epddanmark

ECO PLATFORM EPD VERIFIED

Owner:	Egernsund Wienerberger A/S
No.:	MD-26051-EN_rev1
Issued:	03-06-2026
Revision:	02-10-2026
Valid to:	03-06-2031

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)
Tumbled bricks from Ydby Teglværk

Number of declared datasets/product variations: 2

Production site
Ydby Teglværk
Ydby Stationsvej 2
7760 Hurup Thy
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)
2025

EPD version
[Version 2, 02-10-2026]:
Pallet reuse rate and density of EW0180 Aks corrected. Input bricks updated with revised EPDs. Module A1, A3, A5 and D has been affected.

Issued: 03-06-2026
Valid to: 03-06-2031

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, Lin Consulting ApS

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, pigments, forming processes and the tumbling process result in varied aesthetics. This EPD specifically covers *EW0180 Aks* and *EW0181 Rust* produced in different formats.

The main product components are shown in the table below. *EW0180 Aks* consist of 4,2% secondary material. *EW0181 Rust* consist of 0% secondary material.

Material	Weight-% of declared product
Bricks	99
Mortar	1

Product packaging:

The composition of the sales- and transport packaging of the product is shown in the table below. 85% of the pallets are reused.

Material	Weight of packaging material (kg)	Weight-% of packaging
Foil	0,45	1,4
Straps	0,07	0,2
Pallets	31,93	98,4
Total	**32,44**	**100**

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of tumbled bricks at Ydby Teglværk. Production data is based on the full year 2025.

Background data are sourced from ecoinvent 3.11, and all datasets used are less than two years old at the time of the study. A dataset quality assessment following *EN 15804:2012+A2:2019, Annex E (Table E.1)* confirms that the datasets meet the required quality criteria.

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 Tumbled bricks from Ydby Teglværk.

Name	Value	Unit
Declared unit	1	Tonne

Material properties

The density is necessary to calculate the environmental impacts when converting into m^2.

Name	Mass factor (kg/DU)	Density (kg/m^3)
EW0180 Aks	1000	1650
EW0181 Rust	1000	1750

The density for each specific product is also stated in the DoP and on the website.

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 EW0180 Aks (1 m^2)	0,139
63 DNF EW0181 Rust (1 m^2)	0,147

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 electricity covered 100% by Danish Wind GoOs.

Information about the energy mix in the foreground system:

Energy mix	EF	Unit
Electricity, Danish wind GOs	1,32E-02	kg CO_2e/kWh

Background system:

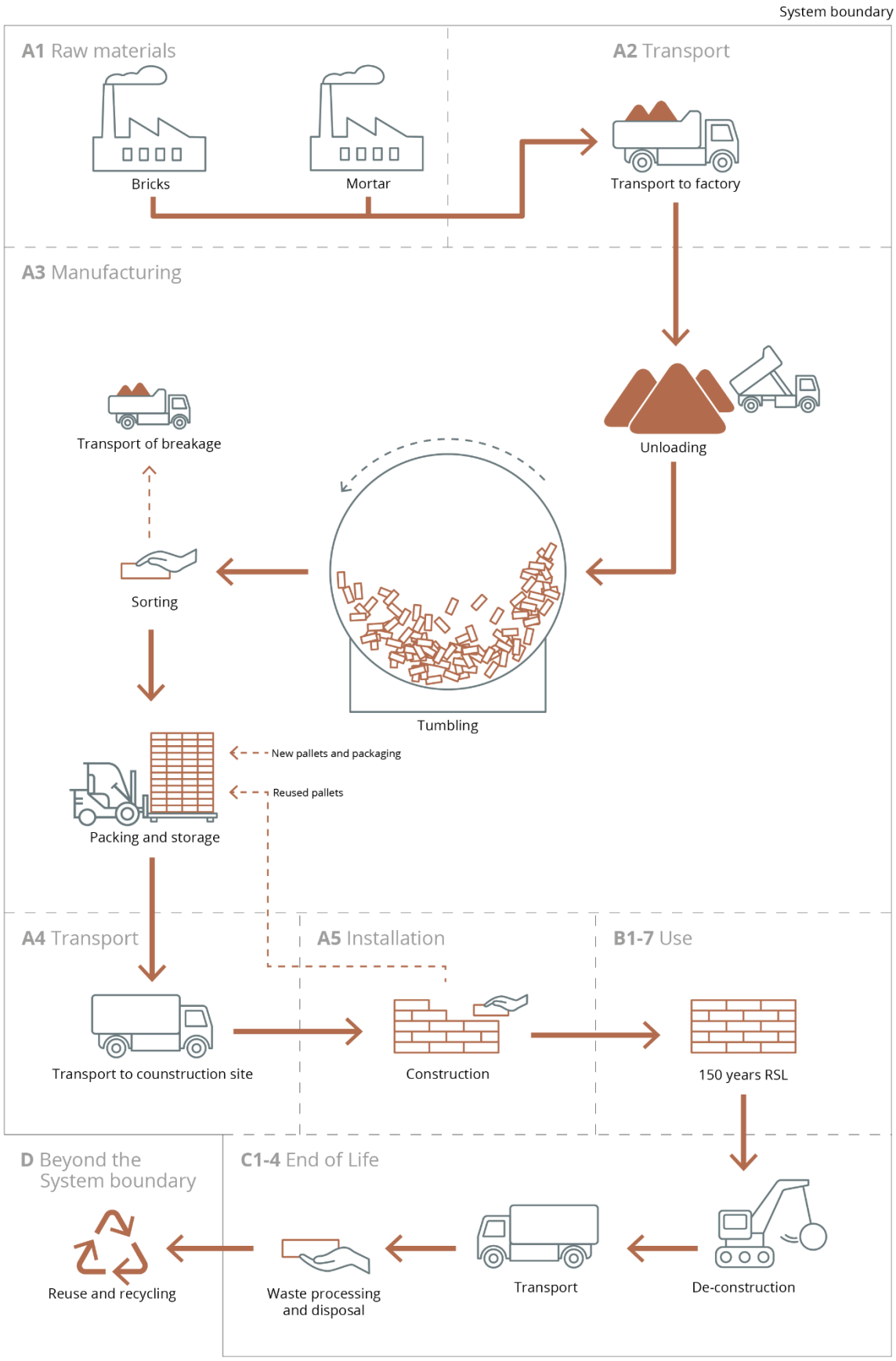
The database, ecoinvent 3.11 is utilized for the background system. As a result, both upstream- and downstream activities are based on average supply mixes for the specific country or region depending on the given dataset.

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 but are also representative for Norway, Sweden and other countries with substantially decarbonised energy systems and low landfilling disposal rates of approximately 1%.

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 mortar in A1, auxiliary materials and capital goods for the factory.

The LCA was conducted using the Ecoinvent 3.11 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 onsite allocation is based on mass.

The production process begins with the manufacture of bricks and cement mortar. These materials are supplied by external factories and transported to Ydby Teglværk. Due to the breakage during the production, 7-16% additional bricks and mortar are needed for the final products produced at Ydby Teglbærk. Upon arrival, the bricks are sorted and mixed into red and yellow batches.

The environmental impacts associated with the bricks are modelled using EPDs. Yellow bricks are represented by MD-26043-EN_rev1, while red bricks are represented by EPD MD-26038-EN_rev1.

The mixed bricks are then fed into a large continuous tumbler, where controlled amounts of water and mortar are added to achieve the desired surface appearance. After tumbling, the bricks undergo quality control to ensure they meet the specified requirements. Once approved, the finished products are packaged and stored on-site, ready for distribution. Breakage during production is sent back to the nearest brickwork for recycling.

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 A/S 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 85% of the pallets back to the brick factory has been included. The remaining 15% are incinerated.

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.

The 4,2% content of secondary materials in *EW0180 Aks* results in adjusted values for the quantity of material recovered and used as a substitute for gravel.

LCA results for EW0180 Aks

ENVIRONMENTAL IMPACTS PER TONNE										
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	1,21E+02	5,26E+00	4,03E+01	0,00E+00	0,00E+00	3,99E+00	5,03E-01	5,82E-02	-4,49E+00
GWP-fossil	[kg CO_2 eq.]	1,54E+02	5,25E+00	1,02E+00	0,00E+00	0,00E+00	3,99E+00	5,03E-01	5,82E-02	-4,48E+00
GWP-biogenic	[kg CO_2 eq.]	-3,36E+01	1,13E-03	3,93E+01	0,00E+00	0,00E+00	8,59E-04	5,06E-05	2,08E-05	-1,18E-02
GWP-luluc	[kg CO_2 eq.]	7,30E-02	1,96E-03	9,75E-05	0,00E+00	0,00E+00	1,49E-03	5,14E-05	2,46E-05	-6,05E-03
ODP	[kg CFC 11 eq.]	3,88E-06	1,19E-07	4,37E-09	0,00E+00	0,00E+00	9,06E-08	7,47E-09	7,61E-10	-7,68E-08
AP	[mol H^+ eq.]	8,68E-01	1,28E-02	1,31E-03	0,00E+00	0,00E+00	9,70E-03	4,49E-03	4,77E-04	-3,47E-02
EP-freshwater	[kg P eq.]	1,24E-03	4,13E-05	2,82E-06	0,00E+00	0,00E+00	3,14E-05	1,76E-06	7,26E-07	-1,64E-04
EP-marine	[kg N eq.]	2,31E-01	3,29E-03	5,39E-04	0,00E+00	0,00E+00	2,50E-03	2,09E-03	2,04E-04	-9,70E-03
EP-terrestrial	[mol N eq.]	2,58E+00	3,64E-02	5,76E-03	0,00E+00	0,00E+00	2,76E-02	2,29E-02	2,24E-03	-1,32E-01
POCP	[kg NMVOC eq.]	7,89E-01	2,14E-02	1,81E-03	0,00E+00	0,00E+00	1,62E-02	6,85E-03	6,78E-04	-3,17E-02
ADPm[1]	[kg Sb eq.]	5,70E-04	1,53E-05	6,77E-07	0,00E+00	0,00E+00	1,16E-05	1,79E-07	2,67E-08	-5,93E-05
ADPf[1]	[MJ]	1,17E+03	7,91E+01	3,10E+00	0,00E+00	0,00E+00	6,01E+01	6,50E+00	7,46E-01	-6,76E+01
WDP[1]	[m^3 world eq. deprived]	3,17E+01	4,22E-01	6,58E-02	0,00E+00	0,00E+00	3,21E-01	1,84E-02	3,13E-03	-1,49E+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]	1,11E-05	5,20E-07	2,50E-08	0,00E+00	0,00E+00	3,95E-07	1,28E-07	1,26E-08	-7,56E-07
IRP[2]	[kBq U235 eq.]	2,89E+00	3,28E-02	1,44E-03	0,00E+00	0,00E+00	2,50E-02	1,09E-03	5,95E-04	-5,13E-01
ETP-fw[1]	[CTUe]	5,53E+02	9,34E+00	1,15E+00	0,00E+00	0,00E+00	7,10E+00	3,55E-01	5,79E-02	-1,84E+01
HTP-c[1]	[CTUh]	4,97E-08	8,63E-10	2,20E-10	0,00E+00	0,00E+00	6,56E-10	5,07E-11	6,31E-12	-2,27E-09
HTP-nc[1]	[CTUh]	2,19E-06	5,11E-08	1,22E-08	0,00E+00	0,00E+00	3,88E-08	8,04E-10	1,40E-10	-6,74E-08
SQP[1]	-	2,53E+03	8,01E+01	2,64E+00	0,00E+00	0,00E+00	6,09E+01	4,34E-01	1,80E+00	-1,59E+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]	8,97E+02	1,23E+00	6,73E-02	0,00E+00	0,00E+00	9,34E-01	4,12E-02	2,13E-02	-4,16E+01
PERM	[MJ]	4,47E+02	0,00E+00	-4,47E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,34E+03	1,23E+00	-4,47E+02	0,00E+00	0,00E+00	9,34E-01	4,12E-02	2,13E-02	-4,16E+01
PENRE	[MJ]	1,24E+03	8,41E+01	3,32E+00	0,00E+00	0,00E+00	6,39E+01	6,91E+00	7,94E-01	-7,10E+01
PENRM	[MJ]	1,90E+01	0,00E+00	-1,90E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,26E+03	8,41E+01	-1,57E+01	0,00E+00	0,00E+00	6,39E+01	6,91E+00	7,94E-01	-7,10E+01
SM	[kg]	1,03E+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
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]	1,15E+00	1,25E-02	1,91E-03	0,00E+00	0,00E+00	9,49E-03	5,64E-04	1,11E-04	-3,78E-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]	3,23E-02	5,30E-04	2,23E-05	0,00E+00	0,00E+00	4,03E-04	4,56E-05	4,62E-06	-4,72E-04
NHWD	[kg]	7,11E+01	6,87E+00	3,78E-01	0,00E+00	0,00E+00	5,22E+00	4,42E-03	1,00E+01	-1,10E+00
RWD	[kg]	1,73E-03	2,19E-05	9,59E-07	0,00E+00	0,00E+00	1,67E-05	6,85E-07	3,82E-07	-2,75E-04
CRU	[kg]	0,00E+00	0,00E+00	2,71E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,64E-01	0,00E+00	1,18E-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]	4,37E-02	0,00E+00	4,65E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	9,04E-02	0,00E+00	1,53E+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]	1,07E+01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

LCA results for EW0181 Rust

ENVIRONMENTAL IMPACTS PER TONNE										
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	5,23E+01	5,26E+00	4,03E+01	0,00E+00	0,00E+00	3,99E+00	5,03E-01	5,82E-02	-4,64E+00
GWP-fossil	[kg CO_2 eq.]	8,51E+01	5,25E+00	1,02E+00	0,00E+00	0,00E+00	3,99E+00	5,03E-01	5,82E-02	-4,62E+00
GWP-biogenic	[kg CO_2 eq.]	-3,29E+01	1,13E-03	3,93E+01	0,00E+00	0,00E+00	8,59E-04	5,06E-05	2,08E-05	-1,20E-02
GWP-luluc	[kg CO_2 eq.]	7,02E-02	1,96E-03	9,75E-05	0,00E+00	0,00E+00	1,49E-03	5,14E-05	2,46E-05	-6,15E-03
ODP	[kg CFC 11 eq.]	3,78E-06	1,19E-07	4,37E-09	0,00E+00	0,00E+00	9,06E-08	7,47E-09	7,61E-10	-7,87E-08
AP	[mol H^+ eq.]	8,81E-01	1,28E-02	1,31E-03	0,00E+00	0,00E+00	9,70E-03	4,49E-03	4,77E-04	-3,59E-02
EP-freshwater	[kg P eq.]	1,03E-03	4,13E-05	2,82E-06	0,00E+00	0,00E+00	3,14E-05	1,76E-06	7,26E-07	-1,67E-04
EP-marine	[kg N eq.]	2,38E-01	3,29E-03	5,39E-04	0,00E+00	0,00E+00	2,50E-03	2,09E-03	2,04E-04	-1,00E-02
EP-terrestrial	[mol N eq.]	2,65E+00	3,64E-02	5,76E-03	0,00E+00	0,00E+00	2,76E-02	2,29E-02	2,24E-03	-1,36E-01
POCP	[kg NMVOC eq.]	7,82E-01	2,14E-02	1,81E-03	0,00E+00	0,00E+00	1,62E-02	6,85E-03	6,78E-04	-3,29E-02
ADPm[1]	[kg Sb eq.]	5,00E-04	1,53E-05	6,77E-07	0,00E+00	0,00E+00	1,16E-05	1,79E-07	2,67E-08	-6,16E-05
ADPf[1]	[MJ]	9,89E+02	7,91E+01	3,10E+00	0,00E+00	0,00E+00	6,01E+01	6,50E+00	7,46E-01	-6,98E+01
WDP[1]	[m^3 world eq. deprived]	2,36E+01	4,22E-01	6,58E-02	0,00E+00	0,00E+00	3,21E-01	1,84E-02	3,13E-03	-1,54E+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]	1,06E-05	5,20E-07	2,50E-08	0,00E+00	0,00E+00	3,95E-07	1,28E-07	1,26E-08	-7,83E-07
IRP[2]	[kBq U235 eq.]	2,89E+00	3,28E-02	1,44E-03	0,00E+00	0,00E+00	2,50E-02	1,09E-03	5,95E-04	-5,29E-01
ETP-fw[1]	[CTUe]	1,37E+03	9,34E+00	1,15E+00	0,00E+00	0,00E+00	7,10E+00	3,55E-01	5,79E-02	-1,91E+01
HTP-c[1]	[CTUh]	4,99E-08	8,63E-10	2,20E-10	0,00E+00	0,00E+00	6,56E-10	5,07E-11	6,31E-12	-2,35E-09
HTP-nc[1]	[CTUh]	4,05E-06	5,11E-08	1,22E-08	0,00E+00	0,00E+00	3,88E-08	8,04E-10	1,40E-10	-6,93E-08
SQP[1]	-	2,09E+03	8,01E+01	2,64E+00	0,00E+00	0,00E+00	6,09E+01	4,34E-01	1,80E+00	-1,63E+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]	9,10E+02	1,23E+00	6,73E-02	0,00E+00	0,00E+00	9,34E-01	4,12E-02	2,13E-02	-4,23E+01
PERM	[MJ]	4,47E+02	0,00E+00	-4,47E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,36E+03	1,23E+00	-4,47E+02	0,00E+00	0,00E+00	9,34E-01	4,12E-02	2,13E-02	-4,23E+01
PENRE	[MJ]	1,05E+03	8,41E+01	3,32E+00	0,00E+00	0,00E+00	6,39E+01	6,91E+00	7,94E-01	-7,33E+01
PENRM	[MJ]	1,90E+01	0,00E+00	-1,90E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,07E+03	8,41E+01	-1,57E+01	0,00E+00	0,00E+00	6,39E+01	6,91E+00	7,94E-01	-7,33E+01
SM	[kg]	5,95E+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]	8,79E-01	1,25E-02	1,91E-03	0,00E+00	0,00E+00	9,49E-03	5,64E-04	1,11E-04	-3,93E-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]	2,66E-02	5,30E-04	2,23E-05	0,00E+00	0,00E+00	4,03E-04	4,56E-05	4,62E-06	-4,88E-04
NHWD	[kg]	3,62E+01	6,87E+00	3,78E-01	0,00E+00	0,00E+00	5,22E+00	4,42E-03	1,00E+01	-1,14E+00
RWD	[kg]	1,64E-03	2,19E-05	9,59E-07	0,00E+00	0,00E+00	1,67E-05	6,85E-07	3,82E-07	-2,84E-04
CRU	[kg]	0,00E+00	0,00E+00	2,71E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	4,20E-04	0,00E+00	1,18E-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]	1,12E-04	0,00E+00	4,65E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	2,31E-04	0,00E+00	1,53E+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]	1,07E+01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Additional information

GWP-GHG

GWP-GHG is equal to GWP-total, except that the characterization factor for biogenic CO_2 emissions is set to zero.

GHG IMPACT PER TONNE											
Product	**Parameter**	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
EW0180 Aks	GWP-GHG	[kg CO_2 eq.]	1,60E+02	5,26E+00	1,02E+00	0,00E+00	0,00E+00	3,99E+00	5,03E-01	5,82E-02	-4,49E+00
EW0181 Rust	GWP-GHG	[kg CO2 eq.]	9,16E+01	5,26E+00	1,02E+00	0,00E+00	0,00E+00	3,99E+00	5,03E-01	5,82E-02	-4,64E+00

LCA interpretation

Bricks account for approximately 99% of the total raw material input and are therefore the dominant contributor to all assessed environmental impact categories in module A1–A3 of the final products. The yellow bricks used for *EW0180 Aks* have higher process CO_2 emissions during firing than the red bricks used in *EW0181 Rust*, resulting in a significantly higher carbon footprint for *EW0180 Aks*. In addition, the yellow bricks are transported over nearly twice the distance of the red bricks, further increasing the overall environmental impacts of this product. The new packaging materials generally represent the highest contribution within module A3. However, the packaging materials overall influence remains minor compared to the impacts associated with brick production and transport.

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)	44,3	%
Gross density of products transported	1650-1750	kg/m^3
Capacity utilisation volume factor	-	-

Installation of the product in the building (A5)

Scenario information	Value	Unit
Packaging waste	5,70	kg
Packaging reused	27,14	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
EW0180 Aks recycled as gravel	948,46	kg
EW0181 Rust recycled as gravel	990	kg
Energy recovery from waste incineration	61,83	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+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

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General programme instructions
General Programme Instructions, version 3.0, spring 2025
www.epddanmark.dk

Technical Rules and Guidelines
Technical Rules and Guidelines, version 1.0, spring 2025
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"

Tiles & Bricks Europe (2020)
Internal Guidance Document on TBE PCR for Clay Construction Products

EN 16449
DS/EN 16449:2014 – "Wood and wood-based products - Calculation of the biogenic carbon content of wood and conversion to carbon dioxide"

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”