epddanmark

ECO PLATFORM EPD VERIFIED

Owner: Egernsund Wienerberger A/S
No.: MD-25050-EN
Issued: 30-04-2025
Valid to: 30-04-2030

3rd PARTY **VERIFIED**

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | **ISO 14025 & EN 15804**

Owner of declaration
Egernsund Wienerberger A/S
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Programme
EPD Danmark
www.epddanmark.dk

☐ Industry EPD
☒ Product EPD

☐ Product specific
☒ Average
☐ Worst Case

Declared product(s)
Red bricks from Vedstaarup Teglværk

Number of declared datasets/product variations: 1

Production site
Vedstaarup Teglværk
Bogyden 12
5610 Assens
Denmark

Use of Guarantees of Origin
☐ No certificates used
☒ Electricity covered by GoO
☒ Biomethane covered by GoO

Declared/ functional unit
1 tonne of bricks

Year of production site data (A3)
2023

EPD version
1

Issued: 30-04-2025
Valid to: 30-04-2030

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

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.

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.

EPD type
☐Cradle-to-gate with modules C1-C4 and D
☐Cradle-to-gate with options, modules C1-C4 and D
☒Cradle-to-grave and module D
☐Cradle-to-gate
☐Cradle-to-gate with options

CEN standard EN 15804 serves as the core PCR

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

☐ internal ☒ external

Third party verifier:

Nana Lin Rasmussen, Sweco Danmark A/S

Martha Katrine Sørensen
EPD Danmark

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

Bricks are durable, modular construction units made primarily from clay and sand. Variations in clay type, additives, and forming processes result in varied aesthetics. This EPD specifically covers Red bricks such as *EW2207 Turup Rød* and *EW2222 Rådhusblanding* produced in different formats including LESS and slips.

The main product components for Red bricks are shown in the table below.

Material	Weight-% of declared product
Clay	75
Sand	21
Chamotte	4
Additives	<1

Product packaging:

The composition of the sales- and transport packaging of the product is shown in the table below. 83% of the pallets are reused.

Material	Weight of packaging material (kg)	Weight-% of packaging
Foil	0,56	1,8
Straps	0,08	0,3
Paper	0,38	1,2
Pallets	30,60	96,8
Total	**31,62**	**100**

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of bricks at Vedstaarup Teglværk located in Assens Municipality. Product data are based on average values collected in the period of 2023. The average value is based on the weighted production from 2023. The maximum possible amount of additives (worst case product) have been modelled in parallel to the declared average result.

The difference between the declared average result and the worst case product covered by this EPD is within the allowed span of +/-10%. The A1-C4 GWP-total of the worst case product is +1,5% of the declared result.

Background data are based on Ecoinvent version 3.9.1 and are less than 2 years old. Overall, the background datasets used are of high quality, with most being only a few years old.

Hazardous substances

The declared products do 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

Bricks are commonly used with mortar for construction of both structural and non-structural applications, including load-bearing walls, partition walls, and facades.

Essential characteristics

Bricks are covered by harmonized technical specification EN 771-1:2011+A1:2015. Declaration of performance (DoP) according to EU regulation 305/2011 is available for all declared product variations.

Further technical information can be obtained by contacting egernsund wienerberger or on the website:

www.egernsund.com

Reference Service Life (RSL)

150 years reference service life as outlined in the TBE PCR (2020):

"For clay construction products, the RSL is 150 years. Studies have shown that clay construction products stand out with their high durability and prevail with no maintenance and a life span of 150 years and more."

Picture of product(s)

The brick products covered by this EPD can vary significantly in expression. The images in this document are examples. Information on which products are covered by this EPD can be obtained by contacting egernsund wienerberger or on the website:

www.egernsund.com

LCA Background

Declared unit

The LCI and LCIA results in this EPD relates to 1 tonne of red bricks from Vedstaarup Teglværk.

Name	Value	Unit
Declared unit	1	Tonne

Material properties

Ten holes decrease the density of the LESS bricks compared to solid bricks. The lower density results in lower environmental impacts when converting into m^2.

Name	Mass factor (kg/DU)	Density (kg/m^3)
LESS bricks	1000	1550
Solid bricks	1000	1800

Conversion factors

To convert the declared unit into m^2, the format and density of the bricks as well the width of the mortar joints must be considered.

When building with the common DNF (Dansk Normal Format) bricks and 12mm mortar joints 63 bricks are used per m^2 excluding cutoffs and waste.

DNF bricks measure 228 x 108 x 54 mm.

Name	Conversion factor
Conversion factor to 1 kg.	0,001
63 DNF LESS Bricks (1 m^2)	0,130
63 DNF Solid Bricks (1 m^2)	0,151

For other brick formats the conversion factor can be calculated in the following way:

Bricks per m^2 **x** Brick volume (m^3) **x** Density (kg/m^3) **/** 1000

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804:2012 +A2:2019, and the Internal Guidance Document on TBE PCR for Clay Construction Products (2020).

Energy modelling principles

Foreground system:

The product is produced using a mix of renewable electricity based on 1/3 Wind, 1/3 Solar and 1/3 Hydro covered by GoOs. Gas use is covered 100% by Biomethane also covered by GoOs.

Information about the energy mix in the foreground system:

Energy mix	EF	Unit
Wind/Solar/Hydro electricity GoO mix, 2023	2,54E-02	kg CO_2e/kWh
Biomethane GoO, 2023	1,39E-02	kg CO_2e/MJ

Background system:

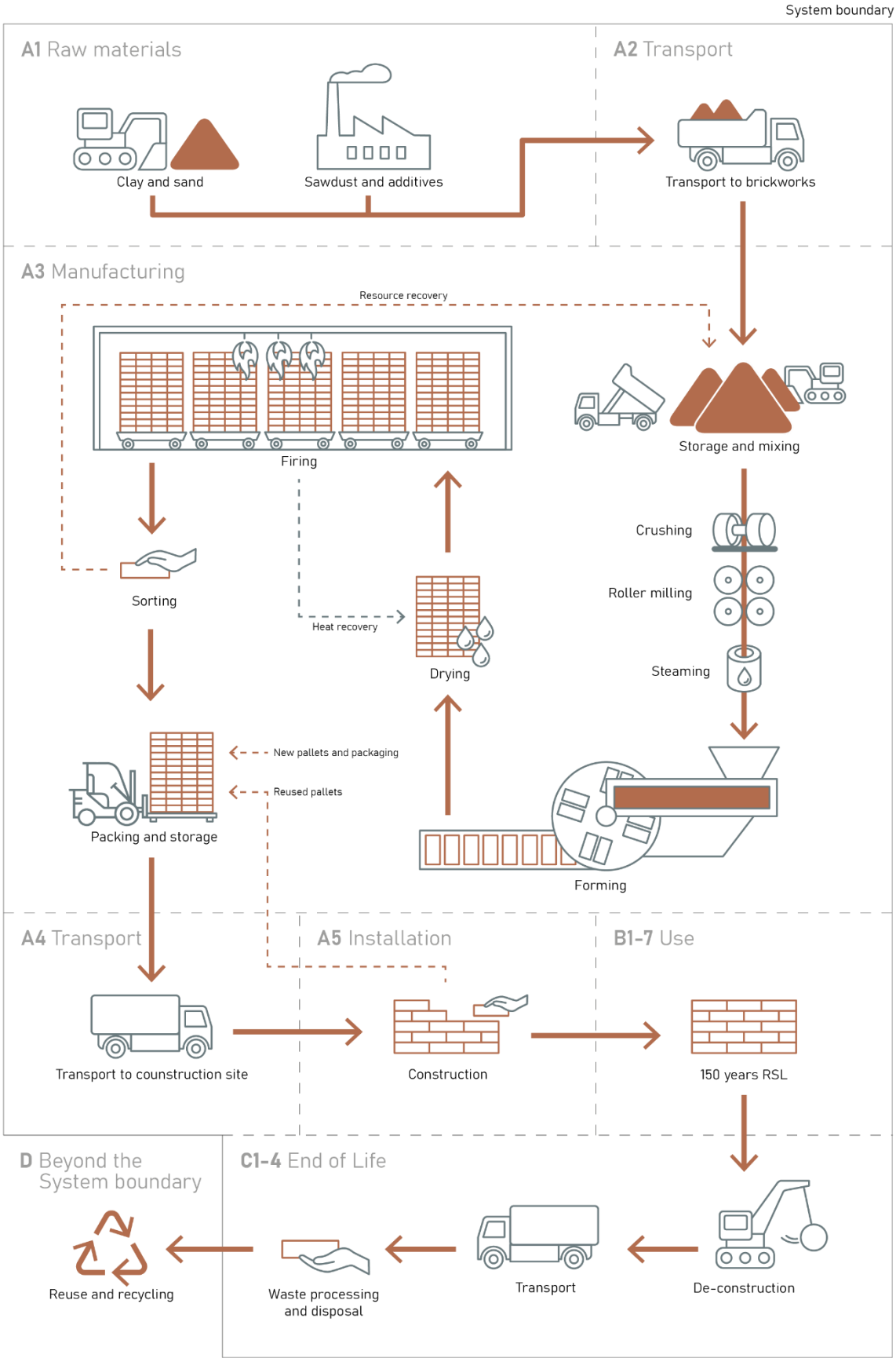
The database, ecoinvent 3.9.1 is utilized for the background system. As a result, both upstream- and downstream activities are based on average supply mixes for the specific country or region depending on the given dataset.

Geographical area

The products are produced in Denmark primarily targeted the Danish market. The products are also exported to other countries, such as Norway and Sweden. Therefore GWP-GHG is included under additional information.

The A4-D scenarios reflect use and end-of-life processes within the Danish context.

Flowdiagram



System boundary

This EPD is based on a *cradle-to-grave and module D* LCA, in which >99 weight-% has been accounted for. The excluded processes in this study are the packaging from materials in A1, auxiliary materials, capital goods for the clay pits and also the factory, and transport of excavators to the clay pits.

The LCA was conducted using the Ecoinvent 3.9.1 database with the system model 'Allocation, cut-off by classification', in accordance with the EN 15804+A2 standard. This approach excludes recycling benefits of secondary materials and energy beyond the system boundary and assigns all upstream burdens to the producer of the primary material.

Characterisation factors from the Environmental Footprint 3.1 (EF 3.1) method were used, as recommended by the EN 15804+A2 standard for midpoint impact assessment.

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:

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. The on site allocation is based on mass.

The production process starts with extracting and transporting raw materials, primarily clay and sand. These materials are sourced from quarries and combined with various additives and chamotte (recycled crushed bricks) to achieve the desired characteristics. The blended clay mixture is then shaped into bricks and thoroughly dried to eliminate excess moisture. After drying, the product is fired at high temperatures in kilns, which strengthens the dried bricks and enhances their resistance to weather and external stress. During the firing stage, the calcium carbonate ($CaCO_3$) in the clay decomposes into calcium oxide (CaO) and carbon dioxide (CO_2). Once the product passes quality control, it is packaged and stored ready for distribution.

Construction process stage (A4-A5) includes:

The environmental impacts in Module A4 are based on 50 km of transportation in accordance with the TBE PCR. Egernsund Wienerberger exclusively uses transport providers operating EURO 6 trucks. The scenario includes 1 ton of product along with all associated packaging.

The installation of the bricks is carried out primarily by hand, meaning no energy is required during the installation process. As specified in the TBE PCR (2020) for clay construction products, the environmental impacts of the construction phase are building-specific rather than product-specific, varying according to the design and application of the bricks. Therefore, Module A5 only accounts for the waste treatment of the product packaging and does not include product waste from the installation of the bricks into the building.

The packaging is being treated according to an assessment by VANA. For both the foil and straps it is assumed that 50,2% is being incinerated, 22,9% is being recycled and 26,9% is being landfilled. 50 km transport of the reused pallets back to the factory has been included.

Use stage (B1-B7) includes:

According to the *Internal Guidance Document on TBE PCR for Clay Construction Products* (2020), Section 5.3, page 14, clay products do not generate environmental impacts during the use phase (B1-B7). As a result, the environmental impact for these modules is reported as 0.

End of Life (C1-C4) includes:

As outlined in the TBE PCR for Clay Construction Products (2020) 100% of clay products are transported 39 km to waste processing. 99% of the products is then recycled and 1% is transported a further 23 km for disposal.

For recycling, the material is run through a mill that crushes the bricks into gravel. The scenario for the crushing is based on a 2013 report by Miljøstyrelsen (Miljøprojekt nr. 1512, 2013).

1% (10 kg) of the product is sent to landfill.

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

Module D accounts for the reuse, recovery, and/or recycling potential of the bricks presented as net impacts and benefits. This mainly relates to the substitution of gravel through the recycling of crushed bricks and the energy generated from the incineration of packaging materials.

Red bricks consist of 4,7% secondary material, due to the use of Chamotte and sand from mineral wool. This leads to adjusted values for secondary material loss and material recovery.

LCA results

ENVIRONMENTAL IMPACTS PER TONNE										
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	1,92E+01	5,17E+00	4,99E+01	0,00E+00	0,00E+00	5,83E+00	4,94E-01	1,18E-01	-5,68E+00
GWP-fossil	[kg CO_2 eq.]	6,29E+01	5,17E+00	1,12E+00	0,00E+00	0,00E+00	5,83E+00	4,94E-01	1,17E-01	-5,65E+00
GWP-biogenic	[kg CO_2 eq.]	-4,38E+01	1,57E-03	4,88E+01	0,00E+00	0,00E+00	1,75E-03	6,23E-05	3,00E-04	-2,48E-02
GWP-luluc	[kg CO_2 eq.]	6,73E-02	2,52E-03	1,01E-04	0,00E+00	0,00E+00	2,85E-03	5,56E-05	8,53E-05	-5,88E-03
ODP	[kg CFC 11 eq.]	1,83E-06	1,17E-07	3,89E-09	0,00E+00	0,00E+00	1,28E-07	7,86E-09	2,75E-09	-1,88E-07
AP	[mol H^+ eq.]	3,39E-01	1,28E-02	5,84E-04	0,00E+00	0,00E+00	2,72E-02	4,58E-03	8,34E-04	-3,24E-02
EP-freshwater	[kg P eq.]	1,09E-02	4,33E-05	2,12E-06	0,00E+00	0,00E+00	4,79E-05	1,79E-06	1,68E-06	-9,17E-03
EP-marine	[kg N eq.]	8,05E-02	3,41E-03	1,91E-04	0,00E+00	0,00E+00	1,07E-02	2,12E-03	3,09E-04	-1,24E-01
EP-terrestrial	[mol N eq.]	9,18E-01	3,58E-02	1,98E-03	0,00E+00	0,00E+00	1,16E-01	2,31E-02	3,34E-03	-1,81E-04
POCP	[kg NMVOC eq.]	3,01E-01	2,09E-02	8,72E-04	0,00E+00	0,00E+00	4,04E-02	6,84E-03	1,13E-03	-3,18E-02
ADPm[1]	[kg Sb eq.]	5,48E-04	1,44E-05	5,67E-07	0,00E+00	0,00E+00	1,82E-05	1,73E-07	2,38E-07	-5,34E-05
ADPf[1]	[MJ]	6,25E+02	7,84E+01	2,56E+00	0,00E+00	0,00E+00	8,41E+01	6,47E+00	2,54E+00	-8,86E+01
WDP[1]	[m^3 world eq. deprived]	1,74E+01	3,76E-01	1,75E-02	0,00E+00	0,00E+00	3,68E-01	1,40E-02	1,08E-01	-1,18E+00
Caption	GWP-total = Globale 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 = Acidifcation; 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 depletion potential									
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.									
Disclaimer	[1] 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 TONNE										
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	4,52E-06	5,10E-07	1,68E-08	0,00E+00	0,00E+00	5,72E-07	1,28E-07	1,79E-08	-6,31E-07
IRP[2]	[kBq U235 eq.]	3,69E+00	3,77E-02	1,72E-03	0,00E+00	0,00E+00	4,36E-02	1,32E-03	1,31E-03	-5,10E-01
ETP-fw[1]	[CTUe]	4,31E+02	3,77E+01	1,38E+00	0,00E+00	0,00E+00	4,14E+01	3,09E+00	1,11E+00	-2,81E+01
HTP-c[1]	[CTUh]	6,03E-08	2,30E-09	2,26E-10	0,00E+00	0,00E+00	3,14E-09	1,51E-10	6,54E-11	-7,09E-09
HTP-nc[1]	[CTUh]	1,27E-06	5,60E-08	2,75E-09	0,00E+00	0,00E+00	6,53E-08	1,05E-09	7,33E-10	-6,95E-08
SQP[1]	-	1,35E+03	7,96E+01	2,48E+00	0,00E+00	0,00E+00	6,32E+01	4,36E-01	5,80E+00	-1,22E+02
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 (dimensionless)									
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.									
Disclaimers	[1] 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.									
	[2] 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 TONNE										
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	3,95E+02	1,15E+00	5,99E-02	0,00E+00	0,00E+00	1,33E+00	3,68E-02	4,36E-02	-3,35E+01
PERM	[MJ]	7,82E+01	0,00E+00	-7,82E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	4,73E+02	1,15E+00	5,99E-02	0,00E+00	0,00E+00	1,33E+00	3,68E-02	4,36E-02	-3,35E+01
PENRE	[MJ]	6,48E+02	8,34E+01	2,73E+00	0,00E+00	0,00E+00	8,95E+01	6,88E+00	2,70E+00	-9,44E+01
PENRM	[MJ]	2,09E+01	0,00E+00	-2,09E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	6,69E+02	8,34E+01	2,73E+00	0,00E+00	0,00E+00	8,95E+01	6,88E+00	2,70E+00	-9,44E+01
SM	[kg]	4,71E+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
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
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
FW	[m^3]	1,85E+00	1,14E-02	6,89E-04	0,00E+00	0,00E+00	1,18E-02	4,55E-04	2,57E-03	-3,79E-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									
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.									

WASTE CATEGORIES AND OUTPUT FLOWS PER TONNE										
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2,82E-03	4,87E-04	1,45E-05	0,00E+00	0,00E+00	5,30E-04	4,36E-05	1,26E-05	-4,40E-04
NHWD	[kg]	1,36E+01	6,87E+00	3,73E-01	0,00E+00	0,00E+00	5,32E+00	9,26E-03	1,00E+01	-9,12E-01
RWD	[kg]	1,15E-03	2,39E-05	1,16E-06	0,00E+00	0,00E+00	2,83E-05	7,09E-07	8,06E-07	-2,80E-04
CRU	[kg]	0,00E+00	0,00E+00	2,54E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	0,00E+00	0,00E+00	1,46E-01	0,00E+00	0,00E+00	0,00E+00	9,90E+02	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
EEE	[MJ]	0,00E+00	0,00E+00	5,25E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	1,83E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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									
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.									

BIOGENIC CARBON CONTENT PER TONNE		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	1,33E+01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Additional information

GWP-GHG

GHG IMPACT PER TONNE										
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG	[kg CO_2 eq.]	6,83E+01	5,17E+00	1,12E+00	0,00E+00	0,00E+00	5,83E+00	4,94E-01	1,18E-01	-5,68E+00

LCA interpretation

The largest contribution to global warming potential (GWP-total) originates in module A3, primarily due to CO_2 emissions from fuel combustion and decarbonation of minerals in the clay (Process CO_2). Module A1, which covers the extraction and processing of materials, has a significant water use (WDP) because of sand mining and production of Manganese oxide. In module A2, the highest impact is observed in resource use of fossil fuels (ADPf), driven by diesel emissions from transportation, while the lowest impact occurs in eutrophication of freshwater (EP-fw). Detailed values for each impact indicator are provided in the table below.

Impact indicator	Most contributing processes	Percentage
GWP-total	Main production (biomethane)	46,1%
GWP-fossil	Main production (biomethane)	41,8%
GWP-biogenic	Main production (biomethane)	99,1%
GWP-luluc	Main production (biomethane)	62,6%
ODP	PET Straps	63,1%
AP	Main production (biomethane)	68,5%
EP-freshwater	Main production (biomethane)	72,2%
EP-marine	Main production (biomethane, specifically Nitrogen oxides)	66,9%
EP-terrestrial	Main production (biomethane, specifically Nitrogen oxides)	64,8%
POCP	Main production (biomethane)	64,6%
ADPm[1]	Main production (biomethane)	47,1%
ADPf[1]	Main production (biomethane)	59,2%
WDP[1]	Sand	26,8%

Technical information on scenarios

Transport to the building site (A4)

Scenario information	Value	Unit
Fuel type	Diesel	-
Vehicle type	Truck, >32 metric ton, EURO6	-
Transport distance	50	km
Capacity utilisation (including empty runs)	26,6	%
Gross density of products transported	1550-1800	kg/m^3
Capacity utilisation volume factor	-	-

Installation of the product in the building (A5)

Scenario information	Value	Unit
Packaging waste	6,22	kg
Packaging reused	25,40	kg

Reference service life

RSL information		Unit
Reference service Life	150	Years
Declared product properties	Declaration of Performance	
Design application parameters	Technical information	
Assumed quality of work	Installation and maintenance manuals	
Outdoor environment	Technical information	
Indoor environment	SBI 2009:1	
Usage conditions	Technical information	
Maintenance	Internal Guidance Document on TBE PCR for Clay Construction Products (2020)	

Use (B1-B7)
No environmental impacts.

End of life (C1-C4)

Scenario information	Value	Unit
Collected separately	1000	kg
Collected with mixed waste		kg
For reuse		kg
For recycling	990	kg
For energy recovery		kg
For final disposal	10	kg
Assumptions for scenario development	TBE PCR	As appropriate

Re-use, recovery and recycling potential (D)

Scenario information/Material	Value	Unit
Recycled as gravel	943,47	kg
Energy recovery from waste incineration	55,38	MJ

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+A1 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+A1 chapter 7.4.2.

References

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LCA software /background data	Ecochain Helix v3.4.1. Ecoinvent v3.9.1 EN 15804 reference package 3.1
3rd party verifier	*Nana Lin Rasmussen* Sweco Danmark A/S Verified according to Verification Checklist 1 v. 2.7

General programme instructions
General Programme Instructions, version 2.0, spring 2020
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EN 15804
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Tiles & Bricks Europe (2020)
Internal Guidance Document on TBE PCR for Clay Construction Products

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