a total of 4 products all within the segment doors from Living Better A/S. The doors are split into a terrace door and a sliding door. Additionally, each door is grouped in relation to the construction which is divided into 2 subgroups: Pine and pine/aluminum.

The terrace door chosen for this EPD includes 3-layer glass panes. The door functions as an outward opening door with a glass area of 69% of the total area. This EPD relates to 1 m<sup>2</sup> of terrace door with the standard dimensions 1.23m x 2.18m based on *DS/EN 17213:2020 for Windows and doors*.

The sliding door functions as a lift- and slide door with 1 moveable sash and includes a 3-layer glass pane. Additionally, the glass area makes up 74% of the total door area. This EPD relates to 1 m<sup>2</sup> of sliding door with the standard dimensions 3m x 2.18m based on *DS/EN 17213:2020 for Windows and doors*.

The main product components are shown in the table below.

Material	Weight-% of declared product			
	Terrace door (W/A)	Terrace door (P)	Sliding door (W/A)	Sliding door (P)
Aluminium	8.5	1.2	6.8	1.1
Adhesive	2.8	2.4	3.0	3.2
Glass	49.3	53.0	54.4	57.6
Plastic	1.2	0.9	1.6	1.0
Rubber	0.1	0.1	0.1	0.1
Stainless steel	0.0	0.4	0.0	0.4
Steel	6.9	7.4	0.9	0.8
Wood	31.4	34.6	33.2	35.8
Sum	100	100	100	100

## Product packaging:

The composition of the sales- and transport packaging of the product is shown in the table below.

Material	Weight of packaging material (kg)	Weight-% of packaging
Pallet	2.5-3.6	99.2
PVC film	0.02-0.03	0.8
Total	2.5-3.6	100

## Representativity

This declaration, including data collection and the modeled foreground system and results, represents the production of 4 variations of energy doors varying from terrace door to sliding doors using specific material composition based on set dimensions of 1.23m x 2.18m and 3m x 2.18m with data provided from the production site located in Lithuania. Product specific data are based on average values collected in the period 2022. Background data are based on datasets from LCA for experts 10.7 and Ecoinvent v3.8. Some datasets are more than 10 years old, but included to avoid datagaps. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old.

## Hazardous substances

The doors from Living Better A/S does not contain substances listed on the "Candidate List of Substances of Very High Concern for authorisation"

(<http://echa.europa.eu/candidate-list-table>)

## Product(s) use

Doors are installed into the walls of buildings to secure passages into a building from the exterior, for reasons of climate control and safety.

## Essential characteristics

The following Technical Specifications is determined for each declared product:

Specification	Terrace door (W/A)	Terrace door (P)	Sliding door (W/A)	Sliding door (P)
Glass type	Energy glass (T4-16A. TPS-F4-18A. TPS-T4)	Energy glass (4NRG-12A.TPS-F4-12A.TPS-4NRG)	Energy glass (T4-12A.TPS-F4-12A.TPS-T4)	Energy glass (T4-10A. TPS-F4-10A. TPS-T4)
Glass layer	3	3	3	3
U value: Uw [W/m <sup>2</sup> K]	0.85	0.97	1.01	1.06
g <sub>g</sub> value	0.55	0.63	0.5	0.5
Ff value	0.69	0.69	0.73	0.74
Ew value [kWh/m <sup>2</sup> ]	-1.9	-6.1	-15.8	-23.3



The doors are additionally covered by harmonised technical specification EN 14351-1, 4.8, EN 10077-2, EN410, EN12210 and EN12207. Declaration of performance according to EU regulation 305/2011 is available for all declared product variations.

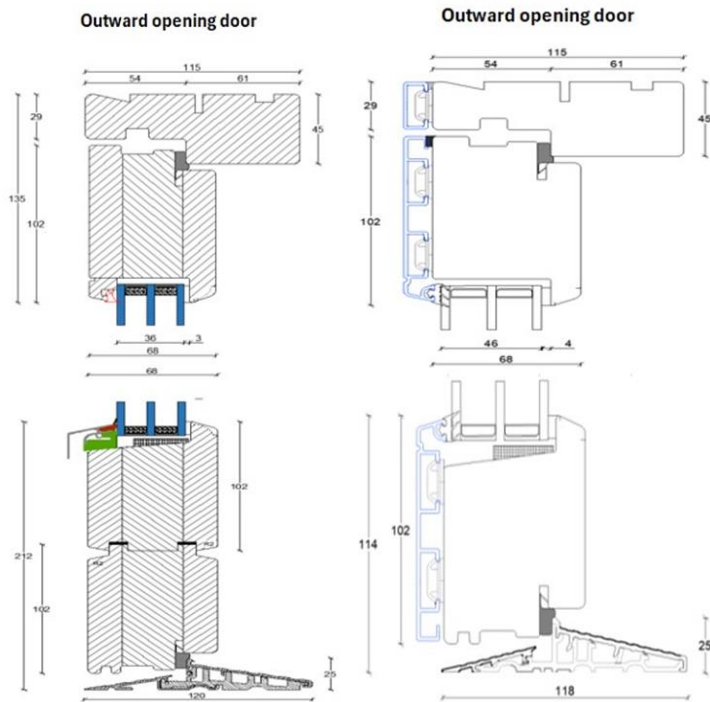
Further technical information can be obtained by contacting the manufacturer or on the manufacturers website: <https://livingbetter.dk/>

#### Reference Service Life (RSL)

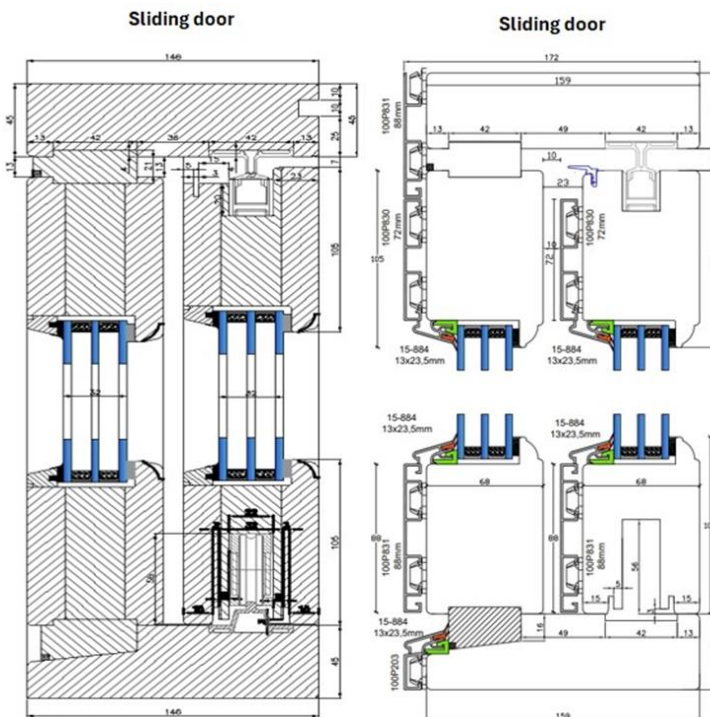
The reference service life (RSL) of the product is set to 40 years for both doors with a pine and 60 years for both doors with an aluminium/wood according to the main product equivalent to "Doors, outer walls" in the lifetime table of [LCABuild](#).



Picture of product(s)



Cross section of an outward opening terrace door, pine (left) and wood/aluminium (right). The figures show a vertical section of the elements with the upper frame and sash and bottom frame and sash. The cross-sectional drawings depict outdoor conditions to the left and indoor conditions to the right.



Cross section of sliding door, 1 movable sash, pine (left) and wood/aluminium (right). The figures show a vertical section of the elements with the upper frame and sash and bottom frame and sash. The cross-sectional drawings depict outdoor conditions to the left and indoor conditions to the right.



# LCA background

## Declared unit

The LCI and LCIA results in this EPD relate to 1 m<sup>2</sup> of energy door with the standard dimensions 1.23m x 2.18m for terrace doors and 3m x 2.18m for the lift-and slide door based on *DS/EN 17213:2020 for Windows and doors*.

Name	Terrace door (W/A)	Terrace door (P)	Sliding door (W/A)	Sliding door (P)
Declared unit, m <sup>2</sup>	1	1	1	1
Area density, kg/m <sup>2</sup>	43.66	41.77	40.64	39.71
Conversion to kg	0.0229	0.0246	0.0239	0.0252

## Functional unit

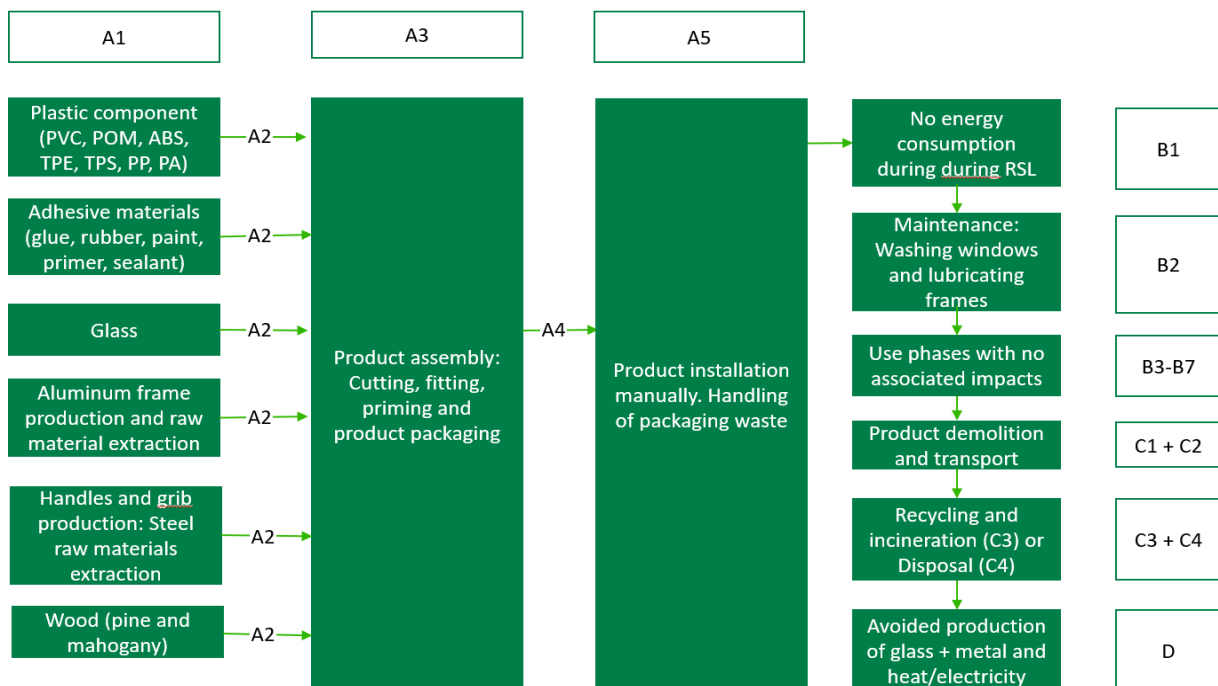
Not defined.

## PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804 and follows the principles from the *DS/EN 17213:2020 for Windows and*

## Flowdiagram

The process diagram below represents the life cycle of a door product from Living Better A/S.



Doors as well as *NPCR 014 PART B for Windows and doors* as it is not updated for the +A2 version.

## Energy modelling principles

### Foreground system:

No guarantees of origin or certificated for green electricity or energy production are used in manufacturing. Consumption of electricity is modelled with the country specific residual electricity grid mix. Consumption of heat is modelled with average data, representative for the geographical area, which in this case is Lithuania.

### Background system:

Other processes upstream and downstream from the production are modelled with processes from the LCA for experts database 2023.2 that is based on average data.



## System boundary

This EPD is based on a cradle-to-grave LCA, in which 100 weight-% has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

### Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Manufacturing processes

The product stage comprises the acquisition of all raw materials, products and energy, transport to the production site, packaging and waste processing up to the “end-of-waste” state or final disposal. The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

Wood and aluminum for the frame are delivered to RODA, where it is cut into the correct size. The frames are then primed and painted. Additionally, glass, fittings and brackets are delivered in the correct size and are thus ready to be directly assembled with the frame using a variety of adhesives.

Only windows and doors are produced at the RODA factory, and thus factory data for energy is based on the measured annual energy consumption. Despite factors such as the produced amount of product per time influencing the energy consumption, the chosen allocation is done per m<sup>2</sup>, which is a measured constant for the whole production, and which better relates to the declared unit. For the outgoing packaging, pallets and PVC film is fitted to each set of windows that is shipped to customers, it is assumed legitimate to allocate the mass of packaging based on the window mass.

The doors from Living Better A/S are installed in Northern Europe.

### Construction process stage (A4-A5) includes:

In the construction phase, it is assumed that the transport to the customer (A4) consists of smaller deliveries through direct sales at a distance of 2000 km with empty driving remaining. The assembly (A5) is expected to be done manually with few auxiliary tools. As detailed in the cPCR EN 17213:2020, the use of materials during installation should be calculated for the individual building and thus falls under the cut-off criterion for the system boundary. For this reason, the results in the EPD relate mainly to waste treatment of the product packaging.

### Use stage (B1-B7) includes:

The use phase includes the total period from installation (A5) to end of life (C1-C4), during which the product is active. As defined in the standard EN 17213:2020, the thermal energy balance should be calculated for the individual building based on the technical specifications that appear in this EPD.

Furthermore, the use phase is largely defined by maintenance (B2), which is based on the standard scenario described in EN 17213:2020. The specific consumption of water (0.4 l) and soap (0.02 l) per year is based on the specific maintenance requirements for the Living Better A/S doors. To this end, it is specified in the cPCR EN 17213:2020, section 6.3.4.4.2, that the maintenance (B2) should include the replacement and repair of worn or damaged components. The following table indicates the replacement of components over the lifetime of the door (40 - 60 years).

Component	Unit	Value
Sealing strip (15 years)	Times/RSL	2-3
Fittings and brackets (25 years)	Times/RSL	1
Glazing (25 years)	Times/RSL	1

Modules B3, B4, and B5 do contribute to the environmental impacts, as it is estimated that there is no need for replacement or repair during the products' lifetime as well as renovation of the building in which the product is placed during the product's expected lifetime. The declared products do not contain any electrical devices, e.g. motor for shutters. For this reason, there is neither operational energy nor water consumption



(B6-B7) associated with the use phase. These modules therefore all appear empty.

**End of Life (C1-C4) includes:**

This EPD is aimed at a Northern European market. Municipal incineration, landfill and recycling are therefore expected to be carried out in each respective country.

Dismantling (C1) of doors is a manual process and the use of tools other than ordinary tools is therefore not expected. After demolition, 100% of the doors are sent to a recycling facility with an assumed distance of 50 km. Here they are crushed and sorted and then sent to additional waste handling. According to the PCR DS-EN 17213:2020, disposal of glass must be modelled as 30% recycling and 70% landfill, while for the non-glass components are 95% recycled and 5% landfilled, see Figure B.1 and B.3. The process of recycling is modelled in C3 while landfilling is modelled in C4.

Plastic, wood, paint, and the various adhesives are all incinerated and assumed to be processed at a municipal incineration plant (C3).

**Re-use, recovery and recycling potential (D) includes:**

According to EN 17213:2020, Annex B.3, 70% of glass and 5% of non-glass is landfilled, while the remaining fractions are either incinerated or recycled.

In Northern Europe, crushed glass shards are mainly used in the production of new glass, but also in the production of glass wool. In both the production of new glass and glass wool, glass shards from the doors replace virgin raw materials in production. Recycled glass thus replaces lime, soda ash, clay and dolomite since these are the most used materials in the production of new glass and glass wool. Sorted steel and aluminum, and zinc, which is also part of the door material composition, is used as an input in the production of new metals. Only virgin materials are credited in D.

The incineration plant for combustible components have an end-of-life energy utilization with a distribution of 20% electricity, 75% district heating and a waste of 5%. Electricity is assumed to replace an average supply mix in Europe, while the production of district heating entails an avoided production and burning of natural gas at a cogeneration plant.





## LCA results

### Terrace door, wood/aluminium

ENVIRONMENTAL IMPACTS PER m2												
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	7,72E+01	1,10E-02	4,26E+00	0,00E+00	3,51E+01	0,00E+00	0,00E+00	8,11E-01	2,60E+01	1,52E+00	-3,38E+01
GWP-fossil	kg CO <sub>2</sub> eq.	1,04E+02	1,09E-02	1,14E-01	0,00E+00	3,46E+01	0,00E+00	0,00E+00	8,01E-01	5,37E+00	2,85E-01	-3,38E+01
GWP-biogenic	kg CO <sub>2</sub> eq.	-2,64E+01	2,49E-05	4,15E+00	0,00E+00	4,38E-01	0,00E+00	0,00E+00	1,84E-03	2,06E+01	1,23E+00	-1,60E-03
GWP-luluc	kg CO <sub>2</sub> eq.	5,74E-02	1,02E-04	2,07E-05	0,00E+00	1,88E-02	0,00E+00	0,00E+00	7,53E-03	6,64E-04	7,44E-04	-8,73E-04
ODP	kg CFC 11 eq.	3,85E-10	1,43E-15	4,63E-13	0,00E+00	7,60E-11	0,00E+00	0,00E+00	1,06E-13	8,08E-12	6,74E-13	1,31E-09
AP	mol H <sup>+</sup> eq.	5,40E-01	1,62E-05	7,15E-04	0,00E+00	2,57E-01	0,00E+00	0,00E+00	2,76E-03	1,30E-02	1,92E-03	-7,57E-02
EP-freshwater	kg P eq.	6,72E-04	4,03E-08	1,51E-07	0,00E+00	5,82E-04	0,00E+00	0,00E+00	2,97E-06	1,55E-06	3,61E-06	2,86E-05
EP-marine	kg N eq.	1,35E-01	5,89E-06	2,08E-04	0,00E+00	6,16E-02	0,00E+00	0,00E+00	1,24E-03	5,91E-03	8,62E-04	-1,51E-02
EP-terrestrial	mol N eq.	1,48E+00	6,97E-05	2,97E-03	0,00E+00	6,82E-01	0,00E+00	0,00E+00	1,41E-02	6,86E-02	5,77E-03	-1,20E-01
POCP	kg NMVOC eq.	3,41E-01	1,42E-05	5,69E-04	0,00E+00	1,25E-01	0,00E+00	0,00E+00	2,48E-03	1,54E-02	2,00E-03	-5,20E-02
ADPm <sup>1</sup>	kg Sb eq.	1,48E-04	7,30E-10	4,34E-09	0,00E+00	1,88E-05	0,00E+00	0,00E+00	5,39E-08	1,72E-07	1,20E-08	-7,46E-07
ADPf <sup>1</sup>	MJ	1,45E+03	1,50E-01	1,16E+00	0,00E+00	4,91E+02	0,00E+00	0,00E+00	1,11E+01	2,42E+01	3,94E+00	-5,01E+02
WDP <sup>1</sup>	m <sup>3</sup> world eq. deprived	8,28E+00	1,33E-04	4,79E-01	0,00E+00	3,00E+00	0,00E+00	0,00E+00	9,82E-03	2,58E+00	2,93E-02	-1,01E+00
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use											
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.											



ADDITIONAL ENVIRONMENTAL IMPACTS PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
PM	[Disease incidence]	1,09E-05	1,40E-10	5,18E-09	0,00E+00	1,52E-06	0,00E+00	0,00E+00	1,80E-08	5,63E-08	2,27E-08	-7,58E-07
IRP <sup>2</sup>	[kBq U235 eq.]	1,08E+01	4,20E-05	9,98E-03	0,00E+00	1,81E+00	0,00E+00	0,00E+00	3,10E-03	3,30E-01	5,62E-03	-8,02E+00
ETP-fw <sup>1</sup>	[CTUe]	8,05E+02	1,07E-01	5,00E-01	0,00E+00	5,95E+02	0,00E+00	0,00E+00	7,93E+00	7,12E+00	3,11E+00	5,34E+02
HTP-c <sup>1</sup>	[CTUh]	6,60E-08	2,18E-12	4,75E-11	0,00E+00	1,42E-08	0,00E+00	0,00E+00	1,61E-10	3,28E-10	2,89E-10	-1,68E-08
HTP-nc <sup>1</sup>	[CTUh]	2,69E-06	9,70E-11	2,65E-09	0,00E+00	1,30E-06	0,00E+00	0,00E+00	7,16E-09	7,74E-09	3,11E-08	-2,41E-07
SQP <sup>1</sup>	-	8,06E+03	6,27E-02	3,52E-01	0,00E+00	6,50E+01	0,00E+00	0,00E+00	4,63E+00	3,95E+00	8,02E-01	-2,85E+01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality											
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. <sup>2</sup> 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.											

RESOURCE USE PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
PERE	[MJ]	3,83E+02	1,09E-02	2,92E-01	0,00E+00	5,13E+01	0,00E+00	0,00E+00	8,06E-01	3,38E+00	5,69E-01	-1,25E+02
PERM	[MJ]	2,88E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	6,71E+02	1,09E-02	2,92E-01	0,00E+00	5,13E+01	0,00E+00	0,00E+00	8,06E-01	3,38E+00	5,69E-01	-1,25E+02
PENRE	[MJ]	1,44E+03	1,51E-01	1,16E+00	0,00E+00	4,92E+02	0,00E+00	0,00E+00	1,11E+01	2,42E+01	3,95E+00	-5,02E+02
PENRM	[MJ]	1,56E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,45E+03	1,51E-01	1,16E+00	0,00E+00	4,92E+02	0,00E+00	0,00E+00	1,11E+01	2,42E+01	3,95E+00	-5,02E+02
SM	[kg]	4,62E-01	0,00E+00	0,00E+00	0,00E+00	9,32E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	6,32E-01	1,20E-05	1,12E-02	0,00E+00	9,26E-02	0,00E+00	0,00E+00	8,82E-04	6,26E-02	8,93E-04	-2,37E-01
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water											



WASTE CATEGORIES AND OUTPUT FLOWS PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
HWD	[kg]	1,94E-06	4,66E-13	2,37E-11	0,00E+00	9,07E-05	0,00E+00	0,00E+00	3,44E-11	1,12E-09	1,48E-10	-3,12E-08
NHWD	[kg]	1,57E+01	2,30E-05	1,06E-01	0,00E+00	3,92E+00	0,00E+00	0,00E+00	1,69E-03	2,68E-01	1,55E+01	-5,60E+00
RWD	[kg]	5,99E-02	2,82E-07	6,35E-05	0,00E+00	1,16E-02	0,00E+00	0,00E+00	2,08E-05	2,19E-03	4,53E-05	-4,12E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,27E-01	0,00E+00	0,00E+00	0,00E+00	2,10E+01	0,00E+00	0,00E+00	0,00E+00	1,26E+01	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,22E+00	0,00E+00	5,94E+00	0,00E+00	1,34E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+01	0,00E+00	0,00E+00
EET	[MJ]	1,66E+01	0,00E+00	1,07E+01	0,00E+00	1,50E+01	0,00E+00	0,00E+00	0,00E+00	5,46E+01	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy											

BIOGENIC CARBON CONTENT PER m2		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	6,43E+00
Biogenic carbon content in accompanying packaging	kg C	1,21E+00



## Terrace door, pine wood

ENVIRONMENTAL IMPACTS PER m2												
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	1,41E+02	1,03E-02	3,98E+00	0,00E+00	3,01E+01	0,00E+00	0,00E+00	7,51E-01	2,34E+01	1,41E+00	-3,00E+01
GWP-fossil	kg CO <sub>2</sub> eq.	1,65E+02	1,02E-02	1,09E-01	0,00E+00	2,97E+01	0,00E+00	0,00E+00	7,43E-01	4,17E+00	2,62E-01	-3,00E+01
GWP-biogenic	kg CO <sub>2</sub> eq.	-2,46E+01	2,32E-05	3,87E+00	0,00E+00	3,86E-01	0,00E+00	0,00E+00	1,70E-03	1,92E+01	1,15E+00	5,99E-04
GWP-luluc	kg CO <sub>2</sub> eq.	5,24E-02	9,52E-05	1,95E-05	0,00E+00	1,68E-02	0,00E+00	0,00E+00	6,97E-03	6,18E-04	6,79E-04	-7,02E-04
ODP	kg CFC 11 eq.	1,81E-10	1,34E-15	4,33E-13	0,00E+00	5,61E-11	0,00E+00	0,00E+00	9,80E-14	7,48E-12	6,16E-13	1,29E-09
AP	mol H <sup>+</sup> eq.	9,54E-01	1,52E-05	6,68E-04	0,00E+00	2,50E-01	0,00E+00	0,00E+00	2,56E-03	1,16E-02	1,76E-03	-6,75E-02
EP-freshwater	kg P eq.	6,11E-04	3,76E-08	1,41E-07	0,00E+00	5,36E-04	0,00E+00	0,00E+00	2,75E-06	1,42E-06	3,12E-06	2,93E-05
EP-marine	kg N eq.	2,16E-01	5,50E-06	1,94E-04	0,00E+00	5,97E-02	0,00E+00	0,00E+00	1,16E-03	5,21E-03	7,95E-04	-1,33E-02
EP-terrestrial	mol N eq.	2,36E+00	6,51E-05	2,77E-03	0,00E+00	6,62E-01	0,00E+00	0,00E+00	1,31E-02	6,05E-02	5,28E-03	-1,01E-01
POCP	kg NMVOC eq.	5,84E-01	1,33E-05	5,32E-04	0,00E+00	1,19E-01	0,00E+00	0,00E+00	2,31E-03	1,36E-02	1,84E-03	-4,66E-02
ADPm <sup>1</sup>	kg Sb eq.	1,48E-04	6,81E-10	4,07E-09	0,00E+00	1,16E-05	0,00E+00	0,00E+00	4,99E-08	1,60E-07	1,10E-08	-3,66E-06
ADPF <sup>1</sup>	MJ	1,85E+03	1,40E-01	1,09E+00	0,00E+00	4,07E+02	0,00E+00	0,00E+00	1,03E+01	2,23E+01	3,62E+00	-4,41E+02
WDP <sup>1</sup>	m <sup>3</sup> world eq. deprived	2,08E+01	1,24E-04	4,47E-01	0,00E+00	2,41E+00	0,00E+00	0,00E+00	9,10E-03	2,33E+00	2,68E-02	-8,89E-01
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPF = Abiotic Depletion Potential – fossil fuels; WDP = water use											
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.											



ADDITIONAL ENVIRONMENTAL IMPACTS PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
PM	[Disease incidence]	2,51E-05	1,31E-10	4,85E-09	0,00E+00	1,47E-06	0,00E+00	0,00E+00	1,67E-08	5,08E-08	2,08E-08	-6,79E-07
IRP <sup>2</sup>	[kBq U235 eq.]	2,38E+00	3,92E-05	9,32E-03	0,00E+00	1,57E+00	0,00E+00	0,00E+00	2,87E-03	3,06E-01	5,16E-03	-7,20E+00
ETP-fw <sup>1</sup>	[CTUe]	8,84E+02	1,00E-01	4,70E-01	0,00E+00	5,53E+02	0,00E+00	0,00E+00	7,35E+00	6,60E+00	2,85E+00	5,29E+02
HTP-c <sup>1</sup>	[CTUh]	3,14E-07	2,03E-12	4,44E-11	0,00E+00	1,14E-08	0,00E+00	0,00E+00	1,49E-10	3,01E-10	2,64E-10	-1,59E-08
HTP-nc <sup>1</sup>	[CTUh]	3,21E-06	9,05E-11	2,48E-09	0,00E+00	1,05E-06	0,00E+00	0,00E+00	6,63E-09	7,23E-09	2,85E-08	-2,14E-07
SQP <sup>1</sup>	-	7,48E+03	5,85E-02	3,29E-01	0,00E+00	4,64E+01	0,00E+00	0,00E+00	4,29E+00	3,64E+00	7,32E-01	-2,49E+01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality											
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. <sup>2</sup> 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.											

RESOURCE USE PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
PERE	[MJ]	2,25E+02	1,02E-02	2,73E-01	0,00E+00	3,89E+01	0,00E+00	0,00E+00	7,47E-01	3,12E+00	5,21E-01	-1,13E+02
PERM	[MJ]	2,91E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	5,15E+02	1,02E-02	2,73E-01	0,00E+00	3,89E+01	0,00E+00	0,00E+00	7,47E-01	3,12E+00	5,21E-01	-1,13E+02
PENRE	[MJ]	1,84E+03	1,41E-01	1,09E+00	0,00E+00	4,07E+02	0,00E+00	0,00E+00	1,03E+01	2,23E+01	3,62E+00	-4,42E+02
PENRM	[MJ]	1,06E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,85E+03	1,41E-01	1,09E+00	0,00E+00	4,07E+02	0,00E+00	0,00E+00	1,03E+01	2,23E+01	3,62E+00	-4,42E+02
SM	[kg]	5,12E-01	0,00E+00	0,00E+00	0,00E+00	9,99E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	6,56E-01	1,12E-05	1,05E-02	0,00E+00	7,08E-02	0,00E+00	0,00E+00	8,18E-04	5,65E-02	8,16E-04	-2,14E-01
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water											



WASTE CATEGORIES AND OUTPUT FLOWS PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
HWD	[kg]	1,57E-06	4,35E-13	2,21E-11	0,00E+00	5,63E-05	0,00E+00	0,00E+00	3,19E-11	1,02E-09	1,38E-10	-2,62E-08
NHWD	[kg]	2,34E+01	2,14E-05	1,00E-01	0,00E+00	3,72E+00	0,00E+00	0,00E+00	1,57E-03	2,50E-01	1,42E+01	-5,09E+00
RWD	[kg]	1,83E-02	2,63E-07	5,93E-05	0,00E+00	9,84E-03	0,00E+00	0,00E+00	1,93E-05	2,03E-03	4,16E-05	-3,69E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	2,87E-02	0,00E+00	0,00E+00	0,00E+00	2,10E+01	0,00E+00	0,00E+00	0,00E+00	1,24E+01	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,14E+00	0,00E+00	5,54E+00	0,00E+00	4,45E-01	0,00E+00	0,00E+00	0,00E+00	2,68E+01	0,00E+00	0,00E+00
EET	[MJ]	1,55E+01	0,00E+00	9,98E+00	0,00E+00	5,43E+00	0,00E+00	0,00E+00	0,00E+00	4,83E+01	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy											

BIOGENIC CARBON CONTENT PER m2		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	6,60E+00
Biogenic carbon content in accompanying packaging	kg C	1,12E+00



**Sliding door, wood/aluminium**

ENVIRONMENTAL IMPACTS PER m2												
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	5,38E+01	1,06E-02	4,09E+00	0,00E+00	3,72E+01	0,00E+00	0,00E+00	7,95E-01	2,76E+01	1,59E+00	-1,43E+01
GWP-fossil	kg CO <sub>2</sub> eq.	8,14E+01	1,04E-02	1,11E-01	0,00E+00	3,69E+01	0,00E+00	0,00E+00	7,86E-01	5,95E+00	2,97E-01	-1,43E+01
GWP-biogenic	kg CO <sub>2</sub> eq.	-2,77E+01	2,39E-05	3,98E+00	0,00E+00	2,60E-01	0,00E+00	0,00E+00	1,80E-03	2,16E+01	1,29E+00	-9,78E-03
GWP-luluc	kg CO <sub>2</sub> eq.	4,29E-02	9,78E-05	2,00E-05	0,00E+00	1,90E-02	0,00E+00	0,00E+00	7,38E-03	6,48E-04	7,98E-04	2,93E-03
ODP	kg CFC 11 eq.	2,13E-10	1,37E-15	4,45E-13	0,00E+00	6,99E-11	0,00E+00	0,00E+00	1,04E-13	8,04E-12	7,12E-13	1,40E-09
AP	mol H <sup>+</sup> eq.	4,60E-01	1,56E-05	6,86E-04	0,00E+00	2,82E-01	0,00E+00	0,00E+00	2,67E-03	1,40E-02	2,05E-03	-8,89E-03
EP-freshwater	kg P eq.	6,29E-04	3,86E-08	1,45E-07	0,00E+00	5,62E-04	0,00E+00	0,00E+00	2,91E-06	1,57E-06	3,92E-06	3,95E-05
EP-marine	kg N eq.	1,12E-01	5,65E-06	1,99E-04	0,00E+00	6,63E-02	0,00E+00	0,00E+00	1,20E-03	6,35E-03	9,12E-04	-2,27E-03
EP-terrestrial	mol N eq.	1,24E+00	6,69E-05	2,85E-03	0,00E+00	7,36E-01	0,00E+00	0,00E+00	1,36E-02	7,37E-02	6,14E-03	2,24E-02
POCP	kg NMVOC eq.	3,29E-01	1,36E-05	5,46E-04	0,00E+00	1,38E-01	0,00E+00	0,00E+00	2,40E-03	1,65E-02	2,12E-03	-1,39E-02
ADPm <sup>1</sup>	kg Sb eq.	2,72E-05	7,00E-10	4,18E-09	0,00E+00	1,41E-05	0,00E+00	0,00E+00	5,28E-08	1,68E-07	1,27E-08	2,44E-08
ADPf <sup>1</sup>	MJ	1,14E+03	1,44E-01	1,12E+00	0,00E+00	5,02E+02	0,00E+00	0,00E+00	1,09E+01	2,40E+01	4,09E+00	-2,56E+02
WDP <sup>1</sup>	m <sup>3</sup> world eq. deprived	8,47E+00	1,28E-04	4,59E-01	0,00E+00	3,89E+00	0,00E+00	0,00E+00	9,63E-03	2,74E+00	3,20E-02	1,36E-02
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use											
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.											

ADDITIONAL ENVIRONMENTAL IMPACTS PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
PM	[Disease incidence]	9,31E-06	1,34E-10	4,98E-09	0,00E+00	1,93E-06	0,00E+00	0,00E+00	1,75E-08	5,86E-08	2,43E-08	-2,60E-08
IRP <sup>2</sup>	[kBq U235 eq.]	4,73E+00	4,03E-05	9,58E-03	0,00E+00	1,75E+00	0,00E+00	0,00E+00	3,04E-03	3,22E-01	5,76E-03	-4,47E+00
ETP-fw <sup>1</sup>	[CTUe]	7,64E+02	1,03E-01	4,81E-01	0,00E+00	6,21E+02	0,00E+00	0,00E+00	7,77E+00	7,14E+00	3,28E+00	6,35E+02
HTP-c <sup>1</sup>	[CTUh]	9,80E-08	2,09E-12	4,56E-11	0,00E+00	7,34E-08	0,00E+00	0,00E+00	1,58E-10	3,36E-10	3,08E-10	-5,46E-09
HTP-nc <sup>1</sup>	[CTUh]	3,13E-06	9,31E-11	2,55E-09	0,00E+00	2,03E-06	0,00E+00	0,00E+00	7,02E-09	8,03E-09	3,32E-08	-1,08E-07
SQP <sup>1</sup>	-	7,57E+03	6,01E-02	3,38E-01	0,00E+00	5,71E+01	0,00E+00	0,00E+00	4,53E+00	3,99E+00	8,56E-01	-1,58E+01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality											
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. <sup>2</sup> 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.											



RESOURCE USE PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
PERE	[MJ]	2,31E+02	1,40E+00	2,80E-01	0,00E+00	4,88E+01	0,00E+00	0,00E+00	1,57E+00	3,42E+00	6,02E-01	-5,43E+01
PERM	[MJ]	2,89E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	5,21E+02	1,40E+00	2,80E-01	0,00E+00	4,88E+01	0,00E+00	0,00E+00	1,57E+00	3,42E+00	6,02E-01	-5,43E+01
PENRE	[MJ]	1,12E+03	1,93E+01	1,12E+00	0,00E+00	5,09E+02	0,00E+00	0,00E+00	2,16E+01	2,40E+01	4,09E+00	-2,56E+02
PENRM	[MJ]	2,15E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,14E+03	1,93E+01	1,12E+00	0,00E+00	5,09E+02	0,00E+00	0,00E+00	2,16E+01	2,40E+01	4,09E+00	-2,56E+02
SM	[kg]	8,69E-02	0,00E+00	0,00E+00	0,00E+00	6,84E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	4,24E-01	1,53E-03	1,08E-02	0,00E+00	1,06E-01	0,00E+00	0,00E+00	1,72E-03	6,63E-02	9,67E-04	-8,78E-02
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water											

WASTE CATEGORIES AND OUTPUT FLOWS PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
HWD	[kg]	2,87E-07	4,47E-13	2,28E-11	0,00E+00	8,68E-05	0,00E+00	0,00E+00	3,37E-11	1,13E-09	1,44E-10	-2,29E-08
NHWD	[kg]	1,18E+01	2,20E-05	1,03E-01	0,00E+00	5,90E+00	0,00E+00	0,00E+00	1,66E-03	3,15E-01	1,67E+01	-1,88E+00
RWD	[kg]	2,93E-02	2,70E-07	6,10E-05	0,00E+00	1,11E-02	0,00E+00	0,00E+00	2,04E-05	2,13E-03	4,70E-05	-2,53E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,85E-01	0,00E+00	0,00E+00	0,00E+00	2,22E+01	0,00E+00	0,00E+00	0,00E+00	8,48E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,38E+00	0,00E+00	5,69E+00	0,00E+00	9,06E-01	0,00E+00	0,00E+00	0,00E+00	3,24E+01	0,00E+00	0,00E+00
EET	[MJ]	1,89E+01	0,00E+00	1,03E+01	0,00E+00	1,17E+01	0,00E+00	0,00E+00	0,00E+00	5,86E+01	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy											

BIOGENIC CARBON CONTENT PER m2		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	6,49E+00
Biogenic carbon content in accompanying packaging	kg C	1,15E+00





**Sliding door, pine wood**

ENVIRONMENTAL IMPACTS PER m2												
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
GWP-total	kg CO <sub>2</sub> eq.	6,55E+01	1,00E-02	3,89E+00	0,00E+00	3,54E+01	0,00E+00	0,00E+00	7,55E-01	2,58E+01	1,52E+00	-1,44E+01
GWP-fossil	kg CO <sub>2</sub> eq.	9,19E+01	9,91E-03	1,07E-01	0,00E+00	3,51E+01	0,00E+00	0,00E+00	7,46E-01	5,06E+00	2,81E-01	-1,44E+01
GWP-biogenic	kg CO <sub>2</sub> eq.	-2,66E+01	2,27E-05	3,78E+00	0,00E+00	2,33E-01	0,00E+00	0,00E+00	1,71E-03	2,08E+01	1,24E+00	-7,96E-03
GWP-luluc	kg CO <sub>2</sub> eq.	3,91E-02	9,29E-05	1,91E-05	0,00E+00	1,84E-02	0,00E+00	0,00E+00	7,00E-03	6,15E-04	7,55E-04	2,70E-03
ODP	kg CFC 11 eq.	1,50E-10	1,31E-15	4,24E-13	0,00E+00	6,44E-11	0,00E+00	0,00E+00	9,84E-14	7,60E-12	6,73E-13	1,40E-09
AP	mol H <sup>+</sup> eq.	5,45E-01	1,48E-05	6,52E-04	0,00E+00	2,80E-01	0,00E+00	0,00E+00	2,53E-03	1,24E-02	1,94E-03	-1,21E-02
EP-freshwater	kg P eq.	5,92E-04	3,67E-08	1,38E-07	0,00E+00	5,31E-04	0,00E+00	0,00E+00	2,76E-06	1,47E-06	3,56E-06	3,90E-05
EP-marine	kg N eq.	1,28E-01	5,37E-06	1,89E-04	0,00E+00	6,58E-02	0,00E+00	0,00E+00	1,14E-03	5,59E-03	8,69E-04	-2,67E-03
EP-terrestrial	mol N eq.	1,41E+00	6,35E-05	2,71E-03	0,00E+00	7,31E-01	0,00E+00	0,00E+00	1,29E-02	6,50E-02	5,82E-03	1,75E-02
POCP	kg NMVOC eq.	3,74E-01	1,30E-05	5,19E-04	0,00E+00	1,35E-01	0,00E+00	0,00E+00	2,28E-03	1,45E-02	2,02E-03	-1,50E-02
ADPm <sup>1</sup>	kg Sb eq.	4,27E-05	6,65E-10	3,98E-09	0,00E+00	1,01E-05	0,00E+00	0,00E+00	5,01E-08	1,59E-07	1,20E-08	-3,31E-06
ADP <sup>1</sup>	MJ	1,16E+03	1,37E-01	1,06E+00	0,00E+00	4,70E+02	0,00E+00	0,00E+00	1,03E+01	2,26E+01	3,87E+00	-2,52E+02
WDP <sup>1</sup>	m <sup>3</sup> world eq. deprived	1,10E+01	1,21E-04	4,36E-01	0,00E+00	3,42E+00	0,00E+00	0,00E+00	9,14E-03	2,57E+00	3,03E-02	-5,66E-02
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADP <sup>1</sup> = Abiotic Depletion Potential – fossil fuels; WDP = water use											
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.											

ADDITIONAL ENVIRONMENTAL IMPACTS PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
PM	[Disease incidence]	1,25E-05	1,27E-10	4,74E-09	0,00E+00	1,92E-06	0,00E+00	0,00E+00	1,66E-08	5,36E-08	2,30E-08	-6,54E-08
IRP <sup>2</sup>	[kBq U235 eq.]	2,18E+00	3,83E-05	9,10E-03	0,00E+00	1,66E+00	0,00E+00	0,00E+00	2,89E-03	3,05E-01	5,45E-03	-4,48E+00
ETP-fw <sup>1</sup>	[CTUe]	7,42E+02	9,79E-02	4,59E-01	0,00E+00	6,07E+02	0,00E+00	0,00E+00	7,38E+00	6,74E+00	3,11E+00	6,26E+02
HTP-c <sup>1</sup>	[CTUh]	3,23E-07	1,99E-12	4,34E-11	0,00E+00	2,50E-08	0,00E+00	0,00E+00	1,50E-10	3,16E-10	2,91E-10	-5,89E-09
HTP-nc <sup>1</sup>	[CTUh]	3,11E-06	8,84E-11	2,43E-09	0,00E+00	1,91E-06	0,00E+00	0,00E+00	6,66E-09	7,54E-09	3,14E-08	-1,12E-07
SQP <sup>1</sup>	-	7,27E+03	5,71E-02	3,22E-01	0,00E+00	4,94E+01	0,00E+00	0,00E+00	4,30E+00	3,77E+00	8,10E-01	-1,57E+01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality											
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. <sup>2</sup> 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.											



RESOURCE USE PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
PERE	[MJ]	1,71E+02	9,95E-03	2,67E-01	0,00E+00	4,41E+01	0,00E+00	0,00E+00	7,50E-01	3,23E+00	5,70E-01	-5,75E+01
PERM	[MJ]	2,93E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	4,64E+02	9,95E-03	2,67E-01	0,00E+00	4,41E+01	0,00E+00	0,00E+00	7,50E-01	3,23E+00	5,70E-01	-5,75E+01
PENRE	[MJ]	1,15E+03	1,37E-01	1,06E+00	0,00E+00	4,70E+02	0,00E+00	0,00E+00	1,03E+01	2,26E+01	3,87E+00	-2,53E+02
PENRM	[MJ]	1,25E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,16E+03	1,37E-01	1,06E+00	0,00E+00	4,70E+02	0,00E+00	0,00E+00	1,03E+01	2,26E+01	3,87E+00	-2,53E+02
SM	[kg]	1,86E-01	0,00E+00	0,00E+00	0,00E+00	7,23E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	4,01E-01	1,09E-05	1,02E-02	0,00E+00	9,11E-02	0,00E+00	0,00E+00	8,21E-04	6,21E-02	9,16E-04	-9,52E-02
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water											

WASTE CATEGORIES AND OUTPUT FLOWS PER m2												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3	C4	D
HWD	[kg]	1,86E-07	4,25E-13	2,16E-11	0,00E+00	5,50E-05	0,00E+00	0,00E+00	3,20E-11	1,04E-09	1,37E-10	-2,13E-08
NHWD	[kg]	1,31E+01	2,09E-05	9,84E-02	0,00E+00	5,83E+00	0,00E+00	0,00E+00	1,58E-03	2,96E-01	1,58E+01	-2,09E+00
RWD	[kg]	1,65E-02	2,57E-07	5,80E-05	0,00E+00	1,05E-02	0,00E+00	0,00E+00	1,94E-05	2,02E-03	4,45E-05	-2,49E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	3,57E-04	0,00E+00	0,00E+00	0,00E+00	2,23E+01	0,00E+00	0,00E+00	0,00E+00	8,30E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,33E+00	0,00E+00	5,41E+00	0,00E+00	5,91E-01	0,00E+00	0,00E+00	0,00E+00	2,99E+01	0,00E+00	0,00E+00
EET	[MJ]	1,81E+01	0,00E+00	9,75E+00	0,00E+00	8,39E+00	0,00E+00	0,00E+00	0,00E+00	5,40E+01	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy											

BIOGENIC CARBON CONTENT PER m2		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	6,64E+00
Biogenic carbon content in accompanying packaging	kg C	1,10E+00



# Additional information

## LCA interpretation

The results show that the production of primary aluminum and glass are the dominating processes in most of the environmental impact categories. The environmental impact of the doors varies based on the door dimensions and frame type.

The datasets used to model the processes that contribute the most to the overall impacts are all considered to be "good/very good" in regard to their representativity. The overall uncertainty of the results is thus considered to be low.

## Technical information on scenarios

### Transport to the building site (A4)

Scenario information	Value	Unit
Fuel type	Diesel	-
Vehicle type	Truck (7.5-16 ton) EURO 6	-
Transport distance	2000	km
Capacity utilisation (including empty runs)	0.61	%
Gross density of products transported	41.45	kg/m <sup>2</sup>

### Installation of the product in the building (A5)

Scenario information	Value	Unit
Ancillary materials	0	kg
Water use	0	m <sup>3</sup>
Other resource use	0	kg
Energy type and consumption	0	kWh
Waste materials: Packaging	2.5-3.6	kg
Output materials	0	kg
Direct emissions to air, soil or water	0	kg

### Reference service life

RSL information		Unit
Reference service Life	40-60	Years
Declared product properties	Technical specifications and guidance can be obtained from direct contact to Living Better at +45 8181 8110 or <a href="mailto:info@livingbetter.dk">info@livingbetter.dk</a>	
Design application parameters		
Assumed quality of work		
Outdoor environment		
Indoor environment		
Usage conditions		
Maintenance		

**Use (B1-B7)**

Scenario information	Value	Unit
<b>B1 – Use</b>		
<b>B2 - Maintenance</b>		
Maintenance process	Washing	-
Maintenance cycle for washing	4	cycles/year
Ancillary materials for maintenance: Cleaning agent	0.005	l/cycle
Waste materials resulting from maintenance (specify which)	0	kg
Net freshwater consumption during maintenance per year	0.4	l
Energy input during maintenance	0	kWh
Maintenance process	Lubrication	
Maintenance cycle for lubricating	1	cycle/year
Ancillary materials for maintenance: Lubricant	0.02	kg/cycle
Ancillary materials for maintenance: Paint	0.05-0.08	kg/cycle
Ancillary materials for maintenance: Primer	0.05-0.07	kg/cycle
Waste materials resulting from maintenance (specify which)	0	kg
Net freshwater consumption during maintenance per year	0	l
Energy input during maintenance	0	kWh
Maintenance process	Wear of glazing and fitting	
Maintenance cycle for glazing and fitting	2	cycles/RSL
Ancillary materials for maintenance: Glazing	21.3 - 26.3	kg/RSL
Ancillary materials for maintenance: Fitting	1.5 - 6.9	kg/RSL
Maintenance process	Sealing strips	
Maintenance cycle for sealing strips	2 - 3	cycle/RSL
Ancillary materials for maintenance: Sealing strips	0.8 - 3.2	kg/RSL
Waste materials resulting from maintenance, cardboard	0.03 - 0.06	kg
Net freshwater consumption during maintenance per year	0	l
Energy input during maintenance	0	kWh
<b>B3 – Repair</b>		
Repair process	Description or reference	-
Inspection process	Description or reference	-
Repair cycle	-	/year
Ancillary materials (specify which)	-	kg/cycle
Waste materials (specify which)	-	kg
Net freshwater consumption during repair	-	m <sup>3</sup>
Energy input during repair	-	kg/cycle
<b>B4 – Replacement</b>	-	
Replacement cycle	-	/year
Energy input during replacement	-	kWh
Exchange of worn parts during products life cycle	-	kg
<b>B5 - Refurbishment</b>	-	
Refurbishment process	-	
Refurbishment cycle	-	/year
Energy input during refurbishment	-	kWh
Material input for refurbishment (specify which)	-	kg/cycle
Waste materials resulting from refurbishment	-	kg
Further assumptions for scenario development	-	As appropriate
<b>B6 + B7 – Use of energy and water</b>	-	
Ancillary materials specified by material	-	kg
Net freshwater consumption	-	m <sup>3</sup>
Type of energy carrier	-	kWh
Power output of equipment	-	kW
Characteristic performance	-	As appropriate
Further assumptions for scenario development	-	As appropriate

**End of life (C1-C4)**

Scenario information	Value	Unit
Collected separately	39.7 - 43.6	kg
Collected with mixed waste	0	kg
For reuse	0	kg
For recycling	7.7 - 12.8	kg
For energy recovery	14.7 - 15.1	kg
For final disposal	17.1 - 18	kg
Assumptions for scenario development	Based on EN 17213:2020 annex B.3	As appropriate

**Transport to the waste handling facility (C2)**

Scenario information	Value	Unit
Fuel type	Diesel	-
Vehicle type	Truck (7.5-16 ton) EURO 6	-
Transport distance	50	km
Capacity utilisation (including empty runs)	0.61	%
Gross density of products transported	41.45	kg/m <sup>2</sup>

**Credited materials (D)**

Scenario information on material/ component	Terrace door (W/A)	Terrace door (P)	Sliding door (W/A)	Sliding door (P)	Unit
Aluminium	3.16	2.88	1.20	1.30	kg
Steel	2.11	2.14	0.24	0.23	kg
Stainless steel	0.00	0.04	0.00	0.05	kg
Quartz sand	17.82	17.45	18.90	18.75	kg
Soda	3.46	3.39	3.69	3.66	kg
Limestone	2.23	2.18	2.36	2.35	kg
Dolomite	0.99	0.97	1.05	1.04	kg
Electricity	39.89	33.19	42.50	37.01	MJ
Heat	104.20	67.33	117.80	83.65	MJ

The avoided production is only calculated on the virgin fraction of the type of input material in A1.

**Indoor air**

*The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A2 chapter 7.4.1.*

**Soil and water**

*The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A2 chapter 7.4.2.*



# References

<b>Publisher</b>	epddanmark <a href="http://www.epddanmark.dk">www.epddanmark.dk</a> <small>Template version 2023.2</small>
<b>Programme operator</b>	Danish Technological Institute Gregersensvej DK-2630 Taastrup <a href="http://www.teknologisk.dk">www.teknologisk.dk</a>
<b>LCA-practitioner</b>	Maria Preilev Hansen Danish Technological Institute Gregersensvej DK-2630 Taastrup <a href="http://www.teknologisk.dk">www.teknologisk.dk</a>
<b>LCA software /background data</b>	Thinkstep LCA for experts version 10.7.1.28, 2023 including databases <a href="https://sphaera.com/">https://sphaera.com/</a> EN 15804 reference package 3.1
<b>3<sup>rd</sup> party verifier</b>	David Althoff Palm Dalemarmen AB <a href="http://www.dalemarmen.dk">www.dalemarmen.dk</a>

## General programme instructions

General Programme Instructions, version 2.0, spring 2020  
[www.epddanmark.dk](http://www.epddanmark.dk)

## EN 15804

DS/EN 15804 + A2:2019 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

## Product-specific cPCR

DS/EN 17213:2020 for Windows and Doors as well as NPCR 014 PART B for Windows and doors.

## EN 15942

DS/EN 15942:2011 – " Sustainability of construction works – Environmental product declarations – Communication format business-to-business"

## ISO 14025

DS/EN ISO 14025:2010 – " Environmental labels and declarations – Type III environmental declarations – Principles and procedures"



**ISO 14040**

DS/EN ISO 14040:2008 – “ Environmental management – Life cycle assessment – Principles and framework”

**ISO 14044**

DS/EN ISO 14044:2008 – “ Environmental management – Life cycle assessment – Requirements and guidelines”