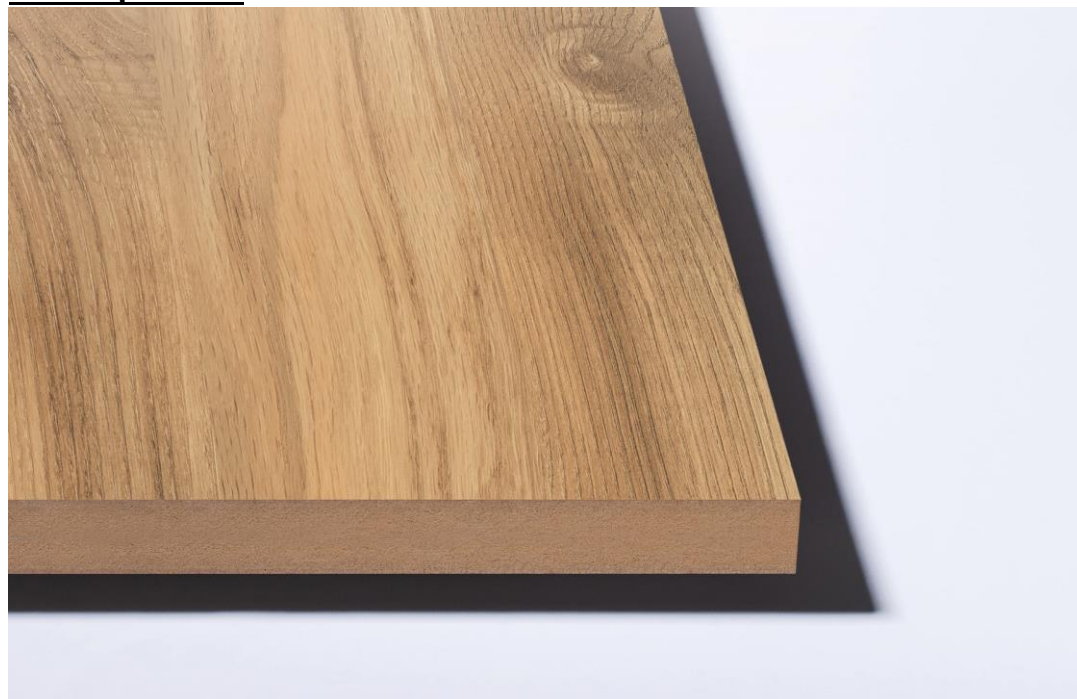


# ENVIRONMENTAL PRODUCT DECLARATION

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

**Kronodesign® Melamine Faced Medium Density Fibreboard (MF MDF)**  
**Kronospan Ltd.**



**EPD HUB, HUB-1161**

Publishing date 22 February 2024, last updated on 22 February 2024, valid until 22 February 2029.

## GENERAL INFORMATION

### MANUFACTURER

Manufacturer	Kronospan Ltd.
Address	Chirk, Wrexham, UK
Contact details	sustainability@kronospan.co.uk
Website	https://kronospan.com/en_UK/products

### 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
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	Daniel Grantham
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	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	Kronodesign® Melamine Faced Medium Density Fibreboard (MF MDF)
Additional labels	-
Product reference	-
Place of production	Chirk, United Kingdom
Period for data	October 2022 - September 2023
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	0%

### ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m <sup>2</sup>
Declared unit mass	14.66 kg
GWP-fossil, A1-A3 (kgCO <sub>2</sub> e)	7.87
GWP-total, A1-A3 (kgCO <sub>2</sub> e)	-20.3
Secondary material, inputs (%)	31.4
Secondary material, outputs (%)	100.0
Total energy use, A1-A3 (kWh)	107.0
Total water use, A1-A3 (m <sup>3</sup> e)	0.180

## PRODUCT AND MANUFACTURER

### ABOUT THE MANUFACTURER

Kronospan Ltd is the UK's longest established manufacturer of wood-based panel products. We produce particleboard (PB), medium density fibreboard (MDF), melamine faced (MF) products, laminate flooring and kitchen worktops. Our products are used in construction, furniture manufacture and the DIY industry.

### PRODUCT DESCRIPTION

Formed by covering an MDF core with a decorative resin-impregnated paper, our melamine-faced MDF is suitable for use in high quality furniture and interior design projects. The core of the material is composed of wood fibres, giving a flat and smooth surface, high density and stability, which makes it excellent for processing. It is available in a variety of thicknesses, designs and decorative finishes to one or both sides.

Further information can be found at [https://kronospan.com/en\\_UK/products](https://kronospan.com/en_UK/products).

### PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	-	-
Minerals	-	-
Fossil materials	12	Global
Bio-based materials	83	UK
Moisture Content	5	-

### BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	7.702
Biogenic carbon content in packaging, kg C	0.317

### FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m <sup>2</sup>
Mass per declared unit	14.94 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.

Raw material/energy supply (A1):

Extraction and processing / manufacture of raw materials including; post-consumer recycled timber, raw chemicals used for the manufacture of resins and raw paper to be used for impregnation.

Laths on which the packs of boards sit are made from reject boards not suitable. PET banding made from 100% post-consumer recycled plastic are used to hold the packs of boards together.

Transportation to manufacturing site (A2):

- Transportation of the post-consumer recycled timber to the Chirk site.
- Transportation of chemicals and packaging from manufacturer/supplier to the Chirk site.
- Transportation of raw paper from manufacturer/supplier.

Manufacturing (A3):

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 impregnated paper and bottom ash from the biomass boilers, both of which are landfilled. Real distances to disposal site have been used in modelling.

The wood waste (wood leftovers, trimmings) and sanding dust are burned in an on-site biomass plant. The thermal energy generated is recycled for consumption in production.

### 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.

Transport (A4):

This module considers 219 km truck transport to site (diesel driven, EURO 6, 40 tonnes total load, 61% utilisation) from average delivery distance within the timeframe.

Installation (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.

Of the packaging materials:

- Wooden laths assume 100% chipped to be used as secondary fuel as laths are predominantly manufactured from particleboard.
- Plastic strapping: assumed 44.2% recycled (from UK Gov. Figures for 2021) and the remaining amount is assumed to be landfilled.

### **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)**

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 use as secondary fuel for energy

recovery of the product. 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.

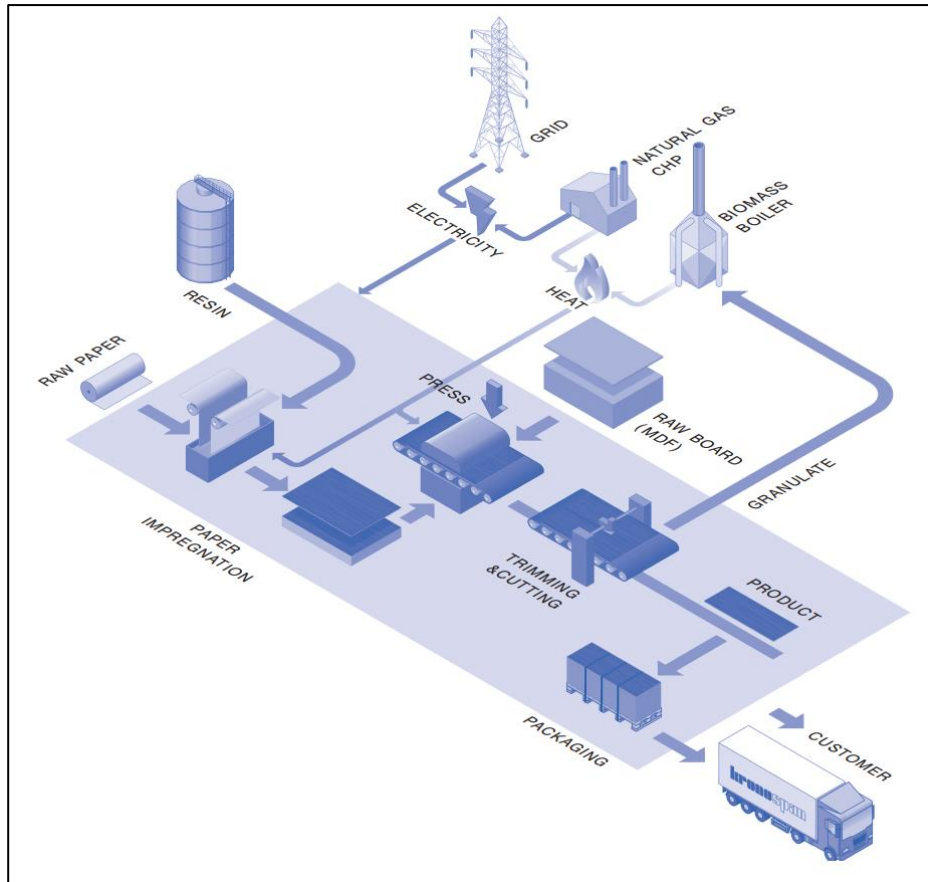
Module D:

The benefits for the secondary fuel will be calculated and shown in module D. The utilization of the boards in an incineration plant and the resulting energy is assigned to module D. It is also assumed that the energy production from biomass meets an R1 value > 0.6.

Energy produced in the form of electricity and thermal energy replaces thermal energy from natural gas (GB) and electrical energy (GB).



## MANUFACTURING PROCESS



Raw Medium Density Fibreboard (MDF) manufacturing consists of timber being prepared into fibres, which is then combined with urea formaldehyde (UF) resins. The material then enters the press, where the raw board is formed before being sanded and cut to size. The thermal energy is derived from biomass residues and electrical energy is derived predominantly from on-site generation with natural gas fuel.

Raw decor paper is bought in and is impregnated with various melamine and formaldehyde based resins dependent on the specification of the paper. The two raw products are then combined in the 'Melamine Facing' Department, where the paper is faced on to the raw board through the use of heat and pressure causing the resin to set. This gives finished melamine faced boards that are then transported by road to our 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 materials	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	0%

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. Ecoinvent v3.8 and One Click LCA databases were used 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 <sup>1)</sup>	kg CO <sub>2</sub> e	-2,47E+01	3,31E-01	4,09E+00	-2,03E+01	3,01E-01	8,50E-03	MND	MND	MND	MND	MND	MND	MND	MNR	1,25E-01	2,83E+01	0,00E+00	-2,14E+00
GWP – fossil	kg CO <sub>2</sub> e	3,48E+00	3,31E-01	4,06E+00	7,87E+00	3,01E-01	8,64E-03	MND	MND	MND	MND	MND	MND	MND	MNR	1,25E-01	1,21E-01	0,00E+00	-2,12E+00
GWP – biogenic	kg CO <sub>2</sub> e	-2,82E+01	0,00E+00	3,38E-02	-2,82E+01	0,00E+00	-1,44E-04	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	2,82E+01	0,00E+00	0,00E+00
GWP – LULUC	kg CO <sub>2</sub> e	2,53E-02	1,66E-04	4,98E-04	2,60E-02	1,17E-04	8,87E-06	MND	MND	MND	MND	MND	MND	MND	MNR	5,22E-05	2,74E-04	0,00E+00	-1,99E-02
Ozone depletion pot.	kg CFC <sub>11</sub> e	6,01E-07	7,49E-08	3,41E-07	1,02E-06	7,07E-08	1,43E-09	MND	MND	MND	MND	MND	MND	MND	MNR	2,69E-08	6,10E-09	0,00E+00	-5,74E-07
Acidification potential	mol H <sup>+</sup> e	1,93E-02	3,06E-03	3,86E-03	2,62E-02	9,79E-04	4,04E-05	MND	MND	MND	MND	MND	MND	MND	MNR	3,67E-04	6,47E-04	0,00E+00	-7,73E-02
EP-freshwater <sup>2)</sup>	kg Pe	2,52E-04	2,47E-06	1,03E-05	2,65E-04	2,55E-06	3,35E-07	MND	MND	MND	MND	MND	MND	MND	MNR	1,06E-06	1,24E-05	0,00E+00	-2,25E-04
EP-marine	kg Ne	4,49E-03	6,91E-04	1,46E-03	6,64E-03	2,15E-04	9,98E-06	MND	MND	MND	MND	MND	MND	MND	MNR	7,33E-05	9,11E-05	0,00E+00	-2,28E-02
EP-terrestrial	mol Ne	5,06E-02	7,69E-03	1,62E-02	7,45E-02	2,39E-03	1,10E-04	MND	MND	MND	MND	MND	MND	MND	MNR	8,15E-04	1,03E-03	0,00E+00	-3,74E-01
POCP (“smog”) <sup>3)</sup>	kg NMVOCe	1,63E-02	2,27E-03	4,41E-03	2,30E-02	9,25E-04	3,29E-05	MND	MND	MND	MND	MND	MND	MND	MNR	3,06E-04	2,88E-04	0,00E+00	-6,43E-02
ADP-minerals & metals <sup>4)</sup>	kg Sbe	4,96E-05	7,46E-07	4,85E-06	5,52E-05	7,32E-07	2,91E-08	MND	MND	MND	MND	MND	MND	MND	MNR	4,41E-07	3,33E-07	0,00E+00	-7,43E-06
ADP-fossil resources	MJ	8,11E+01	4,95E+00	7,19E+01	1,58E+02	4,71E+00	1,43E-01	MND	MND	MND	MND	MND	MND	MND	MNR	1,81E+00	2,51E+00	0,00E+00	-2,42E+01
Water use <sup>5)</sup>	m <sup>3</sup> e depr.	7,36E+00	2,10E-02	3,33E-01	7,72E+00	2,10E-02	2,07E-03	MND	MND	MND	MND	MND	MND	MND	MNR	7,99E-03	6,75E-02	0,00E+00	-2,83E+00

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	1,67E-07	3,14E-08	1,19E-08	2,10E-07	3,42E-08	6,11E-10	MND	MND	MND	MND	MND	MND	MND	MNR	9,93E-09	2,44E-09	0,00E+00	-1,05E-06
Ionizing radiation <sup>6)</sup>	kBq U235e	2,53E-01	2,35E-02	4,02E-01	6,78E-01	2,25E-02	1,96E-03	MND	MND	MND	MND	MND	MND	MND	MNR	8,46E-03	6,68E-02	0,00E+00	-2,07E-01
Ecotoxicity (freshwater)	CTUe	1,12E+02	4,18E+00	7,56E+00	1,24E+02	4,19E+00	1,15E-01	MND	MND	MND	MND	MND	MND	MND	MNR	1,66E+00	1,52E+00	0,00E+00	-7,51E+02
Human toxicity, cancer	CTUh	3,16E-09	1,39E-10	2,65E-10	3,56E-09	1,02E-10	5,63E-12	MND	MND	MND	MND	MND	MND	MND	MNR	4,67E-11	7,43E-11	0,00E+00	-9,34E-09
Human tox. non-cancer	CTUh	6,46E-08	3,83E-09	8,22E-09	7,66E-08	4,03E-09	1,15E-10	MND	MND	MND	MND	MND	MND	MND	MNR	1,50E-09	1,51E-09	0,00E+00	-3,33E-07
SQP <sup>7)</sup>	-	6,36E+02	4,74E+00	4,25E+00	6,45E+02	5,42E+00	7,93E-02	MND	MND	MND	MND	MND	MND	MND	MNR	1,27E+00	3,88E-01	0,00E+00	-1,58E+03

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 <sup>8)</sup>	MJ	1,26E+02	5,24E-02	1,58E+00	1,27E+02	5,30E-02	1,13E-02	MND	MND	MND	MND	MND	MND	MND	MNR	2,15E-02	4,36E-01	0,00E+00	-3,74E+02
Renew. PER as material	MJ	1,71E+02	0,00E+00	-2,30E-01	1,71E+02	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	-1,71E+02	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,97E+02	5,24E-02	1,35E+00	2,99E+02	5,30E-02	1,13E-02	MND	MND	MND	MND	MND	MND	MND	MNR	2,15E-02	-1,71E+02	0,00E+00	-3,74E+02
Non-re. PER as energy	MJ	6,98E+01	4,95E+00	7,19E+01	1,47E+02	4,71E+00	1,43E-01	MND	MND	MND	MND	MND	MND	MND	MNR	1,81E+00	2,51E+00	0,00E+00	-2,42E+01
Non-re. PER as material	MJ	1,12E+01	0,00E+00	3,44E-03	1,12E+01	0,00E+00	-3,12E-02	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	-1,12E+01	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	8,11E+01	4,95E+00	7,19E+01	1,58E+02	4,71E+00	1,12E-01	MND	MND	MND	MND	MND	MND	MND	MNR	1,81E+00	-8,71E+00	0,00E+00	-2,42E+01
Secondary materials	kg	4,61E+00	1,63E-03	6,71E-01	5,28E+00	1,31E-03	6,25E-05	MND	MND	MND	MND	MND	MND	MND	MNR	6,04E-04	9,47E-04	0,00E+00	-3,08E-02
Renew. secondary fuels	MJ	5,86E-03	1,25E-05	1,11E+02	1,11E+02	1,32E-05	8,80E-07	MND	MND	MND	MND	MND	MND	MND	MNR	7,82E-06	1,52E-06	0,00E+00	-1,38E-04
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	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m <sup>3</sup>	1,72E-01	5,85E-04	7,91E-03	1,80E-01	6,08E-04	6,19E-05	MND	MND	MND	MND	MND	MND	MND	MNR	2,15E-04	2,11E-03	0,00E+00	-7,06E-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	1,50E-01	6,76E-03	3,64E-02	1,93E-01	6,20E-03	3,78E-04	MND	MND	MND	MND	MND	MND	MND	MNR	2,62E-03	1,03E-02	0,00E+00	-1,02E-01
Non-hazardous waste	kg	3,28E+00	9,86E-02	5,99E-01	3,98E+00	1,02E-01	1,60E-02	MND	MND	MND	MND	MND	MND	MND	MNR	4,17E-02	5,62E-01	0,00E+00	-1,65E+01
Radioactive waste	kg	1,34E-04	3,36E-05	2,57E-04	4,25E-04	3,17E-05	9,86E-07	MND	MND	MND	MND	MND	MND	MND	MNR	1,20E-05	1,80E-05	0,00E+00	-1,44E-04

### 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	6,66E-01	6,66E-01	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	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	3,33E-01	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	3,26E+00	3,26E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	1,47E+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	1,59E+00	MND	MND	MND	MND	MND	MND	MND	MNR	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 <sub>2</sub> e	3,40E+00	3,28E-01	4,03E+00	7,75E+00	2,98E-01	8,56E-03	MND	MND	MND	MND	MND	MND	MND	MNR	1,23E-01	1,19E-01	0,00E+00	-2,07E+00
Ozone depletion Pot.	kg CFC <sub>11</sub> e	5,13E-07	5,94E-08	2,99E-07	8,71E-07	5,60E-08	1,14E-09	MND	MND	MND	MND	MND	MND	MND	MNR	2,13E-08	5,29E-09	0,00E+00	-5,87E-07
Acidification	kg SO <sub>2</sub> e	1,47E-02	2,47E-03	2,84E-03	2,00E-02	7,94E-04	3,23E-05	MND	MND	MND	MND	MND	MND	MND	MNR	3,01E-04	5,46E-04	0,00E+00	-4,91E-02
Eutrophication	kg PO <sub>4</sub> <sup>3</sup> e	7,64E-03	3,36E-04	8,85E-04	8,86E-03	1,74E-04	1,80E-05	MND	MND	MND	MND	MND	MND	MND	MNR	6,64E-05	4,35E-04	0,00E+00	-1,88E-02
POCP (“smog”)	kg C <sub>2</sub> H <sub>4</sub> e	1,79E-03	8,00E-05	2,57E-04	2,13E-03	3,66E-05	1,34E-06	MND	MND	MND	MND	MND	MND	MND	MNR	1,49E-05	2,36E-05	0,00E+00	-3,18E-03
ADP-elements	kg Sbe	4,94E-05	7,27E-07	4,84E-06	5,49E-05	7,11E-07	2,86E-08	MND	MND	MND	MND	MND	MND	MND	MNR	4,31E-07	3,31E-07	0,00E+00	-7,21E-06
ADP-fossil	MJ	8,11E+01	4,95E+00	7,19E+01	1,58E+02	4,71E+00	1,43E-01	MND	MND	MND	MND	MND	MND	MND	MNR	1,81E+00	2,51E+00	0,00E+00	-2,42E+01

## 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

22.02.2024

