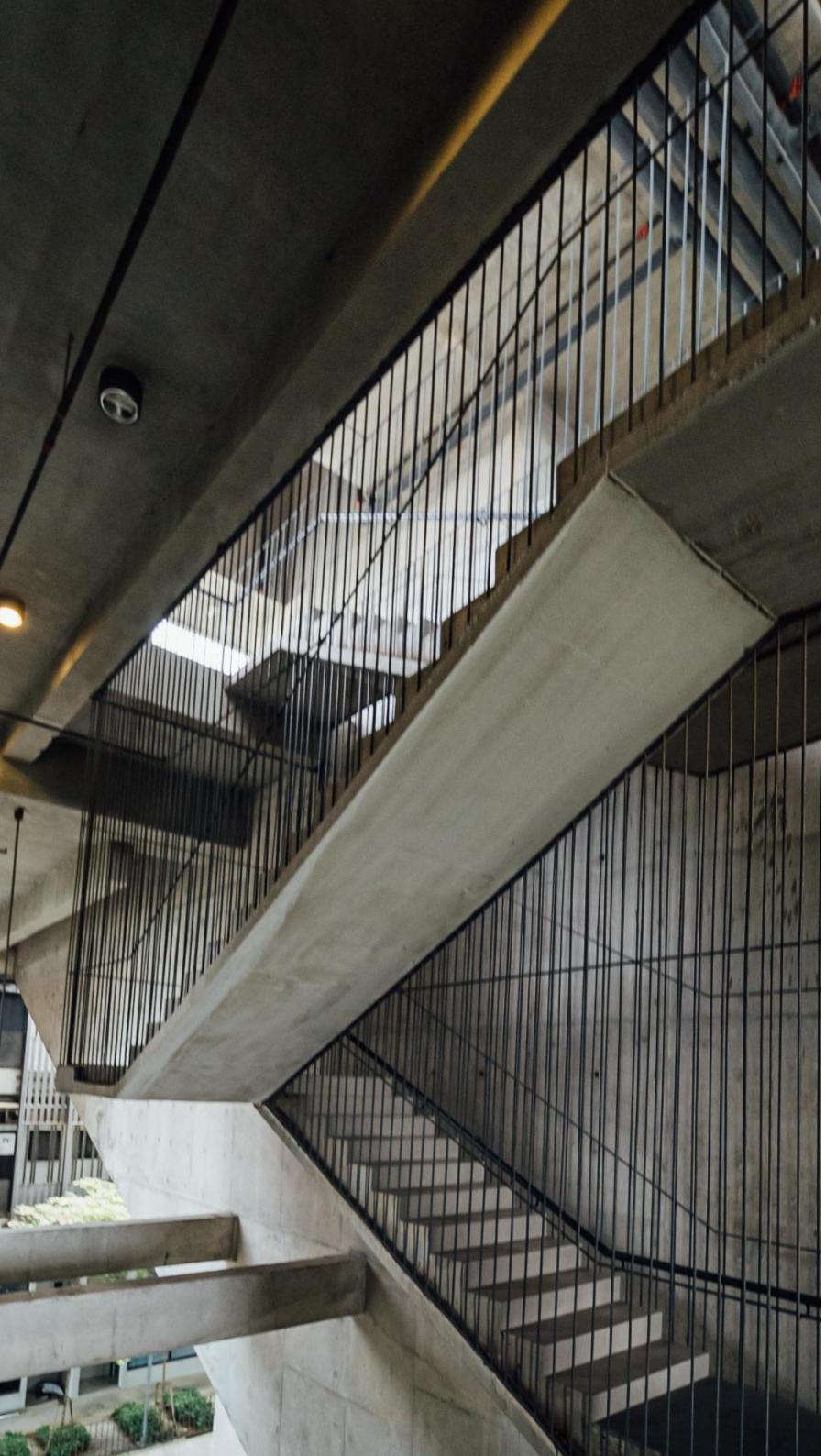


ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Ready-mix concrete - ECOConcrete C32/40
Buildcon Concrete Sdn Bhd

EPD HUB, HUB-3766
Published on 03.08.2025, last updated on 03.08.2025, valid until 02.08.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Buildcon Concrete Sdn Bhd
Address	33rd Floor, Menara YTL, 205 Jalan Bukit Bintang, 55100 Kuala Lumpur, Malaysia.
Contact details	communication@ytlcement.com.my
Website	www.ytlcement.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025 EN 16757 Product Category Rules for concrete and concrete elements
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with modules C1-C4, D
EPD author	Nursyuhada Binti Che Husain, YTL Cement
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Sarah Curpen, as an authorized verifier acting for EPD Hub Limited

This EPD is intended for business-to-business and/or business-to-consumer communication. 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	Ready-mix concrete - ECOConcrete C32/40
Additional labels	ECOConcrete C32/40
Product reference	Z4040MB-SM and Z4050MB-SM
Place(s) of raw material origin	Malaysia
Place of production	Johor, Malaysia
Place(s) of installation and use	Malaysia
Period for data	1 January 2024 - 31 December 2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	<10%
GTIN (Global Trade Item Number)	Not relevant
NOBB (Norwegian Building Product Database)	Not relevant
A1-A3 Specific data (%)	9,42

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 cubic meter of ready-mix concrete
Declared unit mass	2375 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,10E+02
GWP-total, A1-A3 ($kgCO_2e$)	2,10E+02
Secondary material, inputs (%)	8,01
Secondary material, outputs (%)	35
Total energy use, A1-A3 (kWh)	394
Net freshwater use, A1-A3 (m^3)	93,9

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

YTL Cement is the leading provider of ready-mixed concrete in Malaysia, with an extensive network of over 70 batching plants and a fleet of more than 1,000 mixer trucks. This robust infrastructure enables us to deliver reliable concrete solutions to projects across Peninsular Malaysia.

We are committed to delivering high-quality products tailored to meet the diverse needs of our customers. Our Construction Development Lab (CDL) plays a key role in this commitment, offering expert technical support and developing customized mix designs for a wide range of applications.

As part of our dedication to sustainable construction, we offer ECOConcrete — a range concrete mixes with embodied carbon at least 20% lower than conventional CEM I concrete. Through these innovative products, we aim to minimize the environmental impact of construction and support the industry's shift toward greener building practices.

PRODUCT DESCRIPTION

Concrete is essential in every construction independent of its size including buildings, bridges, roads, dams and ports. Ready-mix concrete is made by mixing cement, coarse and fine aggregates and water in controlled proportions. Chemical admixtures may be added to enhance specific properties of the fresh and hardened concrete, such as workability, durability, or early and final strength. Concrete is workable right after production so that it can be transported, poured, pumped, installed, compacted on project sites.

Ready-mixed concrete may be cast into any conceivable shape. Over time, it hardens and develops strength. Hardened concrete can carry substantial compressive loads by itself but is more frequently reinforced to increase its tensile and flexural strength.

C32/40 concrete is a commonly used ready-mixed concrete designed to achieve a cube compressive strength of 40 MPa at 28 days. It is manufactured in accordance with MS EN206 and MS523. This concrete grade is widely applied in structural elements such as columns, beams, slabs, and infrastructure works, where reliable load-bearing capacity and long-term performance are required. Mix designs can incorporate supplementary cementitious materials such as ground granulated blast furnace slag to reduce environmental impact and improve durability.

This EPD covers two mix designs—Z4040MB-SM and Z4050MB-SM—both of which fall under the same concrete strength class, classified as C32/40. Z4040MB-SM is formulated with a lower sand-to-aggregate (S/A) ratio and has a slump of 80 ± 25 mm. In comparison, Z4050MB-SM incorporates a slightly higher S/A ratio to achieve a higher target slump of 100 ± 25 mm. This mix is optimised for improved workability, making it more suitable for pumping operations and large-volume concrete placements.

Further information can be found at:
www.ytlcement.com

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	100	Malaysia
Fossil materials	0	-
Bio-based materials	0	-

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	-

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 cubic meter of ready-mix concrete
Mass per declared unit	2375 kg
Functional unit	-
Reference service life	-

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		
×	×	×	MND	MND	MND	MND	MND	MND	MND	MND	MND	×	×	×	×	×		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered during the product stage include the manufacturing of raw materials and ancillary inputs used in production. This stage also accounts for fuel consumption by machinery, waste generated during manufacturing, and the associated handling processes at production facilities. Additionally, the analysis incorporates material losses occurring throughout the manufacturing process.

Ready-mix concrete production begins with the transportation of binders, aggregates, and additives to the batching plant, where they are stored in silos and storage bays. The aggregates are weighed and transferred to the concrete mixer, where cement is added and dry mixing takes place. Water and chemical additives are then added, followed by wet mixing to achieve the final concrete consistency. Once mixing is complete, the concrete is discharged into the drum of a mixer truck, which transports it to construction sites. Ready-mix concrete is delivered in bulk, without packaging.

TRANSPORT AND INSTALLATION (A4-A5)

This EPD does not cover transport (A4) and installation (A5).

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover product use and maintenance.

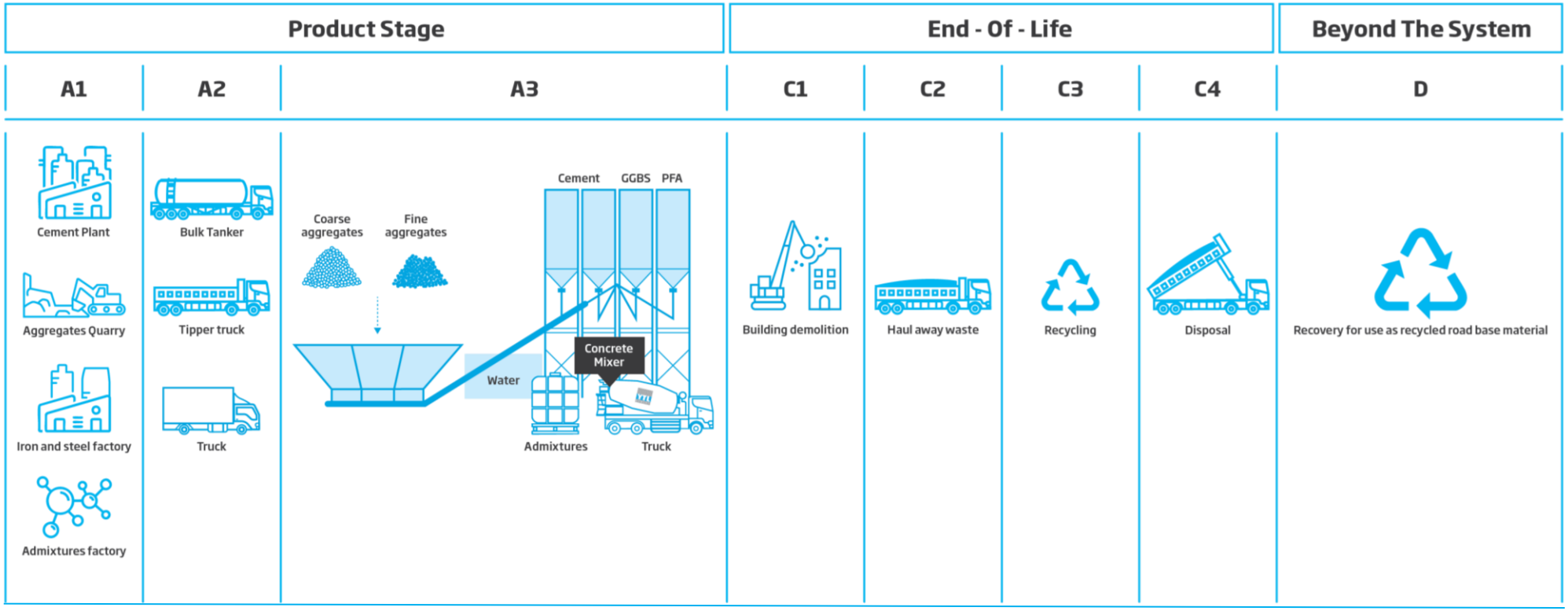
PRODUCT END OF LIFE (C1-C4, D)

At the end-of-life stage, it is assumed that 100% of the product waste is collected along with other construction and demolition waste. The demolition process requires energy, primarily diesel fuel for construction machinery. According to Bozdağ and Seçer (2007), the average energy consumption for demolition is approximately 10 kWh/m^2. Based on the Level(s) framework, the average mass of a reinforced concrete building is estimated at 1,000 kg/m^2. Therefore, the energy demand for demolition is calculated as 10 kWh / 1,000 kg, resulting in an average of 0.01 kWh/kg. (C1)

It is assumed that no mass loss occurs during the use phase; therefore, the product is considered to retain its original weight at end-of-life. The estimated transportation distance to the nearest disposal facility is 50 km, and by lorry, which is the most commonly used method (C2).

According to data issued by the Construction Industry Development Board, 35% of demolished concrete is recycled into road base, while the remainder is sent to inert landfills.

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 production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

All industrial processes from raw material acquisition and pre-processing, production, and end-of-life management are included. For easier modelling and because of lack of accuracy in available modelling resources many constituents under 0,1% of product mass are excluded. Further, water used for cleaning and maintenance of the equipment, transportation and waste streams of the packaging materials used for delivering the raw materials to the factory are omitted since the quantified mass contribution is less than 0.1%. The production of capital equipment and infrastructure, personnel-related activities, energy and water use related to company management and sales activities are excluded.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

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	No allocation
Packaging material	Not applicable
Ancillary materials	No allocation
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on average results of product group - by total volume
Variation in GWP-fossil for A1-A3, %	<10%

This is grouping by average results of two mix designs by total volume (m^3).

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. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2‘.

ENVIRONMENTAL IMPACT DATA

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

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	2,10E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	8,56E+00	2,30E+01	3,64E+00	9,64E+00	-8,33E+00
GWP – fossil	kg CO_2e	2,10E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	8,56E+00	2,30E+01	3,64E+00	9,64E+00	-8,32E+00
GWP – biogenic	kg CO_2e	1,66E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,55E-03	-3,71E-04	-3,07E-03	-7,93E-03
GWP – LULUC	kg CO_2e	4,69E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	8,77E-04	8,12E-03	3,73E-04	5,51E-03	-7,52E-03
Ozone depletion pot.	kg CFC-$_{11}$e	2,83E-06	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,31E-07	4,57E-07	5,57E-08	2,79E-07	-6,48E-08
Acidification potential	mol H^+e	6,63E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	7,73E-02	7,18E-02	3,28E-02	6,83E-02	-5,08E-02
EP-freshwater[2)]	kg Pe	2,18E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,47E-04	1,52E-03	1,05E-04	7,92E-04	-2,53E-03
EP-marine	kg Ne	1,97E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,58E-02	2,42E-02	1,52E-02	2,61E-02	-1,20E-02
EP-terrestrial	mol Ne	2,15E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,92E-01	2,63E-01	1,67E-01	2,84E-01	-1,46E-01
POCP ("smog")[3)]	kg NMVOCe	6,31E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,17E-01	1,13E-01	4,97E-02	1,02E-01	-4,03E-02
ADP-minerals & metals[4)]	kg Sbe	1,03E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,07E-06	7,51E-05	1,30E-06	1,53E-05	-4,45E-05
ADP-fossil resources	MJ	1,37E+03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,12E+02	3,23E+02	4,76E+01	2,37E+02	-9,98E+01
Water use[5)]	m^3e depr.	1,72E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,80E-01	1,58E+00	1,19E-01	6,83E-01	-1,25E+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, EF 3.1

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	6,87E-06	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,20E-06	1,81E-06	7,11E-06	1,56E-06	-7,72E-07
Ionizing radiation[6)]	kBq U235e	4,02E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	4,96E-02	4,11E-01	2,11E-02	1,49E-01	-7,01E-01
Ecotoxicity (freshwater)	CTUe	3,84E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	6,17E+00	4,24E+01	2,62E+00	1,98E+01	-2,38E+01
Human toxicity, cancer	CTUh	3,96E-08	MND	MND	MND	MND	MND	MND	MND	MND	MND	8,80E-10	3,91E-09	3,74E-10	1,78E-09	-2,22E-09
Human tox. non-cancer	CTUh	1,37E-06	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,39E-08	2,03E-07	5,92E-09	4,08E-08	-6,49E-08
SQP[7)]	-	4,80E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	7,85E+00	1,92E+02	3,33E+00	4,66E+02	-9,35E+01

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-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	6,43E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	7,09E-01	5,58E+00	3,01E-01	2,28E+00	-9,09E+00
Renew. PER as material	MJ	0,00E+00	MND	MND	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	6,43E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	7,09E-01	5,58E+00	3,01E-01	2,28E+00	-9,09E+00
Non-re. PER as energy	MJ	1,35E+03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,12E+02	3,23E+02	4,76E+01	2,37E+02	-9,98E+01
Non-re. PER as material	MJ	2,72E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	-2,72E+01	0,00E+00
Total use of non-re. PER	MJ	1,38E+03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,12E+02	3,23E+02	4,76E+01	2,09E+02	-9,98E+01
Secondary materials	kg	1,90E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	4,65E-02	1,48E-01	1,98E-02	5,95E-02	-1,11E-01
Renew. secondary fuels	MJ	5,18E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,22E-04	1,87E-03	5,16E-05	1,23E-03	-7,68E-04
Non-ren. secondary fuels	MJ	0,00E+00	MND	MND	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	9,39E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	7,40E-03	4,34E-02	3,14E-03	2,46E-01	-2,96E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	5,68E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,25E-01	4,63E-01	5,30E-02	2,61E-01	-7,79E-01
Non-hazardous waste	kg	1,66E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,70E+00	9,76E+00	7,22E-01	5,97E+00	-1,39E+01
Radioactive waste	kg	1,85E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,22E-05	1,02E-04	5,17E-06	3,63E-05	-1,69E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	MND	MND	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	4,62E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	8,31E+02	0,00E+00	0,00E+00
Materials for energy rec	kg	3,59E-01	MND	MND	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	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Electricity	MJ	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	MND	MND	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-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	2,03E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	8,52E+00	2,28E+01	3,62E+00	9,55E+00	-8,27E+00
Ozone depletion Pot.	kg $CFC_{-11}e$	9,36E-07	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,04E-07	3,64E-07	4,41E-08	2,22E-07	-5,47E-08
Acidification	kg SO_2e	4,86E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	5,43E-02	5,46E-02	2,31E-02	5,06E-02	-3,94E-02
Eutrophication	kg PO_4^3e	4,80E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,27E-02	1,39E-02	5,39E-03	1,61E-02	-7,66E-03
POCP (“smog”)	kg C_2H_4e	3,50E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	4,07E-03	5,20E-03	1,73E-03	4,78E-03	-3,48E-03
ADP-elements	kg Sbe	6,94E-04	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,98E-06	7,34E-05	1,27E-06	1,50E-05	-4,38E-05
ADP-fossil	MJ	1,15E+03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,11E+02	3,16E+02	4,72E+01	2,34E+02	-8,87E+01

ENVIRONMENTAL IMPACTS – GWP-GHG

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	2,10E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	8,56E+00	2,30E+01	3,64E+00	9,64E+00	-8,32E+00

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Not applicable to this EPD
Electricity CO2e / kWh	Not applicable
Diesel data source and quality	Ecoinvent 3.10.1
Diesel CO2e / MJ	0.095 kg CO_2e / MJ
District heating data source and quality	Not applicable
District heating CO2e / kWh	Not applicable

End of life scenario documentation

Scenario information	Value
Collection process – kg collected separately	0
Collection process – kg collected with mixed waste	2375
Recovery process – kg for re-use	0
Recovery process – kg for recycling	831
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	1544
Scenario assumptions e.g. transportation	50km

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15802+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez
Tool verification validity: 27 March 2025 - 26 March 2028

Sarah Curpen, as an authorized verifier acting for EPD Hub Limited

03.08.2025