Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

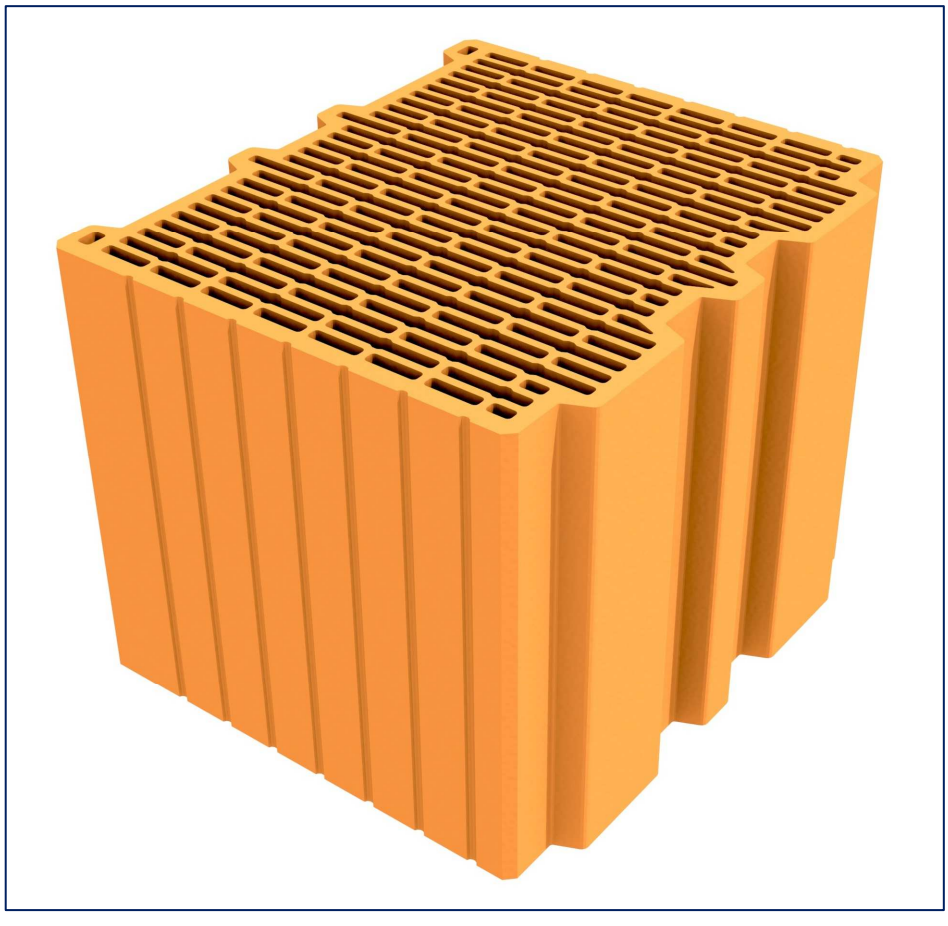
Fired clay brick

from

Leier Hungária Kft

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
Licensee:	N/A
Type of EPD:	EPD of a single product from a manufacturer/service provider.
EPD registration number:	EPD-IES-0026261:001
Publication date:	2025-12-22
Valid until:	2030-12-22

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com



General information

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): **PCR 2019:14 Construction products, version 2.0.1.**
PCR review was conducted by: The Technical Committee of the International EPD System. **A full list of members is available on www.environdec.com.** **The review panel may be contacted via support@environdec.com.**

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ **Individual EPD verification without a pre-verified LCA/EPD tool** Third-party verifier: ***Dr. Freddy Navarro, LCACHECK S.A.S de C.V., fnavarro@lcacheck.org*** Approved by: International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Leier Hungária Kft

Address: H-9024 Győr, Baross Gábor u. 42., Hungary

Contact: Andor Komlós

Address and contact information of the LCA practitioner commissioned by the EPD owner:
BM Certification Estonia OÜ; Väike-Paala 1, 11415, Tallinn, Estonia; info.ee@bmcertification.com.

Description of the organisation:
Leier Hungary is one of the leading manufacturers of construction materials in the country.
Its comprehensive product portfolio covers nearly the entire spectrum of building materials.
For over four decades, the company has been distinguished by its profitable operations, continuous growth, and ongoing modernization in Hungary.
Leier has consistently employed more than 1,000 professionals over the past several years.
Product Certificates and Declarations of Performance are available to view at Camp

Product-related or management system-related certifications: N/A

PRODUCT INFORMATION

Product name: Fired clay brick

UN CPC code:
UN CPC 37310 - Bricks, blocks, tiles and other ceramic goods of siliceous earths

Product description:
Fired clay masonry elements for building structural and non-structural walls.

Technology description including background system:
The clay is mixed with additional materials, such as sawdust, coal dust, or hydrated lime, then shaped, dried, and fired at a temperature of 900–1100°C. During firing, the added auxiliary materials burn out, and the clay transforms into a ceramic-like structure. During the manufacturing process, basalt and tuff are also added to the mixture to improve strength and sound insulation. The final product is durable, high-strength, and dimensionally stable.
Complies to EN 771-1:2011+A1:2015.

Technical purpose of product or process:
Bricks are used for the construction of structural and non-structural walls. Bricks have been a building material for over a thousand years, with houses lasting several hundred years still standing today. Their lifespan is at least 150 years. After a building is demolished, bricks, that are carefully dismantled in good condition can be recycled for reusing purposes in new masonry or alternatively as crushed brick aggregate.

Physical properties of the product:

Brick is a fired clay masonry element, that has good thermal mass, which means it slowly absorbs and releases heat, contributing to the thermal comfort of buildings. Thanks to its strength it is excellently suited for load-bearing purposes, and it also provides good sound isolation.
Name and location of production site:
Mátraderecske: 3246 Mátraderecske, Baross u. 51, Hungary
Devecser: 8460 Devecser, Sümegi út 93, Hungary

References to any relevant websites for more information: https://www.leier.hu/hu

CONTENT DECLARATION

Information on the environmental and hazardous/toxic properties of a substances contained in the product:
Products do not contain any REACH SVHC substances in amounts greater than 0,1% (1000 ppm).

Other information on substances with hazardous and toxic properties: N/A

The table below shows the content declaration for the prefabricated penetration free aluminium platform of this study as the worst-case scenario results.

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Clay	0,94243	0	0	0
Sawdust	0,03492	0	3,49	0,02
Coal dust	0,00836	0	0	0
Basalt / Tuff	0,00485	0	0	0
Hydrated lime	0,00002	0	0	0
Water	0,00942	0	0	0
TOTAL	1,00000	0	3,49	0,02

Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Plastic wrap	0,00032	0,05 %	0
TOTAL	0,00032	0,05 %	0

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO_2.

LCA INFORMATION

Functional unit / declared unit: 1 kg of Fired clay brick

Reference service life: Average service life 150 years.

Time representativeness: 2024.

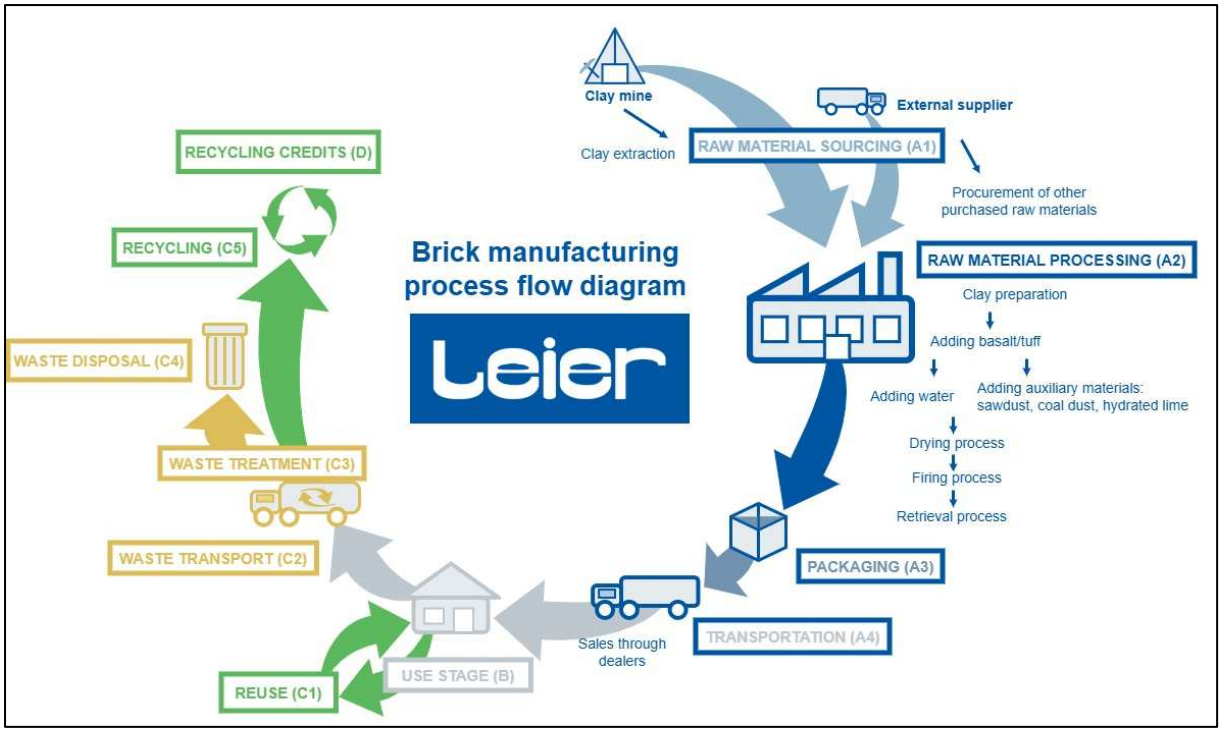
Geographical scope: The manufacturing facility and main suppliers are located in Hungary. The products are exported to the Hungary and European market.

Database(s) and LCA software used:
Calculation software - One Click LCA: EPD Generator - Ecoinvent 3.11 (IES PreVerified).

Environmental Impact Assessment Method: EN15804 reference package EF 3.1.

Description of system boundaries: Cradle to gate with options, A4–A5, and modules C1–C4, D (A1–A3, A4–A5 + C1–C4 + D).

System diagram:



More information: The results have been calculated per 1 kg of product.
The study does not exclude any modules or processes which are mandatory and the applied PCR.
The study does not exclude any hazardous materials or substances.
All relevant inputs and outputs from each unit process that have available data are considered in the calculation. No single unit process is disregarded if it accounts for more than 1% of the total mass or energy flows. Additionally, the total neglected input and output flows for each module do not surpass 5% of the energy usage or mass.

Target group: The aim of the study is to provide information and data for an EPD for both business-to-consumer and business-to-business communication.

Cut-off criteria: The <1% due difficulties to attributing and minor environmental impacts.
Allocation: In this study, as per EN 15804, allocation is conducted in the following order:
1. Allocation should be avoided.
2. Allocation should be based on physical properties (e.g. mass, volume) when the difference in revenue is small.
The allocations in the Ecoinvent 3.11 datasets used in this study follow the Ecoinvent system model 'Allocation, cut-off, EN15804'.

Electricity: Energy sources of the electricity used in manufacturing processes of module A3 are modelled using the electricity:
"Electricity, Hungary, 2022" - 0.26kg CO2 eq./kWh (82,8%) and "Electricity production, photovoltaic, 3kWp slanted-roof installation, multi-Si, panel, mounted (Reference product: electricity, low voltage)" - 0.0774 kg CO2 eq./kWh (17,2 %).
The GHG emission factor was estimated using the GWP-GHG indicator.

Explanation of assumptions regarding modules A4, A5, C and D:

A4: Transportation impacts occurred from final products delivery to construction site cover fuel direct exhaust emissions and environmental impacts of fuel production. The transportation distance is defined according to RTS PCR - from the place of manufacture to local market - Hungary. The distribution market is Europe (mainly the Hungary but also Central Europe), as the Hungary is the main and most distant distribution market, the transport calculations have been based on this scenario. According to the manufacturer, transportation doesn't cause losses as products are packaged properly. The final product is transported 200 km - estimate based on the deliveries organized by the company. Vehicle capacity utilization volume factor is assumed to be 1.

A5: Includes only packaging utilization. 100% of packaging materials sent to recycling.

B: This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

C1: There are no statistics that demonstrate usual practices of dismantling for reuse or recovery of the material at the end of its lifespan. A generic demolition process is assumed, with the use of heavy equipment, as well as the generation of air emissions during this activity, considering that 5 kWh of diesel fuel for machines is required for 1,000 kg.

C2: Transport to waste treatment site after dismantling using EURO 6 lorry average (100 km assumed).

C3, C4, D: EOL scenarios have been based on scenarios that 90% of bricks are sent to waste treatment and recycled or in some cases reused.
Packaging film and cardboard assumed to be recycled - material transferred to next product life.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	**X**	**X**	**X**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**X**	**X**	**X**	**X**	**X**
Geography	HUN, EU			HUN, EU		-	-	-	-	-	-	-	HUN, EU				HUN, EU
Specific data used	93%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	<10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Modules/processes/life-cycle stages declared noted with “X”. Modules/processes/life-cycle stages not declared marked as “ND”.

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3	Share on GWP-GHG results for A1-A3
Manufacturing of product	Collected data	Ecoinvent v3.11	2024	Primary data, Secondary data	0%	3%
Transport to manufacturing site	Database	Ecoinvent v3.11	2024	Primary data	0%	2%
Generation of electricity and energy used in the manufacturing of the product	Database	One Click LCA	2024	Primary data	83%	83%
Energy carriers used in the manufacturing of the product	Database	Ecoinvent v3.11	2024	Primary data	10%	10%
Production of packaging	Database	Ecoinvent v3.11	2024	Primary data	0%	2%
Total share of primary data, of GWP-GHG results for A1-A3					93%*	100%

*The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Data quality assessment

The EPD covers prefabricated aluminium screens with ballast manufactured in 2024. Production is a discontinuous process in which all components are mechanically mixed in batches. Primary data was collected directly from the manufacturer and suppliers, while background data was sourced from Ecoinvent v3.11.

The quality of the data has been assessed according to EN 15804:2012+A2:2019, Annex E, and EN 15941. Using the semi-quantitative evaluation criteria for data quality (DQR) proposed by the European Commission in its Environmental Footprint Guide, the following results were obtained:

- Temporal representativeness (TiR): Very good.
- Geographical representativeness (GeR): Fair.
- Technological representativeness (TeR): Good.

Overall, the data quality is rated between “good” and “very good.” No datasets assessed were rated “very poor.” The assessed datasets together represent more than 80% of the results of each declared environmental impact indicator, ensuring that the EPD is based on sufficiently robust and reliable data.

Results of the environmental performance indicators

LCIA results includes infrastructure processes embedded in the generic LCI datasets used in modelling the entire life cycle of our products (A1-C4), which may include manufacturing, transportation and energy infrastructure plants outside Leier Hungária Kft direct control. Infrastructure processes of Leier Hungária Kft manufacturing plants are excluded. Characterization factors of EN15804 are based on EF 3.1.

Mandatory impact category indicators according to EN 15804:2012+A2:2019

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	2,95E-02	3,04E-02	3,75E-05	1,81E-03	1,52E-02	6,08E-02	8,57E-03	-4,33E-04
GWP-fossil	kg CO_2 eq.	9,34E-02	3,04E-02	1,68E-05	1,81E-03	1,52E-02	3,25E-03	2,18E-03	-4,38E-04
GWP-biogenic	kg CO_2 eq.	-6,39E-02	6,39E-06	2,07E-05	3,45E-07	3,19E-06	5,75E-02	6,39E-03	4,74E-06
GWP-luluc	kg CO_2 eq.	2,23E-05	1,14E-05	2,65E-08	1,85E-07	5,69E-06	3,33E-07	4,74E-06	5,15E-07
ODP	kg CFC 11 eq.	4,70E-09	6,17E-10	1,02E-13	2,69E-11	3,08E-10	4,83E-11	4,12E-11	3,53E-11
AP	mol H^+ eq.	1,09E-04	6,62E-05	8,80E-08	1,62E-05	3,31E-05	2,91E-05	1,31E-05	-9,24E-06
EP-freshwater	kg P eq.	6,65E-04	2,11E-06	7,17E-09	5,83E-08	1,06E-06	1,05E-07	1,99E-07	1,53E-07
EP-marine	kg N eq.	3,15E-05	1,64E-05	4,72E-08	7,54E-06	8,19E-06	1,35E-05	5,25E-06	-8,92E-07
EP-terrestrial	mol N eq.	3,34E-04	1,77E-04	2,92E-07	8,25E-05	8,85E-05	1,48E-04	5,70E-05	-1,02E-05
POCP	kg NMVOC eq.	1,86E-04	1,12E-04	1,02E-07	2,47E-05	5,60E-05	4,43E-05	1,92E-05	-9,40E-07
ADP-minerals&metals*	kg Sb eq.	7,97E-08	9,91E-08	1,87E-10	6,51E-10	4,95E-08	1,17E-09	5,03E-09	3,99E-09
ADP-fossil*	MJ	1,57E+00	4,39E-01	1,36E-02	2,36E-02	2,19E-01	4,23E-02	3,69E-02	-2,11E-02
WDP*	m^3	1,56E-01	2,24E-03	4,76E-06	6,07E-05	1,12E-03	1,09E-04	7,84E-04	2,93E-04
Acronyms	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 = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption								

** The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

" The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks."

"The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3)."

Additional mandatory and voluntary impact category indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG[1]	kg CO_2 eq.	9,34E-02	3,04E-02	3,75E-05	1,81E-03	1,52E-02	3,25E-03	2,19E-03	-4,33E-04

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

Resource use indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	4,91E-02	7,86E-03	1,60E-05	1,48E-04	3,93E-03	2,66E-04	4,28E-04	-6,41E-05
PERM	MJ	7,12E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-6,41E-01	0,00E+00	0,00E+00
PERT	MJ	7,61E-01	7,86E-03	1,60E-05	1,48E-04	3,93E-03	-6,41E-01	4,28E-04	-6,41E-05
PENRE	MJ	1,54E+00	4,39E-01	7,19E-03	2,36E-02	2,19E-01	4,23E-02	3,70E-02	-7,27E-03
PENRM	MJ	2,08E-02	0,00E+00	-2,08E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,38E-02
PENRT	MJ	1,57E+00	4,39E-01	-1,36E-02	2,36E-02	2,19E-01	4,23E-02	3,70E-02	-2,11E-02
SM	kg	1,97E-04	2,01E-04	1,06E-06	9,76E-06	1,00E-04	1,75E-05	1,32E-05	-2,64E-06
RSF	MJ	2,17E-05	2,44E-06	8,30E-09	2,56E-08	1,22E-06	4,59E-08	1,81E-07	1,82E-08
NRSF	MJ	9,32E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	2,30E-04	6,30E-05	8,85E-08	1,51E-06	3,15E-05	2,71E-06	1,87E-05	3,17E-06
Acronyms	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 = Use of net fresh water								

The approach B was used to compute the primary energy indicators.

Waste indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	8,65E-04	6,36E-04	2,88E-06	2,65E-05	3,18E-04	4,75E-05	6,16E-05	1,96E-05
Non-hazardous waste disposed	kg	2,66E-02	1,35E-02	6,33E-05	3,85E-04	6,74E-03	6,92E-04	1,22E-03	1,08E-02
Radioactive waste disposed	kg	1,77E-06	1,46E-07	2,81E-10	2,47E-09	7,30E-08	4,43E-09	6,29E-09	2,25E-08

Output flow indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	3,20E-04	0,00E+00	0,00E+00	9,00E-01	0,00E+00	0,00E+00
Materials for energy recovery	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
Exported energy, electricity	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
Exported energy, thermal	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

Disclaimer: it is not encouraged to use the results of modules A1-A3 without taking into account the results of module C.

The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, non cancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

LCA results of the product - alternative end-of-life scenarios

In accordance with PCR 2019:14 v2.0.1, Section 4.8.4, if the declared end-of-life scenario is a mix of alternatives, the corresponding 100% scenarios shall also be declared. The reference end-of-life scenario assumes that 90% of product are sent to recycling and 10% to landfill.

Indicator and Unit	Landfill			Recycling		
	C3	C4	D	C3	C4	D
Global Warming Potential total kg CO_2e	0,00E+00	8,57E-02	0,00E+00	6,75E-02	0,00E+00	-5,11E-04
Global Warming Potential fossil kg CO_2e	0,00E+00	2,18E-02	0,00E+00	3,61E-03	0,00E+00	-5,16E-04
Global Warming Potential biogenic kg CO_2e	0,00E+00	6,39E-02	0,00E+00	6,39E-02	0,00E+00	4,76E-06
Global Warming Potential, LULUC kg CO_2e	0,00E+00	4,74E-05	0,00E+00	3,70E-07	0,00E+00	5,15E-07
Depletion potential of the stratospheric ozone layer kg CFC11e	0,00E+00	4,12E-10	0,00E+00	5,37E-11	0,00E+00	3,53E-11
Acidification potential, Accumulated Exceedance mol H+ eq.	0,00E+00	1,31E-04	0,00E+00	3,23E-05	0,00E+00	-1,03E-05
Eutrophication aquatic freshwater kg Pe	0,00E+00	1,99E-06	0,00E+00	1,17E-07	0,00E+00	1,53E-07
Eutrophication aquatic marine kg N eq.	0,00E+00	5,25E-05	0,00E+00	1,50E-05	0,00E+00	-1,01E-06
Eutrophication terrestrial mol N eq.	0,00E+00	5,70E-04	0,00E+00	1,64E-04	0,00E+00	-1,15E-05
Formation potential of tropospheric ozone kg NMVOC eq.	0,00E+00	1,92E-04	0,00E+00	4,92E-05	0,00E+00	-1,39E-06
Abiotic depletion potential (ADP-elements) for non fossil resources (+A2) kg Sbe	0,00E+00	5,03E-08	0,00E+00	1,30E-09	0,00E+00	3,99E-09
Abiotic depletion potential (ADP-fossil fuels) for fossil resources (+A2) MJ	0,00E+00	3,69E-01	0,00E+00	4,70E-02	0,00E+00	-2,11E-02
Water use m^3 deprived	0,00E+00	7,84E-03	0,00E+00	1,21E-04	0,00E+00	2,93E-04
GWP-GHG kg CO_2e	0,00E+00	2,19E-02	0,00E+00	3,61E-03	0,00E+00	-5,11E-04
Particulate matter emissions incidence	0,00E+00	1,05E-08	0,00E+00	8,35E-09	0,00E+00	-6,28E-11
Ionising radiation, human health kBq U-235eq	0,00E+00	2,57E-04	0,00E+00	2,00E-05	0,00E+00	8,22E-05
Eco-toxicity (freshwater) CTUe	0,00E+00	3,27E-01	0,00E+00	2,69E-02	0,00E+00	1,19E-02
Human toxicity, cancer effects CTUh	0,00E+00	4,41E-12	0,00E+00	3,68E-13	0,00E+00	8,96E-14
Human toxicity, non-cancer effects CTUh	0,00E+00	1,48E-10	0,00E+00	5,79E-12	0,00E+00	2,99E-12
Land use related impacts/ Soil quality dimensionless	0,00E+00	4,39E-01	0,00E+00	3,11E-03	0,00E+00	1,62E-03
Use of renewable primary energy resources as energy MJ	0,00E+00	4,28E-03	0,00E+00	2,96E-04	0,00E+00	-7,56E-05
Use of renewable primary energy resources as raw materials MJ	0,00E+00	0,00E+00	0,00E+00	-7,12E-01	0,00E+00	0,00E+00
Total use of renewable primary energy MJ	0,00E+00	4,28E-04	0,00E+00	-7,12E-01	0,00E+00	-7,56E-05
Use of non renewable primary energy as energy MJ	4,23E-02	3,70E-02	-7,27E-03	4,23E-02	3,70E-02	-7,27E-03
Use of non renewable primary energy as raw materials MJ	0,00E+00	0,00E+00	-1,38E-02	0,00E+00	0,00E+00	-1,38E-02
Total use of non renewable primary energy MJ	4,23E-02	3,70E-02	-2,11E-02	4,23E-02	3,70E-02	-2,11E-02
Use of secondary materials kg	4,23E-02	1,32E-05	0,00E+00	1,94E-05	0,00E+00	-3,32E-06
Use of renewable secondary fuels MJ	0,00E+00	1,81E-07	0,00E+00	5,10E-08	0,00E+00	1,82E-08
Use of non renewable secondary fuels MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water m^3	0,00E+00	1,87E-05	0,00E+00	3,01E-06	0,00E+00	3,17E-06
Hazardous waste disposed kg	0,00E+00	6,16E-04	0,00E+00	5,28E-05	0,00E+00	1,96E-05
Non hazardous waste disposed kg	0,00E+00	1,22E-03	0,00E+00	7,69E-04	0,00E+00	1,07E-02
Radioactive waste disposed kg	0,00E+00	6,29E-09	0,00E+00	4,92E-09	0,00E+00	2,25E-08
Components for re-use kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling kg	0,00E+00	0,00E+00	0,00E+00	1,00E+00	0,00E+00	0,00E+00
Materials for energy recovery kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported Energy MJ electric	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported Energy MJ thermal	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
eq	equivalent
CPC	Central product classification
SVHC	Substances of Very High Concern
ND	Not Declared

References

Life-Cycle Assessment Background Report in accordance with EN 15804+A2 & ISO 14025 / ISO 21930.

General Programme Instructions of the international EPD® system. Version 5.0. ww.environdec.com.

ISO 14020:2023 Environmental statements and programmes for products. Principles and general requirements.

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

EN 15804+A2 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

PCR 2019:14 Construction products, version 2.0.1.

UN CPC 37310 - Bricks, blocks, tiles and other ceramic goods of siliceous earths

LCA background report 22.12.2025.

Data references:

One Click LCA

Ecoinvent 3.11 database

Version History

Original Version of the EPD, 2025-12-22

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