ENVIRONMENTAL PRODUCT DECLARATION

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

Plasterboard Durlock® EST (Standard) 12,5mm
Durlock® S.A.

EPD HUB, HUB-3258
Publishing date 30 April 2025, last updated on 30 April 2025, valid until 29 April 2030.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Durlock® S.A.
Address	Av. Corrientes 327, Piso 3°, Caba - Argentina
Contact details	departamento.tecnico@etexgroup.com
Website	https://durlock.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	-
Scope of the EPD	Cradle to gate with options, A4-B7, and modules C1-C4, D
EPD author	Salvador Duarte
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	Plasterboard Durlock® EST (Standard) 12,5mm
Additional labels	-
Product reference	-
Place of production	Durlock General Acha - Argentina
Period for data	01/01/2023 to 31/12/2023
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	1-15 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1m² of board thickness 12.5mm
Declared unit mass	8,1 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,33E+00
GWP-total, A1-A3 ($kgCO_2e$)	1,77E+00
Secondary material, inputs (%)	5,82
Secondary material, outputs (%)	0
Total energy use, A1-A3 (kWh)	10,5
Net freshwater use, A1-A3 (m^3)	0,01

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Durlock® S.A. is part of the global Etex Group of Companies, which operates in South America. Durlock® manufactures drywall products and systems for partitions, ceilings, wall linings purposes under the Durlock® brand. The products are used by small builders through to some of the most acclaimed architects and construction companies in the country.

PRODUCT DESCRIPTION

This EPD is relevant for the following plasterboard products: Plasterboard Durlock® EST (Standard) 12,5mm; Plasterboard Durlock® EST Exportación (Standard) 12,5mm; Plasterboard Durlock® RH (Moisture resistant) 12,5mm; Plasterboard Durlock® AH (Anti-moisture) 12,5 mm; Plasterboard Durlock® RS (Dry mortar) 12,5 mm and Plasterboard Durlock® SC (Semi-exposed) 12,5 mm. All these boards are produced in an Etex site located in General Acha, Argentina. The results presented on this EPD are based on the Plasterboard Durlock® EST (Standard) 12,5mm. The representativeness of the Plasterboard Durlock® EST (Standard) 12,5mm has been checked by comparing its results with the results of all the other products covered by this EPD. The comparative analysis confirmed that the maximal variation is below the allowable limit for the GWP-fossil for A1-A3 and as a result, Plasterboard Durlock® EST (Standard) 12,5mm is considered as representative for all the products included in the EPD.

The covered products are gypsum plasterboards to be used as a general drylining in partitions, linings and ceilings. The boards are made from gypsum as core enclosed inside liners made from 100% recycled processed cellulose paper and reinforced edges. They are available in a variety of sizes and are suitable for tape & jointing treatment. The boards are intended for indoors, commercial, or residential applications in load-bearing and non- load bearing wood or steel frame systems. They are the perfect solution for building from scratch, renovating or expanding a home, a commercial premises or any type of building, providing excellent performance in partition wall, ceiling or lining applications.

Manufactured under the strictest quality standards and thanks to different additives present in the core, each plasterboard type is designed for a specific usage. The boards EST (Standard) 12,5mm and EST Expo (Standard) 12,5mm are developed for dry areas. The board RH (Moisture resistant) 12,5mm is ideal for applications in areas with a high degree of humidity, such as bathrooms, kitchens or laundry. The board RF (Fire resistant) 12.5mm is ideal for applications in areas that have a fire requirement. The board AH (Anti-moisture) is developed to be used as lining on walls affected by moisture and is part of a specific lining system. The board RS (Dry mortar) 12,5 mm is to be used bonded on masonry walls and substitute traditional wet mortars. Finally, the board SC (Semi-exposed) 12,5 mm is ideal for semi-exposed ceilings in areas such balconies, verandas and loggias.

Further information can be found at https://durlock.com.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0%	
Minerals	96.81%	Argentina
Fossil materials	0.24%	World
Bio-based materials	2.95%	World

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0,15
Biogenic carbon content in packaging, kg C	0,001

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1m² of board thickness 12.5mm
Mass per declared unit	8,1 kg
Functional unit	1m² of board thickness 12.5mm installed by mean of mechanical fixings, offering a seamless finished substrate ready to receive additional finishing solutions.
Reference service life	50 years

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	x	x	x	x	x	x	x	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.

Transport for raw materials considers the distance from the manufacturing location of the raw material to the production plant and the modelling of the relevant transportation type (e.g., bulk sea fret, road lorry, train, ...) for each raw material. Regarding the energy used, both natural gas and electricity were consumed during manufacturing. 100% of the electricity is sourced from renewable sources (100% wind onshore). No process liquid water is released to the environment whereas water vapour is released in the atmosphere during calcination and drying. Product specific manufacturing waste data was used for production loss ratio in the LCA calculations. The transport assumptions for manufacturing wastes are calculated taking into account the address of the plant where the waste is generated and the address of the third-party location where the waste is treated. The transportation method reflects the actual type of transport used being road transport via lorry.

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.

Plasterboard products are delivered by road from the plants to customers across Argentina. The distance from General Acha to customers is considered 510km by truck, assuming Provincia of Buenos Aires as the main consumption centre. The two most common installation uses for Durlock® plasterboards are in metal framing partitions and ceilings. There are a variety of building systems and components used to deliver the required performance characteristics and which are outside the scope of this declaration. However, the use of screw fixings, jointing materials and mineral wool is common to all applications and the consumption of these are declared within this section as installation resources. A small quantity of water is also consumed in the mixing of jointing materials. No significant fuels or energy are consumed during installation and the process does not produce any emissions apart from solid wastes and water evaporation. For both plasterboard and jointing materials, a site wastage rate of 5% is assumed. 100% of the jobsite plasterboard waste is assumed to be landfilled.

PRODUCT USE AND MAINTENANCE (B1-B7)

The product has a reference service life of 50 years, providing the product is installed as per Durlock® recommendations. In such case, the product will last during its life of use without any requirements for maintenance, repair, replacement, or refurbishment throughout this period, providing normal and no accidental conditions of usage are encountered. The product will also not need any operational energy nor operational water to fulfil its function, once installed in the building.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

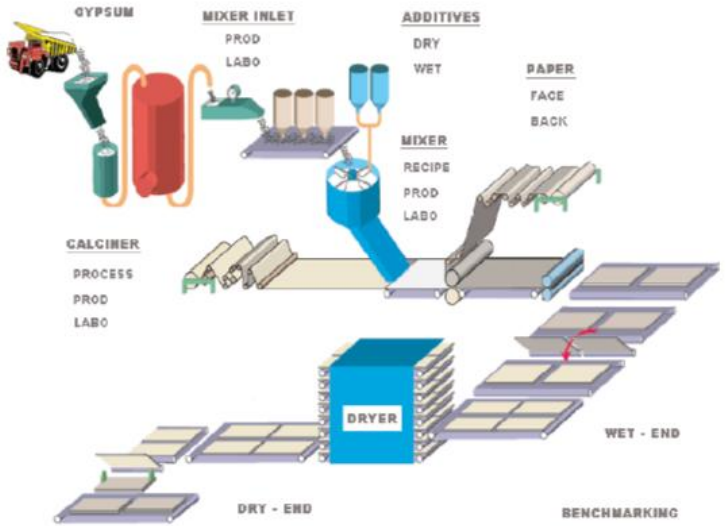
The end-of-life scenario considered for the Durlock® plasterboards is 100% landfilling. 100% of gypsum boards from demolition wastes are going to landfill at end of life. The transport of the gypsum waste to the end-of-life is 50 km. No energy has been considered for C1, it has been assumed that demolition is carried out without power tools or is using negligible amounts of energy.

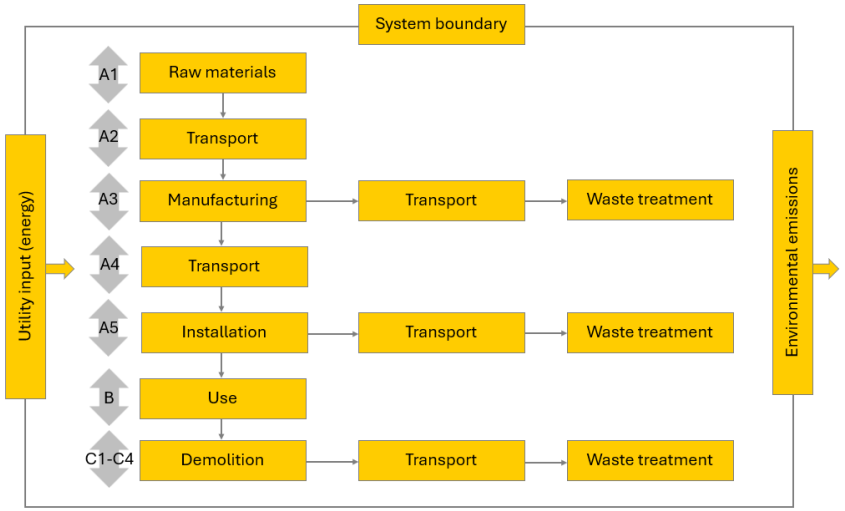
MANUFACTURING PROCESS

Gypsum is stored in silos, milled and calcined to plaster by heating to around 160 Celsius. The plaster is then mixed with additives and water to form a slurry in which the rehydration back to gypsum begins. The slurry is introduced between the face and back paper liners in a forming process which defines board thickness and width. During plaster setting over several minutes a high strength mechanical bond forms at the gypsum/paper interface. The boards are cut to size and then excess water is removed by passing them through the oven at a low temperature for around 30 minutes. During drying, starch migrates to the surface of the gypsum core, adding further strength by means of a chemical bond. Dried boards are packaged for storage and distribution.

Plasterboard is manufactured using state-of-the-art production equipment to rigorous quality standards. Environmental management as well as workers occupational health and safety management are considered in the manufacturing process.

See below the manufacturing process flow diagram and the included life cycle stages within the system boundary of this study:





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 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	Multiple products
Averaging method	Representative product
Variation in GWP-fossil for A1-A3	1-15 %

There is no average result considered in this study since this EPD refers to one specific product produced in one production plant. LCA calculations have been carried out for the other products covered in the EPD. A variation analysis has been conducted comparing each product result vs. the Standard board 12.5mm. The variation analysis confirmed that the maximal variation is below the allowable limit for the GWP-fossil for A1-A3 and as a result, Standard board 12,5mm is considered as representative for all the products included in this EPD.

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-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	1,77E+00	6,97E-01	3,61E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,36E-02	0,00E+00	6,26E-01	0,00E+00
GWP – fossil	kg CO_2e	2,33E+00	6,96E-01	3,70E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,36E-02	0,00E+00	5,16E-02	0,00E+00
GWP – biogenic	kg CO_2e	-5,64E-01	0,00E+00	-9,89E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,74E-01	0,00E+00
GWP – LULUC	kg CO_2e	3,89E-03	2,76E-04	5,94E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,91E-05	0,00E+00	8,53E-05	0,00E+00
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	3,11E-07	1,62E-07	3,90E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,72E-08	0,00E+00	1,94E-08	0,00E+00
Acidification potential	mol H^+e	7,27E-03	3,53E-03	1,83E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,73E-04	0,00E+00	4,63E-04	0,00E+00
EP-freshwater[2)]	kg Pe	2,74E-05	4,93E-06	6,73E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,21E-07	0,00E+00	6,62E-07	0,00E+00
EP-marine	kg Ne	2,47E-03	1,21E-03	4,54E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,28E-04	0,00E+00	1,59E-04	0,00E+00
EP-terrestrial	mol Ne	2,29E-02	1,33E-02	5,34E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,40E-03	0,00E+00	1,74E-03	0,00E+00
POCP ("smog")[3)]	kg NMVOCe	6,16E-03	3,79E-03	1,26E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,01E-04	0,00E+00	5,14E-04	0,00E+00
ADP-minerals & metals[4)]	kg Sbe	2,84E-04	2,49E-06	4,31E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,63E-07	0,00E+00	1,19E-07	0,00E+00
ADP-fossil resources	MJ	3,52E+01	1,04E+01	4,89E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,10E+00	0,00E+00	1,34E+00	0,00E+00
Water use[5)]	m^3e depr.	2,53E-01	4,82E-02	7,15E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,10E-03	0,00E+00	5,35E-03	0,00E+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-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	9,33E-08	6,21E-08	2,00E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,56E-09	0,00E+00	9,29E-09	0,00E+00
Ionizing radiation[6]	kBq U235e	6,57E-02	5,46E-02	1,94E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,77E-03	0,00E+00	6,00E-03	0,00E+00
Ecotoxicity (freshwater)	CTUe	7,62E+01	8,65E+00	9,47E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,14E-01	0,00E+00	9,57E-01	0,00E+00
Human toxicity, cancer	CTUh	9,66E-10	2,68E-10	1,26E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,83E-11	0,00E+00	4,12E-11	0,00E+00
Human tox. non-cancer	CTUh	1,95E-08	8,77E-09	2,89E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,28E-10	0,00E+00	6,37E-10	0,00E+00
SQP[7]	-	1,17E+01	7,30E+00	5,23E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,71E-01	0,00E+00	2,86E+00	0,00E+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-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8]	MJ	2,98E+00	1,50E-01	7,38E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,58E-02	0,00E+00	2,59E-02	0,00E+00
Renew. PER as material	MJ	6,06E+00	0,00E+00	1,11E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-6,17E+00	0,00E+00
Total use of renew. PER	MJ	9,03E+00	1,50E-01	8,50E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,58E-02	0,00E+00	-6,14E+00	0,00E+00
Non-re. PER as energy	MJ	3,49E+01	1,04E+01	4,87E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,10E+00	0,00E+00	1,34E+00	0,00E+00
Non-re. PER as material	MJ	3,14E-01	0,00E+00	2,44E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,16E-01	0,00E+00
Total use of non-re. PER	MJ	3,52E+01	1,04E+01	4,87E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,10E+00	0,00E+00	1,03E+00	0,00E+00
Secondary materials	kg	8,51E-01	3,50E-03	5,75E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,69E-04	0,00E+00	7,03E-04	0,00E+00
Renew. secondary fuels	MJ	2,99E-02	3,85E-05	2,19E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,07E-06	0,00E+00	9,92E-06	0,00E+00
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	1,17E-02	1,31E-03	1,83E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,39E-04	0,00E+00	1,44E-03	0,00E+00

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	9,86E-02	1,17E-02	1,33E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,24E-03	0,00E+00	1,37E-02	0,00E+00
Non-hazardous waste	kg	7,77E-01	2,08E-01	8,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-02	0,00E+00	8,94E+00	0,00E+00
Radioactive waste	kg	7,13E-05	7,18E-05	2,64E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,59E-06	0,00E+00	8,97E-08	0,00E+00

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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	7,92E-02	0,00E+00	3,96E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	2,32E+00	6,90E-01	3,71E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,30E-02	0,00E+00	5,05E-02	0,00E+00
Ozone depletion Pot.	kg $CFC_{-11}e$	2,50E-07	1,29E-07	3,13E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,36E-08	0,00E+00	1,54E-08	0,00E+00
Acidification	kg SO_2e	5,50E-03	2,67E-03	1,40E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,82E-04	0,00E+00	3,51E-04	0,00E+00
Eutrophication	kg PO_4^3e	2,11E-03	6,16E-04	4,60E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,51E-05	0,00E+00	7,98E-05	0,00E+00
POCP (“smog”)	kg C_2H_4e	3,08E-04	9,05E-05	6,85E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,57E-06	0,00E+00	1,61E-05	0,00E+00
ADP-elements	kg Sbe	8,25E-06	2,43E-06	5,29E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,57E-07	0,00E+00	1,16E-07	0,00E+00
ADP-fossil	MJ	3,52E+01	1,04E+01	4,86E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,10E+00	0,00E+00	1,34E+00	0,00E+00

ENVIRONMENTAL IMPACTS – FRENCH NATIONAL COMPLEMENTS

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-elements	kg Sbe	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
Hazardous waste disposed	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
Non-haz. waste disposed	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
Air pollution	m^3	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
Water pollution	m^3	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 – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

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	2,34E+00	6,97E-01	3,71E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,36E-02	0,00E+00	5,16E-02	0,00E+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.

ENVIRONMENTAL IMPACTS – BEPALINGSMETODE, NETHERLANDS

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Shadow price	€	3,25E-01	8,82E-02	5,74E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,32E-03	0,00E+00	8,61E-03	0,00E+00
Terrestrial ecotoxicity	DCB eq	2,07E-02	1,99E-03	1,95E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,10E-04	0,00E+00	1,39E-04	0,00E+00
Seawater ecotoxicity	DCB eq	3,77E+02	9,15E+01	1,00E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,68E+00	0,00E+00	9,63E+00	0,00E+00
Freshwater ecotoxicity	DCB eq	9,34E-02	1,09E-02	8,14E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,15E-03	0,00E+00	8,99E-04	0,00E+00
Human ecotoxicity	DCB eq	1,36E+00	2,98E-01	2,30E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,15E-02	0,00E+00	3,14E-02	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ETE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP Fossil Fuels	kg Sbe	1,69E-02	5,01E-03	2,35E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,30E-04	0,00E+00	6,45E-04	0,00E+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

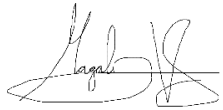
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried 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
30.04.2025



VERIFIED ISO 14025