ENVIRONMENTAL PRODUCT DECLARATION

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

OSB Firestop

Kronospan OSB spol. s r. o.

EPD HUB, HUB-3368

Publishing date 25 May 2025, last updated on 25 May 2025, valid until 25 May 2030.

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) and JRC characterization factors EF 3.1.

Created with One Click LCA

Making circularity a reality

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Kronospan OSB spol. s r. o.
Address	Na Hranici 2361/6, 586 01 Jihlava 1-Bedrichov, Czechia
Contact details	office@kronospan.cz
Website	https://kronospan.com/en_CZ

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	-
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Wei-Li Hung
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	OSB Firestop
Additional labels	-
Product reference	-
Place of production	Jihlava, Czech Republic
Period for data	1.1.2023- 31.12.2023
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	-

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m2
Declared unit mass	12.42 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	5.15
GWP-total, A1-A3 ($kgCO_2e$)	-13.1
Secondary material, inputs (%)	7.1
Secondary material, outputs (%)	100
Total energy use, A1-A3 (kWh)	56.2
Net freshwater use, A1-A3 (m^3)	0.55

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Kronospan OSB spol. s r. o. (Kronospan OSB) is one of the leading manufacturer of wood-based panel products. We produce particleboard (PB), high/ medium density fibreboard (HDF/ MDF), oriented strand board (OSB), melamine-faced (MF) products, laminate flooring, and worktops. Our products are used in construction, furniture manufacture and the DIY industry.

PRODUCT DESCRIPTION

The core panel of OSB Firestop is made from Oriented Strand Board (OSB), which is treated with a patented fire-resistant Pyrotite® finish on one or both sides. The Pyrotite® finish consists of magnesium oxide cement reinforced with a fiberglass mesh. This finish is tightly bonded to the OSB core without cracks or delamination. The cement-based finish improves the burn-through resistance of the OSB, limits flame spreading on the surface, and significantly reduces the spread of fire within the building.

In contrast to conventional fire protective coatings designed for wood-based products, Pyrotite® maintains its protective qualities over time. As a result, Firestop provides both load-bearing capacity and fire resistance for building structures, and it is lighter and stronger than plasterboard. Using OSB Firestop as roof or floor decking saves assembly time and is more cost-effective.

Further information can be found at https://kronospan.com/en_CZ.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	-	-
Minerals	-	-
Fossil materials	15-16%	Czech Republic
Bio-based materials	84-85%	Czech Republic

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	6.22
Biogenic carbon content in packaging, kg C	0.05

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m2
Mass per declared unit	12.42 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	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 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.

Raw material/energy supply (A1):
Extraction and processing / manufacture of raw materials including: post-consumer recycled timber, resins, hardeners, wax, reinforcing fibreglass mesh, and other chemicals. Production loss is considered at this stage.

Transportation to manufacturing site (A2):
• Transportation of the post-consumer recycled timber and reinforcing fibreglass mesh to the Jihlava site.
• Transportation of chemicals and packaging from manufacturer/supplier to the Jihlava site.

Manufacturing (A3):
Ancillary water is sourced from and returned to the local water network in accordance with local standards and agreement. Electricity is sourced from the local grid network, and heat is provided primarily by our onsite biomass boiler (fuelled with site waste) and supplemented by natural gas. Packaging materials include PET banding, PE film, cardboard, and lath made from reject board.
The proper manufacturing of the boards and treatment of waste generated from the manufacturing process up to the end-of waste state during manufacturing is included in module A3.
Manufacturing waste includes bottom ash from the biomass boilers, which is landfilled, metal waste from chip preparation, which is recycled, and waste wood, which is used for energy recovery through incineration.
The transport distance of manufacturing waste is assumed to be 50 km by truck.

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.

Module A4:

This module considers 307 km truck transport to site (diesel driven, EURO 6, 40 tonnes total load, 61% utilisation) from average delivery distance within the timeframe.

Module A5:

Installation has been excluded as a factor because, typically, this product undergoes reprocessing by our customers to make final construction products. There are boundless variations in processing methods, auxiliary materials, energy consumption, wastage, etc.

Packaging materials:

Wood, plastic, and cardboard packaging are assumed to follow the EU scenario based on Ecoinvent v3.10

PRODUCT USE AND MAINTENANCE (B1-B7)

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

PRODUCT END OF LIFE (C1-C4, D)

Module C1:

Manual dismantling → no loads in C1 have been generated.

Module C2:

Transport to waste treatment site after dismantling using EURO 6 truck average (50 km assumed).

Module C3:

The scenario at the end of life assumes the full recycling of the product as OSB can be recycled and returned to the system as post-consumer waste wood. The end-of-waste status for the wood board is achieved at the waste treatment site where the material is recycled.

Module C4:

Within the EoL scenario, no disposal to landfill will occur, thus this module will show zero values

Module D:

The benefits from the recycling of the firestop into new product (modelling it as avoided raw material) is calculated and stated in module D.

Packaging materials:

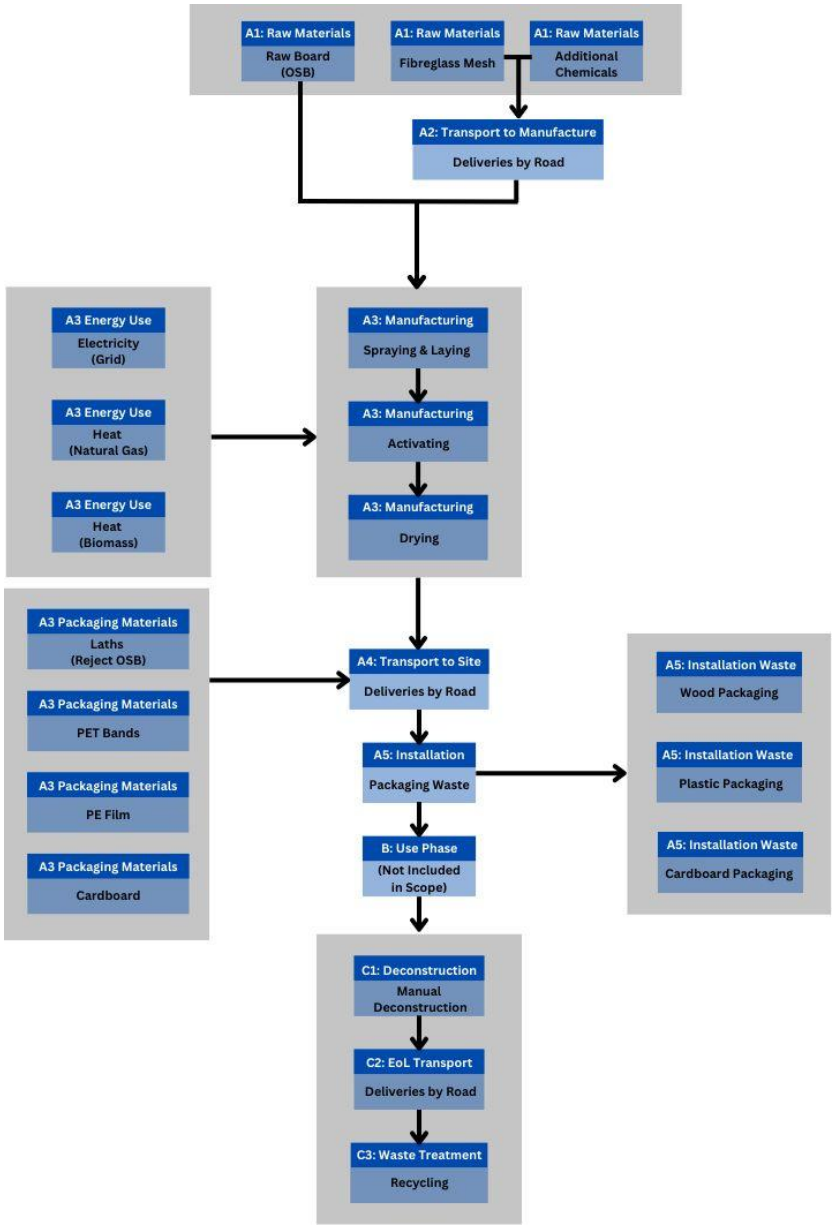
Wood, plastic, and cardboard packaging are assumed to follow the EU scenario based on Ecoinvent v3.10

MANUFACTURING PROCESS

For the production of raw OSB, recycled timber is cleaned and milled into various sized flakes in the pre-production stage. At this stage the contaminants from the cleaned recycled timber are sent off site for further recycling. The timber flakes are then sent to a dryer for moisture removal before further sorting and grading in preparation for the press. Resin is added and the material enters the press where the raw board is formed, before being sanded and cut to size.

Thermal energy and electricity are sourced from biomass, natural gas, and the regional grid, and are used in the drying and pressing processes. Residues are sent for energy recovery for either direct heat in the drying process or to the biomass that provides heat for the presses and various other processes on site.

The raw OSB is then treated with a Pyrotite® finish on one or both sides. This finish consists of magnesium oxide cement reinforced with fiberglass mesh and is tightly bonded to the OSB core. The completed product is then transported by road to customers.



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	Allocated by mass or volume
Packaging material	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
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	-

This EPD is product and factory specific and does not contain average calculations.

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

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	-1.90E+01	3.31E-01	5.59E+00	-1.31E+01	4.14E-01	1.77E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	6.68E-02	1.82E+01	0.00E+00	-1.17E-01
GWP – fossil	kg CO_2e	3.88E+00	3.31E-01	9.46E-01	5.15E+00	4.14E-01	7.58E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	6.68E-02	2.14E-01	0.00E+00	-1.17E-01
GWP – biogenic	kg CO_2e	-2.28E+01	0.00E+00	4.64E+00	-1.82E+01	0.00E+00	1.70E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	1.80E+01	0.00E+00	0.00E+00
GWP – LULUC	kg CO_2e	-5.05E-02	1.48E-04	2.86E-03	-4.75E-02	1.85E-04	5.88E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.99E-05	3.07E-04	0.00E+00	-3.56E-04
Ozone depletion pot.	kg CFC_{-11}e	5.20E-08	4.89E-09	7.13E-08	1.28E-07	6.11E-09	6.47E-11	MND	MND	MND	MND	MND	MND	MND	0.00E+00	9.86E-10	3.94E-09	0.00E+00	-3.13E-09
Acidification potential	mol H^+e	9.09E-03	1.13E-03	4.81E-03	1.50E-02	1.41E-03	2.21E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.28E-04	1.03E-03	0.00E+00	5.11E-04
EP-freshwater[2)]	kg Pe	-4.71E-02	2.58E-05	7.78E-04	-4.63E-02	3.22E-05	1.05E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.20E-06	8.40E-05	0.00E+00	-9.61E-05
EP-marine	kg Ne	2.31E-03	3.71E-04	1.09E-03	3.77E-03	4.64E-04	2.37E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	7.49E-05	3.06E-04	0.00E+00	4.82E-04
EP-terrestrial	mol Ne	2.36E-02	4.04E-03	8.30E-03	3.59E-02	5.05E-03	8.97E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.15E-04	3.19E-03	0.00E+00	5.47E-03
POCP ("smog")[3)]	kg NMVOCe	1.62E-02	1.66E-03	2.71E-03	2.06E-02	2.08E-03	2.94E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.36E-04	1.11E-03	0.00E+00	1.30E-03
ADP-minerals & metals[4)]	kg Sbe	1.04E-05	9.24E-07	2.37E-06	1.37E-05	1.16E-06	1.17E-08	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.86E-07	6.34E-07	0.00E+00	-1.01E-06
ADP-fossil resources	MJ	7.84E+01	4.81E+00	2.15E+01	1.05E+02	6.01E+00	5.59E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	9.70E-01	3.78E+00	0.00E+00	-2.78E+00
Water use[5)]	m^3e depr.	-2.55E+00	2.37E-02	7.68E-01	-1.76E+00	2.97E-02	1.57E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.79E-03	6.28E-02	0.00E+00	-7.00E-02

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	2.01E-07	3.32E-08	2.67E-08	2.60E-07	4.15E-08	3.86E-10	MND	MND	MND	MND	MND	MND	MND	0.00E+00	6.69E-09	1.44E-08	0.00E+00	3.55E-08
Ionizing radiation[6)]	kBq U235e	1.11E-01	4.19E-03	5.58E-01	6.73E-01	5.23E-03	1.51E-04	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.45E-04	5.64E-02	0.00E+00	-6.26E-02
Ecotoxicity (freshwater)	CTUe	4.72E+01	6.80E-01	4.40E+00	5.23E+01	8.50E-01	2.29E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.37E-01	4.80E-01	0.00E+00	-5.86E-01
Human toxicity, cancer	CTUh	3.93E-09	5.47E-11	2.40E-10	4.23E-09	6.84E-11	2.10E-12	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.10E-11	8.67E-11	0.00E+00	-9.89E-11
Human tox. non-cancer	CTUh	6.68E-08	3.11E-09	9.09E-09	7.90E-08	3.89E-09	1.12E-10	MND	MND	MND	MND	MND	MND	MND	0.00E+00	6.28E-10	2.18E-09	0.00E+00	-3.26E-09
SQP[7)]	-	4.98E+02	4.84E+00	3.70E+00	5.06E+02	6.05E+00	5.25E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	9.77E-01	1.80E+00	0.00E+00	-3.09E+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	1.14E+02	6.59E-02	5.19E+00	1.19E+02	8.24E-02	-1.67E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.33E-02	-1.24E+02	0.00E+00	1.24E+02
Renew. PER as material	MJ	1.28E+02	0.00E+00	-2.42E+01	1.04E+02	0.00E+00	-2.84E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-1.01E+02	0.00E+00	0.00E+00
Total use of renew. PER	MJ	2.42E+02	6.59E-02	-1.90E+01	2.23E+02	8.24E-02	-4.51E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.33E-02	-2.25E+02	0.00E+00	1.24E+02
Non-re. PER as energy	MJ	5.66E+01	4.81E+00	2.12E+01	8.27E+01	6.01E+00	-6.55E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	9.70E-01	3.78E+00	0.00E+00	-2.78E+00
Non-re. PER as material	MJ	2.17E+01	0.00E+00	-4.44E+00	1.73E+01	0.00E+00	-1.46E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-1.72E+01	0.00E+00	0.00E+00
Total use of non-re. PER	MJ	7.84E+01	4.81E+00	1.68E+01	1.00E+02	6.01E+00	-2.11E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	9.70E-01	-1.34E+01	0.00E+00	-2.78E+00
Secondary materials	kg	8.82E-01	2.05E-03	5.29E-03	8.90E-01	2.56E-03	4.18E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.13E-04	2.07E-03	0.00E+00	-3.57E-04
Renew. secondary fuels	MJ	9.53E-05	2.60E-05	3.09E-04	4.31E-04	3.25E-05	4.06E-07	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.24E-06	2.99E-05	0.00E+00	-3.69E-05
Non-ren. secondary fuels	MJ	6.66E-13	0.00E+00	0.00E+00	6.66E-13	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
Use of net fresh water	m^3	5.14E-01	7.11E-04	3.04E-02	5.45E-01	8.88E-04	-1.42E-04	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.43E-04	1.92E-03	0.00E+00	-2.19E-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	2.18E-01	8.14E-03	4.86E-02	2.75E-01	1.02E-02	3.95E-04	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.64E-03	9.44E-03	0.00E+00	-9.79E-03
Non-hazardous waste	kg	2.29E+00	1.51E-01	4.20E+00	6.64E+00	1.88E-01	2.52E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.04E-02	9.40E-01	0.00E+00	-1.02E+00
Radioactive waste	kg	1.76E-04	1.02E-06	1.45E-04	3.21E-04	1.28E-06	3.77E-08	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.07E-07	1.45E-05	0.00E+00	-1.60E-05

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	2.94E-03	0.00E+00	1.74E-03	4.69E-03	0.00E+00	3.87E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	1.24E+01	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	4.27E-03	4.27E-03	0.00E+00	3.43E-02	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	0.00E+00	1.93E-01	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.21E-02	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	0.00E+00	1.11E-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_2e	3.57E+00	3.29E-01	9.47E-01	4.85E+00	4.12E-01	1.03E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	6.65E-02	2.13E-01	0.00E+00	-1.17E-01
Ozone depletion Pot.	kg $CFC_{-11}e$	3.38E-08	3.90E-09	4.85E-08	8.62E-08	4.88E-09	5.21E-11	MND	MND	MND	MND	MND	MND	MND	0.00E+00	7.87E-10	3.18E-09	0.00E+00	-2.55E-09
Acidification	kg SO_2e	7.07E-03	8.63E-04	4.02E-03	1.20E-02	1.08E-03	1.64E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.74E-04	8.02E-04	0.00E+00	2.44E-04
Eutrophication	kg PO_4^3e	6.16E-03	2.10E-04	6.69E-04	7.03E-03	2.63E-04	6.29E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.24E-05	1.63E-04	0.00E+00	8.09E-05
POCP (“smog”)	kg C_2H_4e	2.18E-03	7.69E-05	2.28E-04	2.49E-03	9.61E-05	1.93E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.55E-05	5.90E-05	0.00E+00	1.54E-05
ADP-elements	kg Sbe	8.89E-06	9.01E-07	2.35E-06	1.21E-05	1.13E-06	1.13E-08	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.82E-07	6.20E-07	0.00E+00	-9.88E-07
ADP-fossil	MJ	7.37E+01	4.74E+00	1.18E+01	9.02E+01	5.93E+00	5.34E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	9.56E-01	2.79E+00	0.00E+00	-1.67E+00

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	3.83E+00	3.31E-01	9.49E-01	5.11E+00	4.14E-01	7.58E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	6.68E-02	2.14E-01	0.00E+00	-1.17E-01

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.

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

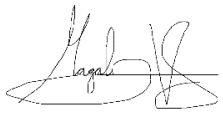
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried 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
25.05.2025



VERIFIED ISO 14025