

## BRAND+NAME OF PRODUCT

Type here the declared unit or functional unit

Issued dd.mm.yyyy  
Valid until dd.mm.yyyy

Third party verified  
Conform to EN 15804+A2 and NBN/DTD B08-001  
{insert additional PCR if applicable}

Modules declared					
A123	A4	A5	B	C	D
.	.	.		.	.

[B-EPD n° {contact FOD for number}]



OWNER OF THIS ENVIRONMENTAL PRODUCT DECLARATION

**Name of company**

EPD PROGRAM OPERATOR

**Federal Public Service of Health, Food Chain Safety  
and Environment**

[www.b-epd.be](http://www.b-epd.be)

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

*{The total number of pages must be even so that the last page is the back cover when printed. If the number of pages is odd, you can create a page break here}.*

*Editorial changes to the text are allowed if agreed upon by the program operator.*

## PRODUCT DESCRIPTION

## PRODUCT NAME

{insert product name and type and very short identification}

## IMAGES OF THE PRODUCT AND ITS INSTALLATION

### PRODUCT DESCRIPTION AND INTENDED USE

{Insert product description, bearing in mind users who don't know the product.

{Clarify whether this is a substance / mixture / intermediate product / product / kit / incorporated product / element / service / equipment.

{Insert whether this is a specific EPD from a single company or from a collective/federation.

{Insert intended use(s)}

### REFERENCE FLOW / DECLARED UNIT

{insert information on reference flow, declared unit, functional unit.

Packaging is {select} included / not included / the product does never contain packaging.

The weight per reference flow is {insert} kg.  
The density of the product is {insert} kg / m<sup>3</sup>.

### INSTALLATION

*This part clarifies in short the scope of the EPD regarding installation. Be clear whether the scope of the product is "as produced" or "as installed".*

#### *For as installed:*

Materials for fixation and installation are included. This EPD includes the impacts of all processes, fixating materials, jointing material or treatments necessary for installing/mounting the product according to following scenario(s): *list them shortly*.

Detailed information on this scenario can be found in the chapter "Data of the underlying scenario's".

*Multiple scenarios for installing are possible (e.g. screwless, with screws, glued, ...).*

#### *If other installation scenario's are possible this text shall be included:*

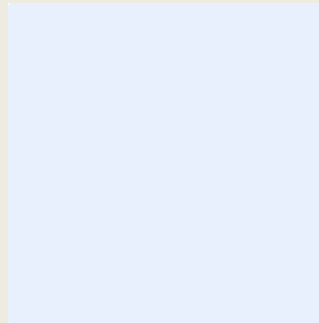
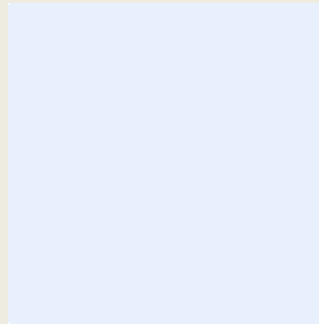
Other options for installing the product are possible for which the environmental impact has not been included in this EPD: *list them*.

You can find more detailed information helping developing a correct scenario at building level in the chapter "Additional technical information for scenario development at building". For these other options additional materials are necessary for which the environmental impact is not included in this EPD but which should be taken into account at building level: *list them*.

#### *For as produced:*

Materials for fixation and installation are not included. Regarding installation this EPD only includes the environmental impact related to the product itself: *list them e.g. material losses, packaging EOL and all relevant impacts e.g. for blow in the energy necessary shall be declared*). For installing the product following scenario's are possible: *list them*. This may lead to the need of additional products and materials for which the impact is not included in this EPD and which shall be taken into account at building level. More detailed information on these scenarios can be found in the chapter "Additional technical information for scenario development at building".

Special attention is needed if it concerns kits including fixation materials where it shall be very clear in what module the impacts are declared.



## COMPOSITION AND CONTENT

This paragraph shall be split up in following parts:

- The main components of the product
- For every main component of the product its composition

*The program operator decides case per case on the level of detail needed. It should be sufficiently detailed and ranges are allowed.*

Components	Composition / content / ingredients	Quantity
Product	- - - -	<i>Ranges are allowed</i>
Fixation materials	- -	
Jointing materials	- -	
Treatments	-	
Packaging	- -	

The product does not contain materials listed in the "Candidate list of Substances of Very High Concern for authorization". {if it does, list them here – also if it contains SVHC or CMR, list them here}

## REFERENCE SERVICE LIFE

The reference service life is estimated at xx years.

The RSL is based on {insert how the RSL was estimated}

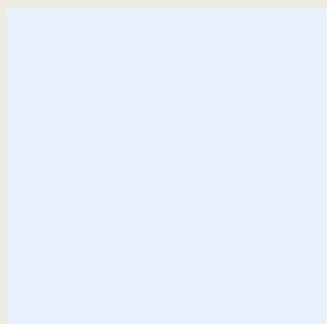
The conditions under which this RSL is valid are as following: {insert here the conditions or scenario under which the reference service life is valid.}

## DESCRIPTION OF GEOGRAPHICAL REPRESENTATIVITY

{insert description of the geographical representativity for A123, A4, A5, B, C and D  
The EPD is representative for the Belgian market. {modify if necessary} }

## DESCRIPTION OF THE PRODUCTION PROCESS AND TECHNOLOGY

{insert description of the production process and a schematic view below. This should allow outsiders to understand the technological representativeness}



## TECHNICAL DATA / PHYSICAL CHARACTERISTICS

Technical property	Standard	Value	Unit	Comment
Thickness				
Thermal characteristics (mandatory)				
...				

# LCA STUDY

## DATE OF LCA STUDY

{insert date of LCA study and calculation on which this EPD is based. If the model development and calculation were done in a separate study both can be mentioned, but at least the date of the calculation}

## SOFTWARE

For the calculation of the LCA results, the software program {insert software and version number} has been used.

## INFORMATION ON ALLOCATION

{insert information on allocation and those stages where it was necessary to apply allocation}

## INFORMATION ON CUT OFF

The following processes are considered below cut-off: {insert} .

## INFORMATION ON EXCLUDED PROCESSES

Following processes were excluded for the inventory:

{insert flows e.g. Flows related to human activities such as employee transport and administration activity.}

## INFORMATION ON BIOGENIC CARBON MODELLING

{Insert information on biogenic carbon modelling. If not relevant, this shall be stated that the product and packaging to not contain biogenic carbon.

Also make a clear on statement on whether or not the product/packaging contains biogenic carbon.

For EN 15804+A2 include following table:

Biogenic carbon content (kg C / FU)	
Biogenic carbon content in product (at the gate)	
Biogenic carbon content in accompanying packaging (at the gate)	

## INFORMATION ON CARBON OFFSETTING

Carbon offsetting is not allowed in the EN 15804 and hence not taken into account in the calculations. If the company takes measures for carbon offsetting this can be additionally added and specified here. }

## INFORMATION ON CARBONATION OF CEMENTITIOUS MATERIALS

{you can remove this paragraph if not relevant}.

## ADDITIONAL OR DEVIATING CHARACTERISATION FACTORS

{For EN 15804+A2: Insert information on the characterization factors. E.g. For the CEN indicators all CF are conform to EN 15804+A1. For toxicity, ionizing radiation and particulate matter the CF of JRC 2018 were used. For ADP following additional CF were used as applied in software xxx

For EN 15804+A2: The characterization factors from EC-JRC were applied. No additional or deviating characterisation factors were used. }

## DESCRIPTION OF THE VARIABILITY

{Only in case of average EPD. Insert information on the variability of the product. Please check NBN/DTD B08-001. E.g. in the case of grouping of products.

If not relevant this paragraph may be removed}

- Description of the range of variability of the LCIA results (preferably quantitative)
- Qualitative description of the main differences between the products / production sites covered by the EPD (e.g. similar composition but different production process, ...)
- The range of products for which the EPD is relevant, even if data from some products has not been used directly in producing the EPD ,including the technical description of the product group covered by the EPD
- Information on the most influencing parameters in the LCA

# DATA

## SPECIFICITY

The data used for the LCA are specific for this product which is manufactured by a single manufacturer in a single production site.

## PERIOD OF DATA COLLECTION

Manufacturer specific data have been collected for the year xxxx.

## INFORMATION ON DATA COLLECTION

{insert information on data collection. E.g. what are the foreground processes, what are the background processes for which generic datasets were used, data quality information, etc}

In case of average EPD or collective EPD: whether inventory was used from all sites or if a selection was made:

- Description on how the selection of the sites/products was done
- The number of manufacturing plants included in the EPD, and the relative production volume covered by the sample (in relation to the product group represented by the EPD)
- How the declared value was determined (worst case, weighted average, results from the various products based on production volume)

## DATABASE USED FOR BACKGROUND DATA

{insert information on the used databases for background data}

## ENERGY MIX

{Insert information on energy mix.}

# PRODUCTION SITES

{list information the location of the production sites. In case of a collective EPD you list here the names of the market players that can use the collective EPD. }




# SYSTEM BOUNDARIES

Product stage			Construction installation stage		Use stage							End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	Construction installation stage	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

X = included in the EPD  
MND = module not declared





	ADP Elements (kg Sb equiv/FU)																		
	ADP fossil fuels (MJ/FU)																		
	WDP (m³ water eq deprived /FU)																		

GWP total = total Global Warming Potential (Climate Change); GWP-luluc = Global Warming Potential (Climate Change) land use and land use change; ODP = Ozone Depletion Potential; AP = Acidification Potential for Soil and Water; EP = Eutrophication Potential; POCP = Photochemical Ozone Creation; ADPE = Abiotic Depletion Potential – Elements; ADPF = Abiotic Depletion Potential – Fossil Fuels; WDP = water use (Water (user) deprivation potential, deprivation-weighted water consumption)

## RESOURCE USE







	Production			Construction process		Use stage							End-of-life stage				D Reuse, recovery, recycling		
	A1 Raw material	A2 Transport	A3 manufacturing	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal			
PERE (MJ/FU, net calorific value)																			
PERM (MJ/FU, net calorific value)																			
PERT (MJ/FU, net calorific value)																			

<i>PENRE</i> (MJ/FU, net calorific value)																	
<i>PENRM</i> (MJ/FU, net calorific value)																	
<i>PENRT</i> (MJ/FU, net calorific value)																	
<i>SM</i> (kg/FU)																	
<i>RSF</i> (MJ/FU, net calorific value)																	
<i>NRSF</i> (MJ/FU, net calorific value)																	
<i>FW</i> (m <sup>3</sup> water eq/FU)																	

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



# IMPACT CATEGORIES ADDITIONAL TO EN 15804

		Production			Construction process		Use stage							End-of-life stage				
		A1 Raw material	A2 Transport	A3 manufacturing	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	PM (disease incidence)																	
	IRHH (kg U235 eq/FU)																	
	ETF (CTU <sub>e</sub> /FU)																	
	HTCE (CTU <sub>h</sub> /FU)																	
	HTnCE (CTU <sub>h</sub> /FU)																	
	Land Use Related impacts (dimension less)																	






HTCE = Human Toxicity – cancer effects; HTnCE = Human Toxicity – non cancer effects; ETF = Ecotoxicity – freshwater; (potential comparative toxic unit)

PM = Particulate Matter (Potential incidence of disease due to PM emissions );

IRHH = Ionizing Radiation – human health effects (Potential Human exposure efficiency relative to U235 );

	<p>Global Warming Potential</p>	<p>The global warming potential of a gas refers to the total contribution to global warming resulting from the emission of one unit of that gas relative to one unit of the reference gas, carbon dioxide, which is assigned a value of 1.</p> <p>It is split up in 4:</p> <ul style="list-style-type: none"> <li>- Global Warming Potential total (GWP-total) which is the sum of GWP-fossil, GWP-biogenic and GWP-luluc</li> <li>- Global Warming Potential fossil fuels (GWP-fossil) : The global warming potential related to greenhouse gas (GHG) emissions to any media originating from the oxidation and/or reduction of fossil fuels by means of their transformation or degradation (e.g. combustion, digestion, landfilling, etc).</li> <li>- Global Warming Potential biogenic (GWP-biogenic) : The global warming potential related to carbon emissions to air (CO<sub>2</sub>, CO and CH<sub>4</sub>) originating from the oxidation and/or reduction of aboveground biomass by means of its transformation or degradation (e.g. combustion, digestion, composting, landfilling) and CO<sub>2</sub> uptake from the atmosphere through photosynthesis during biomass growth – i.e. corresponding to the carbon content of products, biofuels or above ground plant residues such as litter and dead wood.<sup>1</sup></li> <li>- Global Warming Potential land use and land use change (GWP-luluc): The global warming potential related to carbon uptakes and emissions (CO<sub>2</sub>, CO and CH<sub>4</sub>) originating from carbon stock changes caused by land use change and land use. This sub-category includes biogenic carbon exchanges from deforestation, road construction or other soil activities (including soil carbon emissions).</li> </ul>
	<p>Ozone Depletion</p>	<p>Destruction of the stratospheric ozone layer which shields the earth from ultraviolet radiation harmful to life. This destruction of ozone is caused by the breakdown of certain chlorine and/or bromine containing compounds (chlorofluorocarbons or halons), Which break down when they reach the stratosphere and then catalytically destroy ozone molecules.</p>
	<p>Acidification potential</p>	<p>Acid depositions have negative impacts on natural ecosystems and the man-made environment incl. buildings. The main sources for emissions of acidifying substances are agriculture and fossil fuel combustion used for electricity production, heating and transport.</p>
	<p>Eutrophication potential</p>	<p>The potential to cause over-fertilization of water and soil, which can result in increased growth of biomass and following adverse effects.</p> <p>It is split up in 3:</p> <ul style="list-style-type: none"> <li>- Eutrophication potential – freshwater: The potential to cause over-fertilization of freshwater, which can result in increased growth of biomass and following adverse effects.</li> <li>- Eutrophication potential – marine: The potential to cause over-fertilization of marine water, which can result in increased growth of biomass and following adverse effects.</li> <li>- Eutrophication potential – terrestrial: The potential to cause over-fertilization of soil, which can result in increased growth of biomass and following adverse effects.</li> </ul>
	<p>Photochemical ozone creation</p>	<p>Chemical reactions brought about by the light energy of the sun creating photochemical smog. The reaction of nitrogen oxides with hydrocarbons in the presence of sunlight to form ozone is an example of a photochemical reaction.</p>
	<p>Abiotic depletion potential for non-fossil resources</p>	<p>Consumption of non-renewable resources, thereby lowering their availability for future generations. Expressed in comparison to Antimony (Sb).</p> <p>The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.</p>
	<p>Abiotic depletion potential for fossil resources</p>	<p>Measure for the depletion of fossil fuels such as oil, natural gas, and coal. The stock of the fossil fuels is formed by the total amount of fossil fuels, expressed in Megajoules (MJ).</p> <p>The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.</p>
	<p>Ecotoxicity for aquatic fresh water</p>	<p>The impacts of chemical substances on ecosystems (freshwater).</p> <p>The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.</p>
	<p>Human toxicity (carcinogenic effects)</p>	<p>The impacts of chemical substances on human health via three parts of the environment: air, soil and water.</p>

<sup>1</sup> Carbon exchanges from native forests shall be modelled under GWP - luluc (including connected soil emissions, derived products or residues), while their CO<sub>2</sub> uptake is excluded.

		<i>The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.</i>
	<i>Human toxicity (non-carcinogenic effects)</i>	<i>The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.</i>
	<i>Particulate matter</i>	<i>Accounts for the adverse health effects on human health caused by emissions of Particulate Matter (PM) and its precursors (NOx, SOx, NH3)</i>
	<i>Resource depletion (water)</i>	<i>Accounts for water use related to local scarcity of water as freshwater is a scarce resource in some regions, while in others it is not.</i> <i>The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.</i>
	<i>Ionizing radiation - human health effects</i>	<i>This impact category deals mainly with the eventual impact on human health of low dose ionizing radiation 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.</i>
	<i>Land use related impacts</i>	<i>The indicator is the “soil quality index” which is the result of an aggregation of following four aspects:</i> <ul style="list-style-type: none"> <li>- <i>Biotic production</i></li> <li>- <i>Erosion resistance</i></li> <li>- <i>Mechanical filtration</i></li> <li>- <i>Groundwater</i></li> </ul> <i>The aggregation is done based on a JRC model. The four aspects are quantified through the LANCA model for land use.</i>  <i>The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.</i>

# DETAILS OF THE UNDERLYING SCENARIOS USED TO CALCULATE THE IMPACTS

## A1 – RAW MATERIAL SUPPLY

This module takes into account the extraction and processing of all raw materials and energy which occur upstream to the studied manufacturing process.

{+ insert important assumptions made on this stage}

## A2 – TRANSPORT TO THE MANUFACTURER

The raw materials are transported to the manufacturing site + {insert assumptions made on this stage}

## A3 – MANUFACTURING

This module takes into account the production process + {insert assumptions on this stage}

## A4 – TRANSPORT TO THE BUILDING SITE

Fuel type and consumption of vehicle or vehicle type used for transport	E.g. Truck 16-32 ton 0,256 l diesel / km		
Distance	e.g. 100		
Capacity utilisation (including empty returns)	e.g. 50%		
Bulk density of transported products			
Volume capacity utilisation factor			

{insert information on this stage} E.g.

The B-PCR provides default transport scenarios for the transport to the building site for cases where specific data on transport are missing. The B-PCR provides scenario's for this life cycle stage. Fibre cement boards are categorized as 'loose products' in table 5 of the B-PCR. The following transport steps apply:

- 40% directly to the construction site over 100 km with a 16-32 ton lorry (ecoinvent record: 'Transport, freight, lorry 16-32 metric ton, EURO5 {RER} transport, freight, lorry 16-32 metric ton, EURO5 | Cut-off, U')
- 60% to a supplier over 100 km with a 16 -32 ton lorry (ecoinvent record: 'Transport, freight, lorry 16-32 metric ton, EURO5 {RER} transport, freight, lorry 16-32 metric ton, EURO5 | Cut-off, U')
- 85% of these 60% is transported over 35 km from supplier to construction site with a 16-32 ton lorry (ecoinvent record: 'Transport, freight, lorry 16-32 metric ton, EURO5 {RER} transport, freight, lorry 16-32 metric ton, EURO5 | Cut-off, U')
- 15% of these 60% is transported over 35 km from supplier to construction site with a 7.5-16 ton lorry (ecoinvent record: 'Transport, freight, lorry 7.5-16 metric ton, EURO5 {RER} transport, freight, lorry 7.5-16 metric ton, EURO5 | Cut-off, U')

## A5 – INSTALLATION IN THE BUILDING

At the construction site, packaging materials are released. Also 5% material losses have been taken into account

Parts of the installation	quantity	Description
Processes necessary for the installation of the product		E.g. energy needed for blowing in the material
Fixation materials		E.g. copper slate hooks
Jointing materials		E.g. the filler material between gypsum plates
Treatments		E.g. the first treatment of a wooden floor or wooden window
Material losses		E.g. the quantity of material lost due to cutting it in the right shape
Packaging		E.g. the packaging waste at the construction site
Others		

Ancillary materials for installation (specified by material);	Insert information		
Water use	Insert information		
Other resource use			
Quantitative description of energy type (regional mix) and consumption during the installation process			
Waste materials on the building site before waste processing, generated by the product's installation (specified by type)			
Output materials (specified by type) as result of waste processing at the building site e.g. of collection for recycling, for energy recovery, disposal (specified by route)			
Direct emissions to ambient air, soil and water			
Distance			

## B – USE STAGE (EXCLUDING POTENTIAL SAVINGS)

{insert information on the different use stage modules. Also specify whether specific or default from NBN/DTD}

B1:  
B2:  
B3:  
B4:  
B5:  
B6: }

## C: END OF LIFE

{insert information per C-module on the EOL stage. Also specify whether specific scenarios were developed or the default from NBN/DTD were taken

C1:  
C2:  
C3:



C4: }

Module C2 – Transport to waste processing					
Type of vehicle (truck/boat/etc.)	Fuel consumption (litres/km)	Distance (km)	Capacity utilisation (%)	Density of products (kg/m <sup>3</sup> )	Assumptions

End-of-life modules – C3 and C4		
Parameter	Unit	Value
Wastes collected separately	kg	
Wastes collected as mixed construction waste	kg	
Waste for re-use	kg	
Waste for recycling	kg	
Waste for energy recovery	kg	
Waste for final disposal	kg	

## D – BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES

{insert information on this stage}

<i>Quantitative description of the loads beyond the system boundaries</i>	Insert information
<i>Quantitative description of the benefits beyond the system boundaries</i>	Insert information

## ADDITIONAL INFORMATION ON RELEASE OF DANGEROUS SUBSTANCES TO INDOOR AIR, SOIL AND WATER DURING THE USE STAGE

### INDOOR AIR

{insert information on emissions into indoor air. Reference to CEN TC 16561}

### SOIL AND WATER

{insert information on emissions into soil and water. Cf. CEN TC 351}

## DEMONSTRATION OF VERIFICATION

EN 15804+A1 serves as the core PCR
Independent verification of the environmental declaration and data according to standard EN ISO 14025:2010 Internal <input type="checkbox"/> External <input checked="" type="checkbox"/>
Third party verifier: {insert name + address + email}

*Optional*

## ADDITIONAL TECHNICAL INFORMATION FOR SCENARIO DEVELOPMENT

*This chapter can be removed if not relevant. It can also be merged with the chapter on Application unit.*

*In this chapter all information is given to allow correct development of scenario's at building level for those (part of) modules where no impact was calculated in this EPD.*

*E.g for EPD is "as produced" and for A5 only the material losses and the packaging EOL was taken into account. However when the product will be installed other materials and processes may be necessary. These shall be clarified and specified to the extent possible (type, amount, scenario description).*

*E.g. for EPD "as installed" for A5 the impact of only one scenario was calculated. Other possible scenario's shall be clarified and specified here to the extent possible.*

*For A5 at least following parameters shall be reflected per scenario, including a short general description per scenario:*

Parts of the installation	quantity	Description
Processes necessary for the installation of the product		<i>E.g. energy needed for blowing in the material</i>
Fixation materials		<i>E.g. copper slate hooks</i>
Jointing materials		<i>E.g. the filler material between gypsum plates</i>
Treatments		<i>E.g. the first treatment of a wooden floor or wooden window</i>
Material losses		<i>E.g. the quantity of material lost due to cutting it in the right shape</i>
Packaging		<i>E.g. the packaging waste at the construction site</i>
Others		

*Fixation materials are materials necessary to attach a product to another layer or to the primary structure of the building. Jointing materials are materials used during or shortly after installation to connect products within the same layer. The program operator has the final word on which parts of the installation shall be declared.*

## APPLICATION UNIT

*(only mandatory for B-EPD for use in TOTEM)*

This paragraph gives information on on the applied product and how the reference flow and table with impacts relate to different applications.

*Here you list the possible applications for the product with its ratio to another unit, commonly used for that application (e.g. roof tiles: reference flow may be in kg, while depending on the overlap and type of tile the quantity per m<sup>2</sup> roof varies).*

*Insert here information on how the impact table can be scaled or applied.*

*Information on scalability. (e.g. table is for a certain thickness, the environmental impact is proportional with the thickness)*

*For more information please check the Additional rules complimentary to NBN DTD B08-001 on [www.b-epd.be](http://www.b-epd.be)*

## ADDITIONAL INFORMATION ON REVERSIBILITY

This chapter is optional.

For the different applications in the application unit a qualitative assessment of the reversibility can be given. Following 4 indicators shall be used (based on BAMB – buildings as material banks)

Reversibility	non reversible fixing	cast in mass
		projected
		coated
		plaster and filler
		cold or hot bonding, foam bonding
		glue
		sticky or adhesive tape
		welding
		glue mortar for masonry joints ( $R_{joint} \geq R_{mat}$ )
		cement mortar for masonry joints ( $R_{joint} \geq R_{mat}$ )
		hybrid mortar (cement / lime) for masonry joints ( $R_{joint} \geq R_{mat}$ )
		lime mortar for masonry joints ( $R_{joint} < R_{mat}$ )
		clay mortar for masonry joints ( $R_{joint} < R_{mat}$ )
	reversible with non repairable damage	sand joints ( $R_{joint} < R_{mat}$ )
reversible with light repairable damage	mastic (window, sanitary elements...) for joints ( $R_{joint} < R_{mat}$ )	
reversible fixing	nails and staples	
reversible fixing	screws, bolts and dowels	
reversible fixing	brackets, hooks, hooves, clips...	
reversible fixing	nesting, interlocking, superposition, juxtaposition	
non reversible fixing	nesting / interlocking , under screed (example: concrete slab elements)	
reversible fixing	loose laying	
reversible fixing	loose laying without weighting	
reversible fixing	loose laying with weighting	
non reversible fixing	loose laying with weighting, under the screed	
non reversible fixing	multilayer composite material (layers are always glued)	

Simplicity of disassembly	<ul style="list-style-type: none"> <li>- simple - no specific dismantling tools required</li> <li>- simple - use of dismantling tools required</li> <li>- complex - requires specific tools and/or several workers</li> <li>- complexe - requires specific know-how, tools and/or several workers</li> </ul>
Speed of disassembly	<ul style="list-style-type: none"> <li>- very speedy disassembly</li> <li>- speedy disassembly</li> <li>- rather slow disassembly</li> <li>- slow disassembly</li> </ul>
Ease of handling (size and weight)	<ul style="list-style-type: none"> <li>- easy to handle manually, one workers is usually sufficient</li> <li>- can be handled manually, but size and/or weight may require more than one worker</li> <li>- can be handled manually, but size and/or weight requires two or more workers</li> <li>- handling requires mechanical devices</li> </ul>
Robustness of material (material resistance to disassembly)	<ul style="list-style-type: none"> <li>- the material resists well during disassembly</li> <li>- disassembly is possible but should be done carefully in order not to generate any damage</li> <li>- disassembly is possible but generates inevitable damage to the material</li> <li>- n/a: the element is not reversible</li> </ul>

## BIBLIOGRAPHY

- ISO 14040:2006: Environmental Management-Life Cycle Assessment-Principles and framework.
- ISO 14044:2006: Environmental Management-Life Cycle Assessment-Requirements and guidelines.
- ISO 14025:2006: Environmental labels and Declarations-Type III Environmental Declarations-Principles and procedures.
- NBN EN 15804+A2:2019
- NBN/DTD B 08-001 (BE-PCR)
- {insert relevant reference documents used}

## General information

Owner of the EPD,  
Responsible for the data, LCA and information

Insert manufacturer name  
Insert street  
Insert postal code and city  
Insert country

Tel : insert telephone number;  
*For more information you can contact {insert contact person and email address}*

EPD program  
Program operator  
Publisher of this EPD

**B-EPD**  
**FOD Volksgezondheid**  
Victor Hortaplein 40 bus 10  
1060 Brussel  
België  
[www.environmentalproductdeclarations.eu](http://www.environmentalproductdeclarations.eu)

Contact programma operator

[epd@environment.belgium.be](mailto:epd@environment.belgium.be)

Based on following PCR documents

EN 15804+A2:2019  
NBN/DTD B 08-001 and its complement  
Insert others

PCR review conducted by

Federal Public Service of Health and Environment &  
PCR Review committee

Author(s) of the LCA and EPD

Insert name and emailaddress

Identification of the project report

{insert a unique reference number and title of the project report}.

Verification

External independent verification of the declaration and data according to EN ISO 14025 and relevant PCR documents

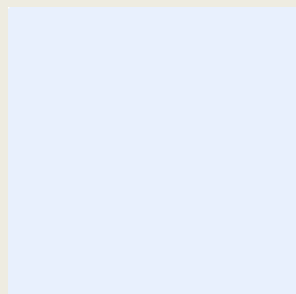
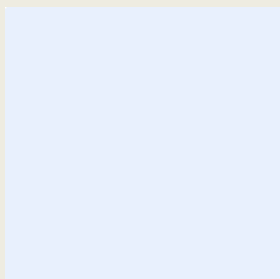
Name of the third party verifier  
Date of verification

Name and association of the verifier  
dd.mm.yyyy

[www.b-epd.be](http://www.b-epd.be)

[www.environmentalproductdeclarations.eu](http://www.environmentalproductdeclarations.eu)

*Comparing EPDs is not possible unless they are conform to the same PCR and taking into account the building context. The program operator cannot be held responsible for the information supplied by the owner of the EPD nor LCA practitioner.*



LCA practitioner



Building calculator of the  
regiona authorities

[www.totem-building.be](http://www.totem-building.be)



Federal Public Service of Health,  
Food Chain Safety and  
Environment

[www.b-epd.be](http://www.b-epd.be)