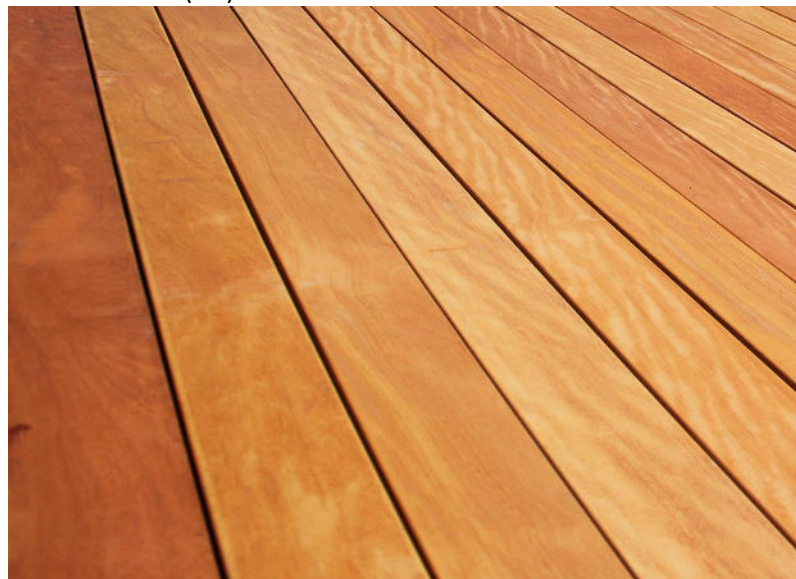




ENVIRONMENTAL PRODUCT DECLARATION

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

Timber decks from Certified forests of Congo Basin
Global Timber (DK)



EPD HUB, HUB-1338

Published on 23.04.2024, last updated on 23.04.2024, valid until 23.04.2029.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Global Timber (DK)
Address	Michael Drewsens Vej 1
Contact details	Mail@globaltimber.dk
Website	https://europe.globaltimber.net/

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 1.0, 1 Feb 2022 EN 16485 Round and sawn timber
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Petra Postolache, Krishnanunni Ravindran
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal certification <input checked="" type="checkbox"/> External verification
EPD verifier	Lucas Pedro Berman, 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	Timber decks from Certified forests of Congo Basin
Additional labels	Certificate registration code: NC-COC-011785, NC-CW-011785 FSC License Code: FSC-C018269
Product reference	HS Code: 4407 2799, UN CPC Code: 311
Place of production	Aarhus, Denmark
Period for data	2022
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m ³
Declared unit mass	885 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	6,29E+02
GWP-total, A1-A3 (kgCO ₂ e)	-8,22E+02
Secondary material, inputs (%)	0.0
Secondary material, outputs (%)	97.0
Total energy use, A1-A3 (kWh)	12.1
Total water use, A1-A3 (m ³ e)	7,59E-03

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Global Timber is the largest stockist of hardwood in Northern Europe. From our warehouse in Aarhus, Denmark, we serve the wood-consuming industry in Scandinavia and other parts of Europe.

PRODUCT DESCRIPTION

Hardwood decking refers to outdoor flooring or deck boards made from hardwood species. These woods are known for their natural beauty, durability, and resistance to weather, insects, and decay, making them ideal for outdoor use. Our tropical decks originate in the certified tropical forests of the Congo Basin and is imported into Europe after processing and packaging from selected manufacturers, which is then repackaged at our warehouse before selling to clients.

PRODUCT RAW MATERIAL MAIN COMPOSITION

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

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	395
Biogenic carbon content in packaging, kg C	1.43 kg

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m3
Mass per declared unit	885 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		
x	x	x	x	x	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	Recovery	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.

A1-A3 Wood sourced from certified forests in the Congo basin undergoes debarking, sawing, thermal treatment, surfacing/profiling in selected manufacturing units before being shipped to Denmark as timber decks. For this stage, private data set provided by the International Tropical Timber Technical Association (ATIBT) was used.

The packaged timber decks received at a port in Denmark is brought to the



GLOBAL TIMBER.

Global Timber warehouse by road. It is then repackaged after removing all the incoming packaging (PET and metal tapes) with new PET tapes containing our company logo and joists.

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.

A4 - The average downstream distance to customers in Denmark is 200 km by road.

A5 - Only the electricity consumed by electric tools used during the installation was considered.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

C1 - The deconstruction of wood was assumed to be done manually and therefore consumes zero energy.

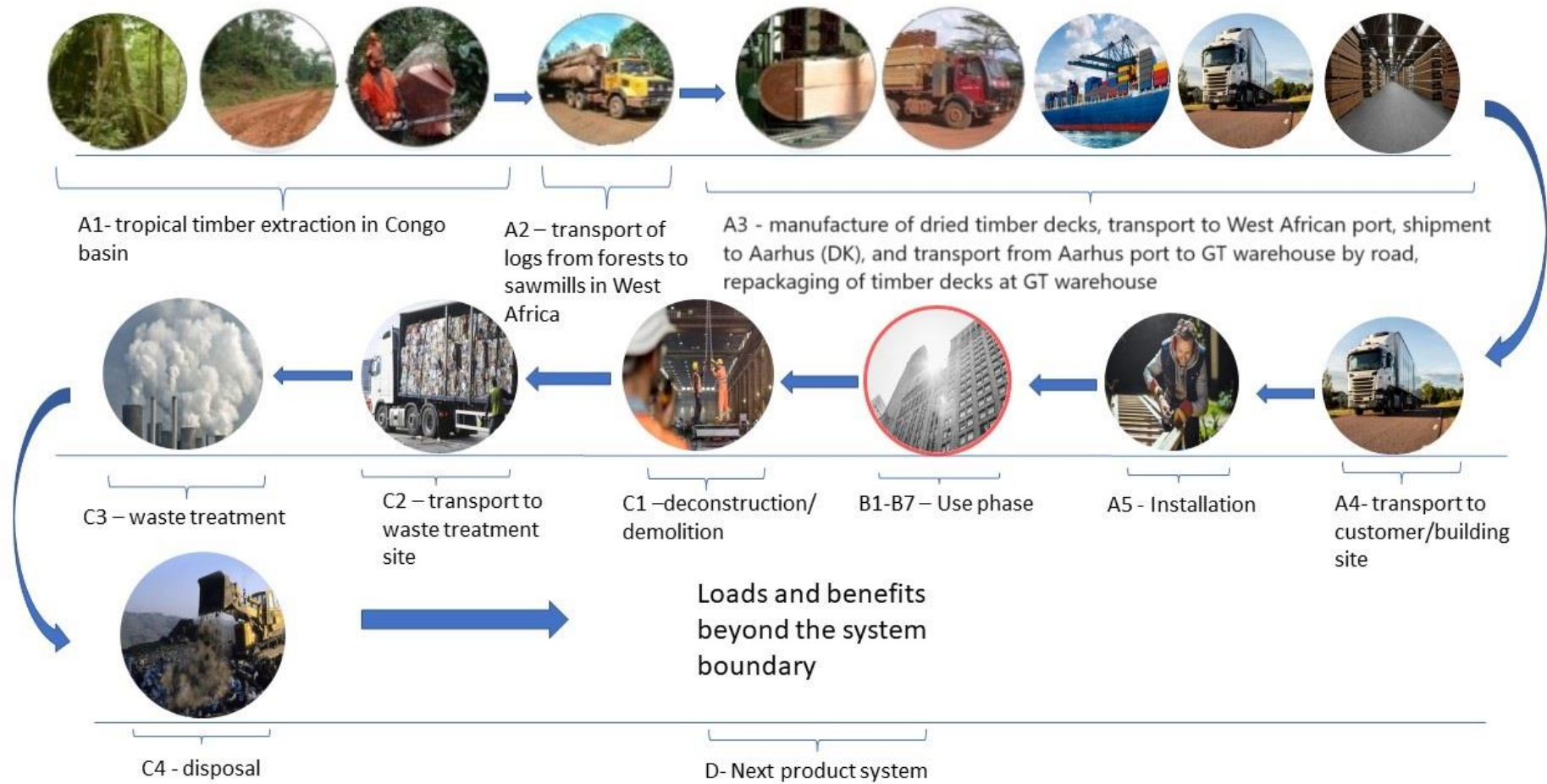
C2- The average distance to the nearest waste treatment unit was assumed as 50 km.

C3 - Based on the Danish Environmental Agency data on waste treatment in Denmark.

C4 - Based on the Danish Environmental Agency data on waste treatment in Denmark, we assume 2% of our products end up in landfills.

D - Includes benefits of heat and energy generation from the incineration process and accounts the recycling potential of wood as well. By recycling wood, we save new wood from being burned for energy needs. We also assume that at the end of life, the recycled wood is ground into wood chips and used as mulch in farmlands or home gardens.

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.

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 materials	Allocated by mass or volume
Ancillary materials	No allocation
Manufacturing energy and waste	No allocation

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	%

A1-A3 The private data came in the form of LCA results for packaged dried tropical timber decks ready for shipment from a West African port. The weight of 1m³ of packaged tropical timber decks was taken as 886.75 (885 kg of wood plus 1.75 kg of packaging material). The West African port was assumed to be Douala, Cameroon, hence the upstream shipping distance was calculated to be 9.231 km (Douala -Aarhus).

The packaged timber decks received at the Aarhus port is brought to the Global Timber warehouse, covering 9 km by road. It is then repackaged after removing all the incoming packaging (PET and metal tapes) with new PET tapes containing our company logo and joists.

A5 - We assumed electricity to be used in A5 for the installation and considered consumption of electricity @ 0.01 kWh/kg in construction.

C2: Transport distances assumed to be 50km, based on Denmark.

C3: Based on the Danish Environmental Agency data, it was assumed that 83% of the wood is recycled, while 15% is incinerated for energy recovery.

C4: Based on the Danish Environmental Agency data, it was assumed that 2% of the wood ends up in landfills.

-Assumption for the EOL scenarios is coming from the 2020 Danish Environmental Agency data on waste treatments in Denmark.

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 v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE 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
GWP – total ¹⁾	kg CO ₂ e	-8,18E+02	8,69E-01	-4,58E+00	-8,22E+02	1,67E+01	7,83E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,15E+00	1,42E+03	2,93E+01	-1,84E+02
GWP – fossil	kg CO ₂ e	6,28E+02	8,69E-01	6,72E-01	6,29E+02	1,66E+01	2,54E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,15E+00	2,75E+00	3,67E-01	-1,83E+02
GWP – biogenic	kg CO ₂ e	-1,45E+03	0,00E+00	-5,25E+00	-1,45E+03	6,44E-03	5,28E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	1,42E+03	2,89E+01	0,00E+00
GWP – LULUC	kg CO ₂ e	5,69E-01	3,21E-04	2,47E-03	5,72E-01	6,14E-03	5,12E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,53E-03	9,74E-04	1,30E-04	-1,78E-01
Ozone depletion pot.	kg CFC ₁₁ e	1,06E-04	2,00E-07	1,65E-06	1,07E-04	3,83E-06	6,93E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,55E-07	3,16E-07	4,22E-08	-1,04E-05
Acidification potential	mol H ⁺ e	9,94E+00	3,68E-03	4,05E-03	9,95E+00	7,05E-02	9,67E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,76E-02	2,57E-02	3,43E-03	-1,17E+00
EP-freshwater ²⁾	kg Pe	5,37E-02	7,12E-06	9,95E-06	5,38E-02	1,36E-04	2,13E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,40E-05	3,31E-05	4,41E-06	-1,04E-02
EP-marine	kg Ne	4,59E+00	1,09E-03	1,00E-03	4,60E+00	2,09E-02	2,04E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,23E-03	1,18E-02	1,57E-03	-1,74E-01
EP-terrestrial	mol Ne	5,02E+01	1,21E-02	1,13E-02	5,03E+01	2,31E-01	2,65E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,77E-02	1,25E-01	1,66E-02	-2,10E+00
POCP (“smog”) ³⁾	kg NMVOCe	2,07E+01	3,86E-03	3,54E-03	2,07E+01	7,39E-02	6,04E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,84E-02	3,15E-02	4,20E-03	-5,50E-01
ADP-minerals & metals ⁴⁾	kg Sbe	0,00E+00	2,04E-06	5,92E-05	6,13E-05	3,90E-05	1,06E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,74E-06	8,03E-06	1,07E-06	-3,82E-04
ADP-fossil resources	MJ	0,00E+00	1,31E+01	1,20E+01	2,51E+01	2,50E+02	3,60E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,24E+01	2,86E+01	3,82E+00	-2,20E+03
Water use ⁵⁾	m ³ e depr.	1,21E+02	5,84E-02	2,37E-01	1,22E+02	1,12E+00	1,99E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,79E-01	8,75E+00	1,17E+00	-6,23E+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.

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	0,00E+00	1,47E-01	2,09E+01	2,11E+01	2,82E+00	2,91E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,03E-01	5,88E-01	7,83E-02	-1,01E+03
Renew. PER as material	MJ	0,00E+00	0,00E+00	4,69E+01	4,69E+01	0,00E+00	-4,69E+01	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	0,00E+00	1,47E-01	6,78E+01	6,80E+01	2,82E+00	-1,78E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,03E-01	5,88E-01	7,83E-02	-1,01E+03
Non-re. PER as energy	MJ	0,00E+00	1,31E+01	9,56E+00	2,26E+01	2,50E+02	3,60E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,24E+01	2,86E+01	3,82E+00	-2,20E+03
Non-re. PER as material	MJ	0,00E+00	0,00E+00	2,48E+00	2,48E+00	0,00E+00	-7,53E+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	0,00E+00	1,31E+01	1,20E+01	2,51E+01	2,50E+02	2,85E+01	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,24E+01	2,86E+01	3,82E+00	-2,20E+03
Secondary materials	kg	0,00E+00	3,62E-03	1,90E-03	5,53E-03	6,94E-02	8,86E-03	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,73E-02	4,48E-02	5,97E-03	-4,29E-01
Renew. secondary fuels	MJ	0,00E+00	3,66E-05	3,90E-05	7,56E-05	7,00E-04	4,76E-05	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,75E-04	1,43E-04	1,91E-05	-3,62E-03
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	0,00E+00	1,69E-03	5,90E-03	7,59E-03	3,24E-02	9,31E-02	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,08E-03	-2,54E-02	-3,38E-03	-3,39E+00

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	0,00E+00	1,73E-02	3,92E-02	5,65E-02	3,32E-01	2,80E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,27E-02	7,46E-01	9,94E-02	-1,62E+01
Non-hazardous waste	kg	0,00E+00	2,84E-01	9,67E-01	1,25E+00	5,45E+00	1,09E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,36E+00	1,32E+02	1,76E+01	-6,12E+02
Radioactive waste	kg	0,00E+00	8,73E-05	2,90E-05	1,16E-04	1,67E-03	1,57E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,17E-04	1,08E-04	1,44E-05	-8,97E-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	0,00E+00	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	1,74E+00	1,74E+00	0,00E+00	1,10E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	7,35E+02	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	1,33E+02	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,03E+01	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 CO ₂ e	0,00E+00	8,60E-01	6,54E-01	1,51E+00	1,65E+01	2,51E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,11E+00	2,81E+00	3,75E-01	-1,80E+02
Ozone depletion Pot.	kg CFC ₋₁₁ e	0,00E+00	1,58E-07	1,11E-06	1,27E-06	3,03E-06	6,17E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,57E-07	2,61E-07	3,47E-08	-8,50E-06
Acidification	kg SO ₂ e	0,00E+00	2,86E-03	3,07E-03	5,93E-03	5,48E-02	7,52E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,37E-02	1,83E-02	2,43E-03	-9,70E-01
Eutrophication	kg PO ₄ ³ e	0,00E+00	6,51E-04	1,21E-03	1,86E-03	1,25E-02	8,29E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,11E-03	2,53E-02	3,37E-03	-3,90E-01
POCP ("smog")	kg C ₂ H ₄ e	0,00E+00	1,12E-04	2,02E-04	3,14E-04	2,14E-03	3,66E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,33E-04	6,89E-04	9,19E-05	-4,24E-02
ADP-elements	kg Sbe	0,00E+00	1,97E-06	5,92E-05	6,12E-05	3,78E-05	1,05E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,43E-06	7,32E-06	9,76E-07	-3,78E-04
ADP-fossil	MJ	0,00E+00	1,31E+01	1,20E+01	2,51E+01	2,50E+02	3,60E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,24E+01	2,86E+01	3,82E+00	-2,20E+03

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.



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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.

Lucas Pedro Berman, as an authorized verifier acting for EPD Hub Limited
23.04.2024

