ENVIRONMENTAL PRODUCT DECLARATION

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

Luxura® A1 Fire Rated Composite Decking
MyDek®

MYDEK®
Non-combustible decking systems

EPD HUB, HUB-3004
Publishing date 28 February 2025, last updated on 28 February 2025, valid until 27 February 2030.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	MyDek®
Address	MyDek, 11 Arkwright Road, Reading, RG2 0LU, UK
Contact details	sales@mydek.com
Website	https://www.mydek.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
Parent EPD number	n/a
Scope of the EPD	Cradle to gate with options, A4, and modules C1-C4, D
EPD author	Sam McGarrick (Blue Marble Environmental Partnerships Ltd.)
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Magaly González Vázquez, 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	Luxura® A1 Fire Rated Composite Decking
Additional labels	n/a
Product reference	20mm thickness
Place of production	China
Period for data	2023 (Calendar Year)
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	n/a

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m2
Declared unit mass	32.2 kg
GWP-fossil, A1-A3 (kgCO2e)	11.1
GWP-total, A1-A3 (kgCO2e)	9.21
Secondary material, inputs (%)	28.6
Secondary material, outputs (%)	94.2
Total energy use, A1-A3 (kWh)	30.8
Net fresh water use, A1-A3 (m3)	0.05

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

MyDek® are specialists in non-combustible deck systems for balconies and terraces. As a company, we are committed to building a safer future for the apartment community by proving durable, compliant and sustainable products and systems.

PRODUCT DESCRIPTION

Luxura fire-rated mineral composite decking is engineered for environments requiring superior durability. It is composed of a specialized blend of minerals, calcium silicates, and other advanced materials, ensuring exceptional performance in critical areas. Luxura's A1 fire rating, combined with its excellent slip, wear, and stain resistance, makes it suitable for diverse applications, including boardwalks, public spaces, educational institutions, roof terraces, and high-rise residential buildings.

The product's natural timber appearance enhances its aesthetic appeal, while the high-performance composite material mitigates issues commonly associated with timber decking and wood-plastic composite boards. This innovative product represents a significant advancement, and MyDek is proud to offer it as a superior fire-rated alternative that complements our aluminium decking range.

Further information can be found at https://www.mydek.com/.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	-	
Minerals	98	China
Fossil materials	-	
Bio-based materials	2	China

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	n/a
Biogenic carbon content in packaging, kg C	0.21

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m2
Mass per declared unit	32.2 kg
Functional unit	n/a
Reference service life	n/a

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	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 / 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.

The product comprises various minerals, secondary material and pigments sourced from suppliers in China or internationally (A1, A2).

The production process occurs at the factory in China and involves mixing the materials, compression, autoclaving, cutting and finally packing. Production losses are negligible as offcuts are simply returned to the mix. Water use in production is also negligible and drawn from and returned to an on-site reservoir in a closed-loop system. Energy generation in the production process is from the combustion of natural gas (A3).

Packaging includes a specially designed pallet, plastic shrink wrap, plastic banding and cardboard corner protectors (A3).

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.

The product is shipped internally within China via road to a port of departure where it is loaded onto a container ship bound for the UK. Further road transportation occurs within the UK and is based on a highly typical scenario of transportation to a construction site based in London (E14 postcode). Road travel within the UK is assumed to be via >32 tonne articulated lorries with an efficiency rating of EURO 6 (A4).

Installation (Module A5) is not considered in this EPD, therefore packaging waste is accounted for in the end-of-life stage (Module C3)

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)

At the end of its life, the product's fixings are removed using hand-held power tools (C1).

Transportation to waste treatment for product and packaging is assumed to be 50km via 16-32 tonne lorry with EURO 6 efficiency rating (C2).

The product is considered to be mineral waste from construction and demolition and the UK waste scenario is based on a 92.6% recycling rate, with the remaining 7.4% assumed to reach landfill (DEFRA, 2023) (C3/C4).

Wood packaging is assumed to be chipped prior to incineration where some energy from waste is generated. The incinerator efficiency is assumed to be 73%, of which 62% is heat and 11% is electrical (C3).

Plastic packaging is assumed to be sorted prior to incineration where some energy from waste is generated. The incinerator efficiency is assumed to be 73%, of which 62% is heat and 11% is electrical (C3).

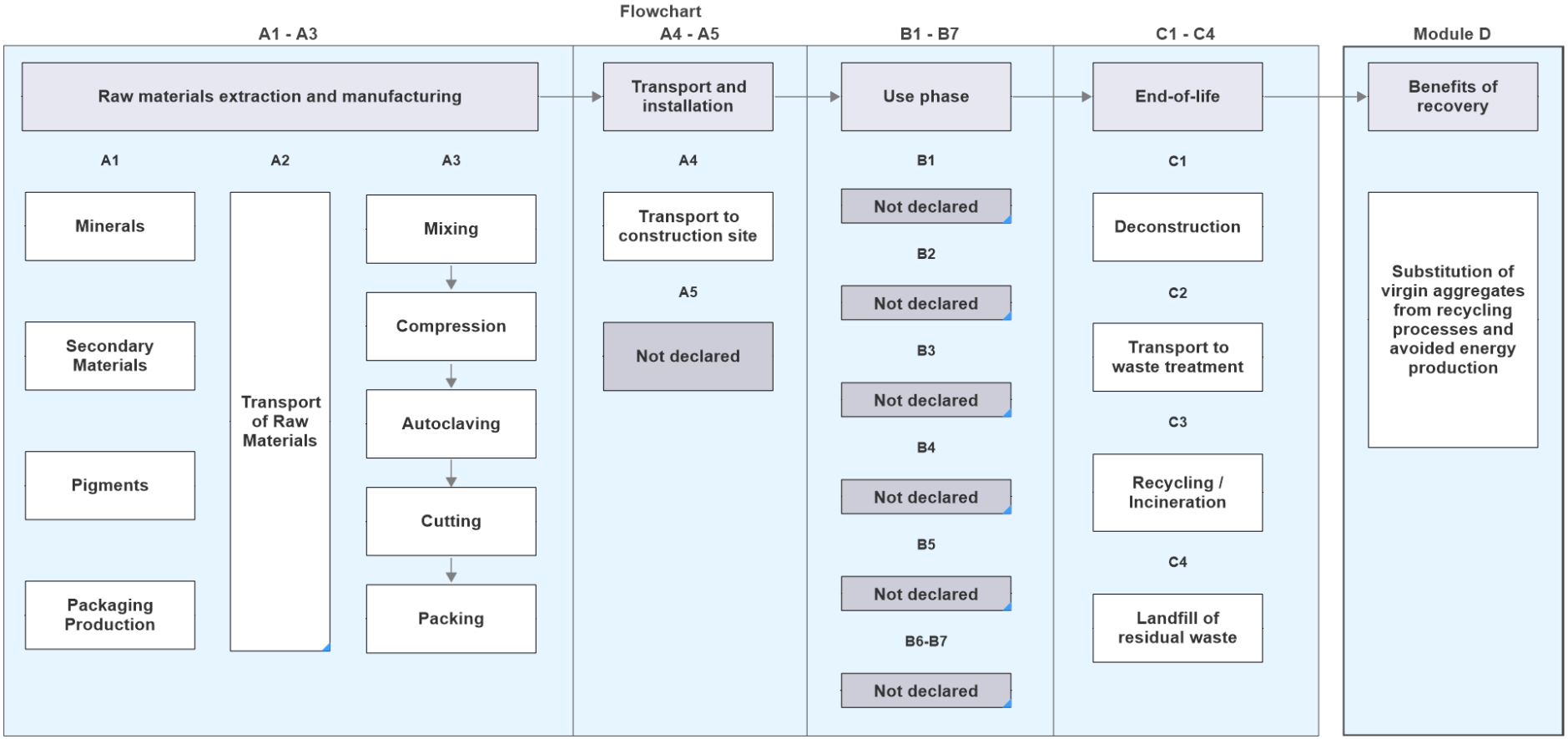
Cardboard packaging is assumed to be fully recycled (C3).

Beyond the system boundary, the avoided impacts from aggregate production are included as are the loads for the crushing and recycling of the product. Secondary materials used in the product are subtracted from the benefit to avoid double counting (D).

Exported heat and electricity from the energy-from-waste incineration of wood and plastic packaging are included, as are the loads from the incineration process (D).

Benefits from the avoided production of virgin board are included, as are the loads from the recycling of the cardboard (D).

SYSTEM DIAGRAM



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

AVERAGES AND VARIABILITY

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

There is no average result considered in this study since this EPD refers to one specific product produced in one production plant

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_2e	6.17E+00	4.42E-01	2.60E+00	9.21E+00	6.32E+00	MND	MND	MND	MND	MND	MND	MND	MND	5.09E-02	2.86E-01	2.17E+00	1.04E-01	-7.52E-01
GWP – fossil	kg CO_2e	7.24E+00	4.42E-01	3.40E+00	1.11E+01	6.32E+00	MND	MND	MND	MND	MND	MND	MND	MND	5.09E-02	2.86E-01	3.72E-01	2.51E-02	-3.85E-02
GWP – biogenic	kg CO_2e	-1.07E+00	0.00E+00	-8.03E-01	-1.87E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	1.79E+00	7.93E-02	-7.14E-01
GWP – LULUC	kg CO_2e	2.90E-03	2.46E-04	1.00E-03	4.15E-03	4.41E-03	MND	MND	MND	MND	MND	MND	MND	MND	2.81E-06	1.16E-04	2.95E-04	2.55E-05	1.87E-04
Ozone depletion pot.	kg CFC_{-11}e	2.68E-07	9.44E-08	4.23E-07	7.85E-07	1.28E-06	MND	MND	MND	MND	MND	MND	MND	MND	1.11E-08	6.30E-08	8.14E-08	7.63E-09	-1.94E-08
Acidification potential	mol H^+e	2.63E-02	8.40E-03	5.77E-03	4.04E-02	1.89E-01	MND	MND	MND	MND	MND	MND	MND	MND	7.19E-04	1.18E-03	3.05E-03	2.12E-04	8.70E-04
EP-freshwater[2)]	kg Pe	1.28E-04	2.55E-06	1.41E-05	1.45E-04	2.48E-05	MND	MND	MND	MND	MND	MND	MND	MND	6.85E-08	2.41E-06	8.59E-06	3.89E-07	9.48E-06
EP-marine	kg Ne	6.12E-03	2.11E-03	1.42E-03	9.66E-03	4.66E-02	MND	MND	MND	MND	MND	MND	MND	MND	3.22E-04	3.45E-04	1.12E-03	7.23E-05	1.90E-04
EP-terrestrial	mol Ne	7.23E-02	2.35E-02	1.54E-02	1.11E-01	5.18E-01	MND	MND	MND	MND	MND	MND	MND	MND	3.52E-03	3.81E-03	1.23E-02	7.95E-04	2.53E-03
POCP ("smog")[3)]	kg NMVOCe	1.84E-02	6.25E-03	5.53E-03	3.02E-02	1.35E-01	MND	MND	MND	MND	MND	MND	MND	MND	9.22E-04	1.16E-03	3.45E-03	2.30E-04	6.07E-04
ADP-minerals & metals[4)]	kg Sbe	1.00E-04	8.14E-07	3.69E-06	1.05E-04	9.30E-06	MND	MND	MND	MND	MND	MND	MND	MND	3.61E-08	9.94E-07	1.21E-06	8.44E-08	1.46E-06
ADP-fossil resources	MJ	4.66E+01	6.07E+00	5.44E+01	1.07E+02	8.09E+01	MND	MND	MND	MND	MND	MND	MND	MND	6.73E-01	4.14E+00	6.60E+00	5.79E-01	-2.10E+00
Water use[5)]	m^3e depr.	1.04E+00	2.28E-02	3.01E-01	1.37E+00	2.54E-01	MND	MND	MND	MND	MND	MND	MND	MND	9.27E-04	1.81E-02	5.68E-02	3.37E-03	3.48E-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	2.17E-07	3.15E-08	4.42E-08	2.93E-07	2.44E-07	MND	MND	MND	MND	MND	MND	MND	MND	9.31E-10	2.43E-08	2.86E-07	4.31E-09	1.34E-08
Ionizing radiation[6)]	kBq U235e	1.94E-01	2.84E-02	3.35E-02	2.56E-01	3.76E-01	MND	MND	MND	MND	MND	MND	MND	MND	3.06E-03	1.92E-02	5.67E-02	2.75E-03	-1.29E-02
Ecotoxicity (freshwater)	CTUe	1.09E+02	4.69E+00	1.55E+01	1.29E+02	5.33E+01	MND	MND	MND	MND	MND	MND	MND	MND	3.71E-01	3.81E+00	4.84E+00	4.71E-01	2.38E+00
Human toxicity, cancer	CTUh	3.33E-09	2.09E-10	1.57E-09	5.11E-09	3.64E-09	MND	MND	MND	MND	MND	MND	MND	MND	4.13E-12	1.07E-10	2.11E-10	1.84E-11	1.73E-10
Human tox. non-cancer	CTUh	7.49E-08	4.00E-09	1.02E-08	8.91E-08	3.68E-08	MND	MND	MND	MND	MND	MND	MND	MND	5.59E-10	3.55E-09	3.98E-09	2.87E-10	3.80E-09
SQP[7)]	-	3.02E+01	4.05E+00	1.04E+02	1.38E+02	2.00E+01	MND	MND	MND	MND	MND	MND	MND	MND	8.50E-02	2.86E+00	8.38E+00	1.41E+00	1.40E+00

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	2.57E+00	5.56E-02	7.32E+00	9.94E+00	6.02E-01	MND	MND	MND	MND	MND	MND	MND	MND	1.89E-03	4.85E-02	2.96E-01	9.98E-03	-1.00E-01
Renew. PER as material	MJ	0.00E+00	0.00E+00	7.04E+00	7.04E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-7.04E+00	0.00E+00	2.40E-02
Total use of renew. PER	MJ	2.57E+00	5.56E-02	1.44E+01	1.70E+01	6.02E-01	MND	MND	MND	MND	MND	MND	MND	MND	1.89E-03	4.85E-02	-6.75E+00	9.98E-03	-7.61E-02
Non-re. PER as energy	MJ	4.14E+01	6.07E+00	5.35E+01	1.01E+02	8.10E+01	MND	MND	MND	MND	MND	MND	MND	MND	6.73E-01	4.14E+00	6.60E+00	5.80E-01	-2.09E+00
Non-re. PER as material	MJ	5.23E+00	0.00E+00	9.63E-01	6.19E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-5.81E+00	-3.87E-01	-1.10E-03
Total use of non-re. PER	MJ	4.66E+01	6.07E+00	5.44E+01	1.07E+02	8.10E+01	MND	MND	MND	MND	MND	MND	MND	MND	6.73E-01	4.14E+00	7.96E-01	1.93E-01	-2.10E+00
Secondary materials	kg	9.19E+00	2.21E-03	3.84E-02	9.24E+00	3.55E-02	MND	MND	MND	MND	MND	MND	MND	MND	3.87E-05	1.36E-03	2.50E-03	2.09E-04	3.27E-03
Renew. secondary fuels	MJ	1.34E-04	1.24E-05	1.79E-01	1.79E-01	1.11E-04	MND	MND	MND	MND	MND	MND	MND	MND	5.73E-07	1.76E-05	4.47E-05	8.02E-06	1.50E-04
Non-ren. secondary fuels	MJ	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	3.96E-02	5.95E-04	6.98E-03	4.72E-02	5.74E-03	MND	MND	MND	MND	MND	MND	MND	MND	2.36E-05	4.88E-04	4.12E-03	6.24E-04	7.50E-03

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	2.28E-01	8.16E-03	3.26E-02	2.69E-01	1.09E-01	MND	MND	MND	MND	MND	MND	MND	MND	2.36E-04	5.95E-03	1.40E-02	0.00E+00	1.14E-02
Non-hazardous waste	kg	5.40E+00	1.01E-01	4.50E-01	5.95E+00	9.77E-01	MND	MND	MND	MND	MND	MND	MND	MND	2.71E-03	9.51E-02	1.14E+01	2.38E+00	9.35E-01
Radioactive waste	kg	1.34E-04	4.17E-05	2.33E-05	1.99E-04	5.71E-04	MND	MND	MND	MND	MND	MND	MND	MND	4.90E-06	2.73E-05	4.37E-05	0.00E+00	-1.57E-06

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	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	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	2.98E+01	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	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	5.10E-01	0.00E+00	0.00E+00
Exported energy	MJ	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

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_2e	7.15E+00	4.38E-01	3.31E+00	1.09E+01	6.27E+00	MND	MND	MND	MND	MND	MND	MND	MND	5.00E-02	2.83E-01	3.67E-01	2.47E-02	-3.89E-02
Ozone depletion Pot.	kg CFC_{-11}e	2.18E-07	7.47E-08	3.64E-07	6.57E-07	1.01E-06	MND	MND	MND	MND	MND	MND	MND	MND	8.73E-09	4.99E-08	6.48E-08	6.05E-09	-1.77E-08
Acidification	kg SO_2e	2.01E-02	6.70E-03	4.61E-03	3.14E-02	1.51E-01	MND	MND	MND	MND	MND	MND	MND	MND	5.12E-04	9.21E-04	2.27E-03	1.61E-04	6.70E-04
Eutrophication	kg PO_4^3e	6.42E-03	8.27E-04	1.03E-03	8.27E-03	1.70E-02	MND	MND	MND	MND	MND	MND	MND	MND	1.14E-04	2.11E-04	7.44E-04	5.25E-05	4.32E-04
POCP (“smog”)	kg C_2H_4e	8.19E-04	1.82E-04	4.13E-04	1.41E-03	3.92E-03	MND	MND	MND	MND	MND	MND	MND	MND	1.52E-05	3.74E-05	7.32E-05	6.58E-06	4.22E-05
ADP-elements	kg Sbe	4.62E-05	7.93E-07	3.66E-06	5.06E-05	9.12E-06	MND	MND	MND	MND	MND	MND	MND	MND	3.58E-08	9.70E-07	1.19E-06	8.13E-08	1.45E-06
ADP-fossil	MJ	4.66E+01	6.07E+00	5.44E+01	1.07E+02	8.09E+01	MND	MND	MND	MND	MND	MND	MND	MND	6.73E-01	4.13E+00	6.60E+00	5.79E-01	-2.09E+00

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

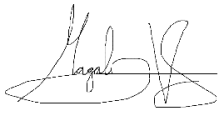
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried 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.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited
28.02.2025



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