



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Vertica® Block

AG Paving + Building Products Limited

EPD HUB, HUB-1401

Published on 17.05.2024, last updated on 17.05.2024, valid until 17.05.2029.



Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	AG Paving + Building Products Limited
Address	27 Crievehill Rd, Fivemiletown BT75 0SY, United Kingdom
Contact details	specifications@ag.uk.com
Website	https://ag.uk.com/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with modules C1-C4, D
EPD author	Michael Casey
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☒ External verification
EPD verifier	Edis Glogic, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Vertica® Block
Additional labels	Vertica Corner Basalt Vertica Corner Canelletto Vertica Corner Cashel Vertica Block Double Sided Basalt Vertica BBA Block Basalt
Product reference	Vertica Block
Place of production	Fivemiletown, BT75 0SY, United Kingdom.
Period for data	2022
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	- 3% to 23%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 cubic meter
Declared unit mass	1737 kg
GWP-fossil, A1-A3 (kgCO₂e)	1,92E2
GWP-total, A1-A3 (kgCO₂e)	1,62E2
Secondary material, inputs (%)	0.15
Secondary material, outputs (%)	93
Total energy use, A1-A3 (kWh)	491
Total water use, A1-A3 (m³e)	1.72

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Established over 60 years ago, AG Paving + Building Products Limited is a renowned and respected designer, developer, manufacturer and distributor of best-in-class walling, paving and facing brick for the commercial and domestic markets across the UK and Ireland. In Britain our products are sold through Builders Merchants, whilst in Northern Ireland and the Republic of Ireland we sell through our own wholly owned outlets as well as several other carefully chosen retail partners and Builders Merchants.

PRODUCT DESCRIPTION

The Anchor Vertica system is mortarless segmental retaining wall designed for steep, sloping hillsides and other traditionally difficult installation areas. Vertica walls can be built to virtually any height in incredibly tight spaces thanks to patented, built-in alignment locators and a near-vertical rise for less excavation and land loss. Typically used with geosynthetic reinforcement, Vertica blocks meet or exceed industry standards for strength and durability. Vertica wall systems can now be specified for machine installation – an exclusive first for AG in the UK and Ireland. Available in a Stone Cut finish in a variety of warm earth tone colours. AG have introduced a Solid Top Block – a double-sided block for finishing the final course of a normal Vertica® retaining wall when both sides would be visible. There are 5 individual products covered under this EPD. Also included are the number of units per m3.

Product Name	No. of Units per m3
Vertica Corner Basalt	39.07
Vertica Corner Canelletto	39.07
Vertica Corner Cashel	39.07
Vertica Block Double Sided Basalt	39.07
Vertica BBA Block Basalt	39.07

Further information can be found at <https://ag.uk.com/>.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	N/A	
Minerals	100	UK/EU
Fossil materials	N/A	
Bio-based materials	N/A	

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	-
Biogenic carbon content in packaging, kg C	8.1

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 cubic meter
Mass per declared unit	1737 kg
Functional unit	N/A
Reference service life	60 years

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
x	x	x	MND	MND	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x	
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recycling

Modules not declared = MND. Modules not relevant = MNR.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission. The product stages environmental impacts encompass the manufacturing of raw

materials and ancillary materials, including fuel usage by machines and waste handling at manufacturing facilities. Material losses during production processes and electricity transmission are also considered. However, packaging materials are excluded from the study due to their minimal proportion of the product by mass and environmental impact. The precise combination of aggregates, binder material, water, and admixtures are discharged from hoppers into a mixer. Afterward, the blend is placed into a mould. The resulting product is subsequently conveyed to a humidity chamber where it gains strength as it cures. The humidity chamber is supplied by heat from dedicated LPG burners. This accelerates the curing process, supplementing the naturally occurring exothermic process. Once sufficiently cured, the blocks are removed from the humidity chamber, split to create the decorative profile, and stacked and packaged. Water loss during manufacture is minimal. Material waste during manufacture is negligible. Straps are secured around the blocks.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions. Transportation and installation (A4-A5) is not included within the scope of this EPD.

PRODUCT USE AND MAINTENANCE (B1-B7)

Product use and maintenance (B1-B7) is not included within the scope of this EPD. Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

C1: In the UK, concrete bricks are manually removed without the use of machinery.

C2: According to the UK Governments Statistics on Construction Waste website, 93% of the product is reused on site while the remaining 7% is transported 50km to a waste processing site for landfilling. This study has informed the assumptions made in relation to end of life calculations. Data Source:

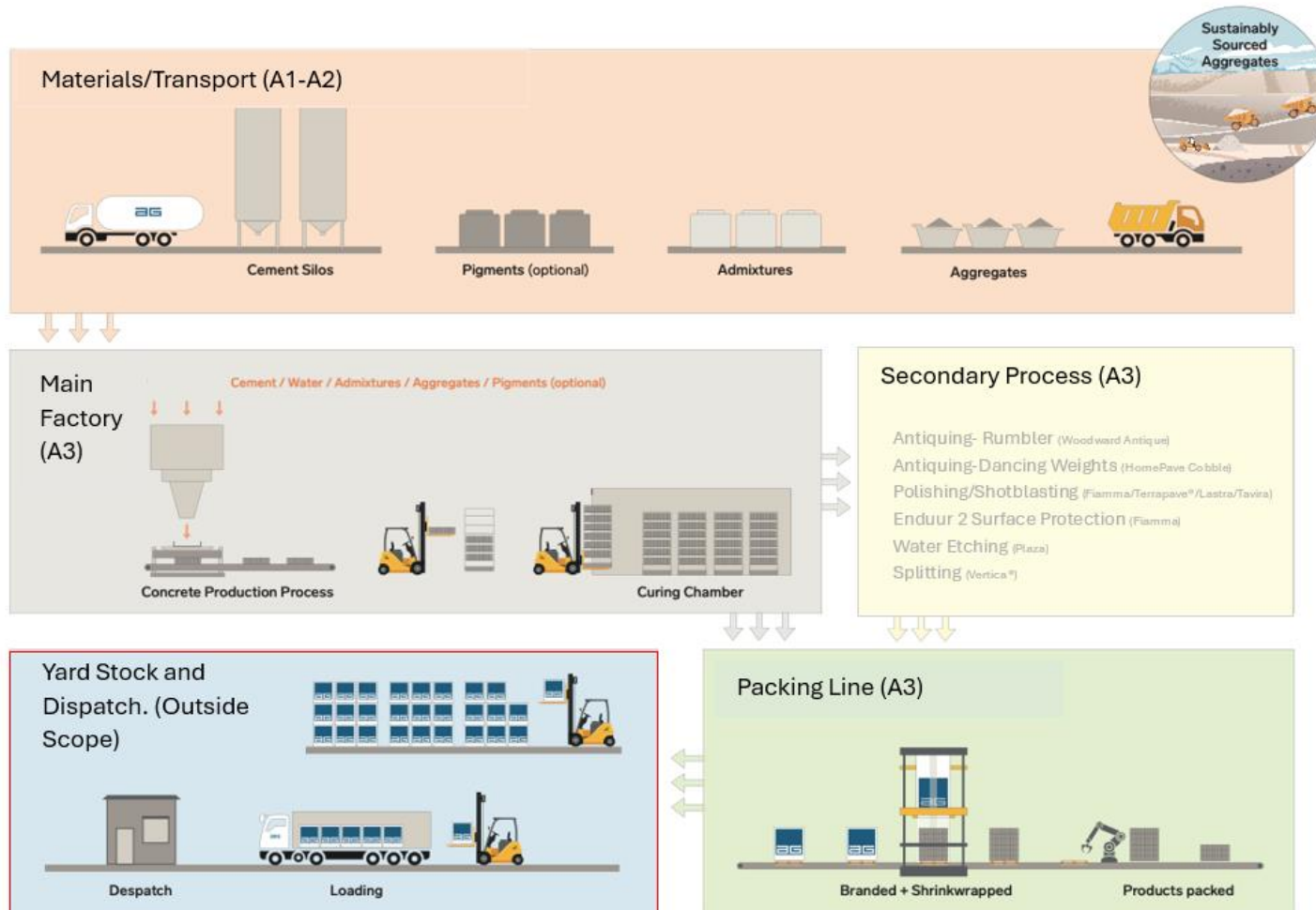
<https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste#recovery-rate-from-non-hazardous-construction-and-demolition-cd-waste>

C3: All materials, whether processed on-site or at a waste treatment facility, will undergo crushing.

C4: It is assumed that 10% of the materials leaving the site will end up in a landfill because they are too fine to be used as aggregates.

D: Concrete reused at end-of-life replaces virgin aggregate in the production of new products.

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The environmental impacts of the wooden pallets have also been considered in this EPD. Any additional packaging was excluded.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	Allocated by mass or volume
Packaging materials	Not applicable
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Averaged by shares of total mass

Variation in GWP-fossil for A1-A3	-3% to 23%
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The Fivemiletown production location is where Vertica walling, covered by this EPD, is manufactured. All products share the same mix design, with only minor differences in pigmentation and finish. The primary data used to calculate the average impacts for all through mix concrete block products (listed at the start of this document) represents their manufacturing. The variability of the primary data or emissions between the products did not exceed 10% of the relevant data (the highest compared to the lowest). Averaging was achieved by calculating the total amount of the 5 Vertica product made in 2022 and allocating the percentage weight produced of each product. These products and their weighting within the average (as a %) are as follows:

Product Name	% of Allocation
Vertica Corner Basalt	9.46
Vertica Corner Canelletto	3.84
Vertica Corner Cashel	6.75
Vertica Block Double Sided Basalt	2.58
Vertica BBA Block Basalt	77.38

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. Ecoinvent and One Click LCA databases were used as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF VP-029-C

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total1)	kg CO2e	1,38E+02	1,64E+00	2,25E+01	1,62E+02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,03E+00	1,33E+01	1,29E-01	-1,35E+01
GWP – fossil	kg CO2e	1,38E+02	1,64E+00	5,23E+01	1,92E+02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,02E+00	1,24E+00	1,28E-01	-1,35E+01
GWP – biogenic	kg CO2e	2,47E-02	6,36E-04	-2,98E+01	-2,97E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,08E-04	1,20E+01	1,13E-03	-4,17E-02
GWP – LULUC	kg CO2e	3,25E-02	6,15E-04	3,96E-02	7,27E-02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,00E-04	1,68E-03	1,30E-04	-1,89E-02
Ozone depletion pot.	kg CFC-11e	3,16E-06	3,77E-07	1,03E-05	1,38E-05	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,37E-07	2,71E-07	3,89E-08	-1,08E-06
Acidification potential	mol H+e	3,25E-01	7,06E-03	1,59E-01	4,92E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,18E-03	1,00E-02	1,08E-03	-8,66E-02
EP-freshwater2)	kg Pe	4,89E-04	1,30E-05	5,63E-04	1,06E-03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,33E-06	5,76E-05	1,98E-06	-7,86E-04
EP-marine	kg Ne	9,45E-02	2,08E-03	2,71E-02	1,24E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,25E-03	3,20E-03	3,69E-04	-1,86E-02
EP-terrestrial	mol Ne	1,09E+00	2,30E-02	3,03E-01	1,42E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,38E-02	3,49E-02	4,06E-03	-2,41E-01
POCP (“smog”)3)	kg NMVOCe	2,68E-01	7,26E-03	1,03E-01	3,79E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,23E-03	9,69E-03	1,17E-03	-6,20E-02
ADP-minerals & metals4)	kg Sbe	1,03E-04	4,22E-06	1,11E-04	2,19E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,49E-06	3,14E-06	4,30E-07	-1,28E-04
ADP-fossil resources	MJ	5,15E+02	2,45E+01	8,25E+02	1,36E+03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,52E+01	2,74E+01	2,96E+00	-1,98E+02
Water use5)	m3e depr.	1,41E+01	1,10E-01	6,76E+00	2,10E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,02E-02	1,14E+00	1,72E-02	-2,51E+01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential;

5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	2,08E-06	1,78E-07	1,19E-06	3,44E-06	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,18E-08	1,41E-07	2,20E-08	-1,09E-06
Ionizing radiation6)	kBq U235e	3,29E+00	1,19E-01	1,02E+01	1,36E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,89E-02	3,38E-01	1,40E-02	-3,06E+00
Ecotoxicity (freshwater)	CTUe	2,39E+02	2,17E+01	5,32E+02	7,93E+02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,28E+01	1,94E+01	2,40E+00	-2,42E+02
Human toxicity, cancer	CTUh	9,40E-09	5,62E-10	4,18E-08	5,18E-08	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,85E-10	1,25E-09	9,40E-11	-1,35E-08
Human tox. non-cancer	CTUh	1,85E-07	2,15E-08	3,09E-07	5,15E-07	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,29E-08	4,20E-08	1,47E-09	-2,51E-07
SQP7)	-	1,45E+02	2,59E+01	2,53E+03	2,70E+03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,14E+01	3,58E+01	7,21E+00	-1,82E+02

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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;

7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	3,83E+01	2,91E-01	2,17E+02	2,56E+02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,13E-01	1,89E+00	5,09E-02	-1,86E+01
Renew. PER as material	MJ	3,11E-02	0,00E+00	2,61E+02	2,61E+02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	3,83E+01	2,91E-01	4,78E+02	5,17E+02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,13E-01	1,89E+00	5,09E-02	-1,86E+01
Non-re. PER as energy	MJ	5,15E+02	2,45E+01	8,07E+02	1,35E+03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,52E+01	2,74E+01	2,96E+00	-1,98E+02
Non-re. PER as material	MJ	1,80E-01	0,00E+00	1,72E+01	1,74E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	5,15E+02	2,45E+01	8,25E+02	1,36E+03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,52E+01	2,74E+01	2,96E+00	-1,98E+02
Secondary materials	kg	2,62E+00	7,11E-03	1,03E+00	3,66E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,01E-03	1,27E-02	1,06E-03	-2,12E-01
Renew. secondary fuels	MJ	6,21E+01	7,28E-05	8,80E+00	7,09E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,47E-05	1,02E-04	4,09E-05	-1,48E-03
Non-ren. secondary fuels	MJ	9,36E+01	0,00E+00	0,00E+00	9,36E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m ³	1,57E+00	3,15E-03	1,53E-01	1,72E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,92E-03	2,29E-02	3,18E-03	-6,06E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	8,07E-01	3,15E-02	9,96E-01	1,83E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,74E-02	3,83E-02	0,00E+00	-1,14E+00
Non-hazardous waste	kg	2,10E+01	5,24E-01	1,69E+01	3,84E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,07E-01	1,24E+02	1,22E+01	-3,46E+01
Radioactive waste	kg	8,70E-04	1,65E-04	5,98E-03	7,01E-03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,05E-04	7,12E-05	0,00E+00	-1,01E-03

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	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	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	1,62E+03	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO2e	1,01E+01	1,62E+00	5,19E+01	6,36E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,02E+00	1,22E+00	1,26E-01	-1,31E+01
Ozone depletion Pot.	kg CFC-11e	7,81E-07	2,98E-07	8,19E-06	9,27E-06	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,88E-07	2,17E-07	3,09E-08	-8,98E-07
Acidification	kg SO2e	5,96E-02	5,49E-03	1,32E-01	1,97E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,25E-03	7,68E-03	8,19E-04	-6,73E-02
Eutrophication	kg PO43e	2,24E-02	1,23E-03	2,91E-02	5,28E-02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,37E-04	4,24E-03	2,68E-04	-3,23E-02
POCP ("smog")	kg C2H4e	3,52E-03	2,14E-04	7,54E-03	1,13E-02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,32E-04	3,14E-04	3,36E-05	-4,52E-03
ADP-elements	kg Sbe	8,73E-05	4,10E-06	1,10E-04	2,02E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,41E-06	3,05E-06	4,15E-07	-1,26E-04
ADP-fossil	MJ	1,42E+02	2,45E+01	8,24E+02	9,91E+02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,52E+01	2,74E+01	2,96E+00	-1,98E+02

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? [Read more online](#)

This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Edis Glogic, as an authorized verifier acting for EPD Hub Limited
17.05.2024

