ENVIRONMENTAL PRODUCT DECLARATION

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

Empire corner shower enclosure 89x89/Black/Muntins/Clear glass
Macro Design AB

EPD HUB, HUB-0948
Publishing date 26 January 2024, last updated on 26 January 2024, valid until 26 January 2029.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Macro Design AB
Address	Sven Hanssons gata 1, 312 96 Laholm
Contact details	info@macrodesign.se
Website	www.macrodesign.se

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	Louise Ulf, Macro Design AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ 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	Empire corner shower enclosure 89x89/Black/Muntins/Clear glass
Additional labels	-
Product reference	Item number: DEH9090SSKL, RSK number: 7332847
Place of production	Kaiping, China
Period for data	Calendar year 2022
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	Not applicable %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO2e)	5,01E+00
GWP-total, A1-A3 (kgCO2e)	4,77E+00
Secondary material, inputs (%)	1.07
Secondary material, outputs (%)	36.7
Total energy use, A1-A3 (kWh)	17.1
Total water use, A1-A3 (m3e)	3,73E-02

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Macro Design is a Swedish bathroom supplier with 40 years of experience in the bathroom industry and has established a strong and esteemed brand for the mid- and premium segments. We offer one of the widest ranges of shower solutions in the Nordic region, providing a comprehensive selection of showers, bathroom furniture, washbasins, taps, lighting, toilets, and bathtubs. Innovation, attractive design, and functionality are the cornerstones of Macro Designs product development. Our ambition is to always stay one step ahead and create products with that extra touch, without losing focus on user-friendliness and quality. We prefer to work with classical materials in the manufacture of our products, such as tempered glass, moisture-resistant wood, and solid oak and ash.
Our commitment lies in delivering timeless and sustainable designs of elegant bathroom furniture. Developed by Macro Design to withstand daily wear and maintain its high quality for many years to come.

PRODUCT DESCRIPTION

The Empire corner shower enclosure is a shower unit with a smart and robust design with raw industrial elements. The glass of the shower is made of 6 mm tempered clear glass, surrounded by aluminum profiles.
The Empire corner shower enclosure offers the option of including or excluding detachable muntins. The muntins are placed on the outside of the shower for easier cleaning and are made of aluminum, just like the profiles.
The Empire corner shower enclosure is of high quality and is easy to install, with a height of 201 cm and features reversible doors.
CE marked product.

Further information can be found at:
https://www.macrodesign.se/sortiment/duschar/duschhornor/empire-duschhorna/

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	18	China
Minerals	81	China
Fossil materials	1	China
Bio-based materials	0	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.068963433

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 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.

The shower enclosure is made of tempered flat glass, aluminium profiles, metal hinges, plastic elements and metallic screws. The components are manufactured in China and delivered to the manufacturers site. The manufacturing process requires electricity. A wooden pallet, cardboard, polyethylene packaging film and EPS are used as packaging materials for transporting the shower enclosure to the dedicated market place.

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.

Average distance of transportation from production plant to retailers site is assumed as 20 786 km and the transportation method is assumed to be lorry and container ship. Vehicle capacity utilization volume factor is assumed to be 1 which means full load. In reality, it may vary but as role of transportation emissions in total results is small, the variety in load is assumed to be negligible. To be conservative, empty returns are included in this study as implemented through an average load factor in the Ecoinvent transport datapoints. Transportation does not cause losses as product is packaged properly.

Environmental impacts from installation into the building include generation of waste packaging materials (A5) and release of biogenic carbon dioxide from wood pallets/cardboard boxes. The impacts of material production, its processing and its disposal as installation waste are also included. Electricity consumption for installation of the shower enclosure is considered, too.

PRODUCT USE AND MAINTENANCE (B1-B7)

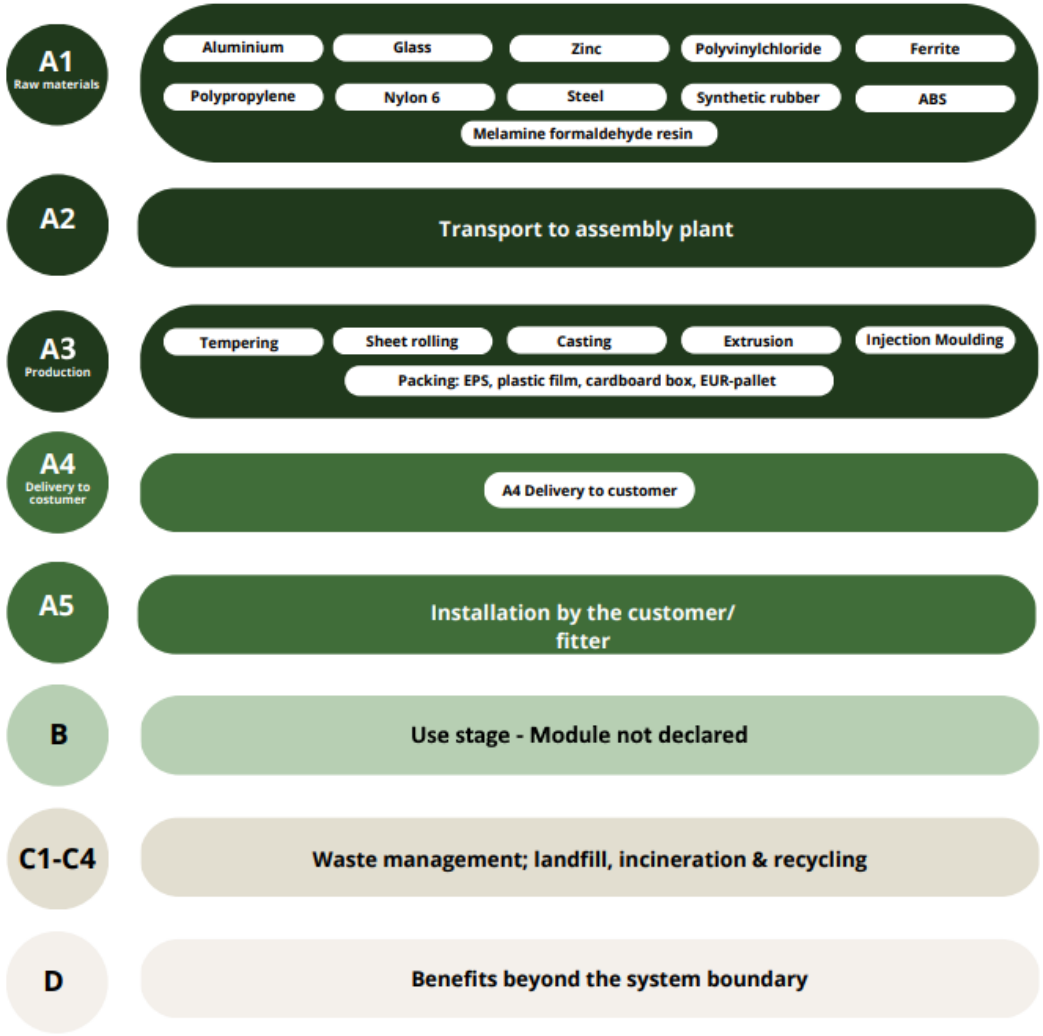
The use phase is not accounted into the assessment because it is not applicable.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-c4, D)

Consumption of energy for dismantling is considered. It is assumed that the waste is collected separately and transported to the waste treatment facility. Transportation distance to waste treatment plant is assumed to be 50 km and the transportation method is assumed to be lorry (C2). Module C3 accounts for energy and resource inputs for sorting and treating of

steel, aluminium and zinc alloy for recycling, and incineration of plastic materials with energy recovery with efficiency greater than 60%. Additionally, waste that is landfilled is included in Module C4. Due to the material and energy recovery potential of parts in the product and in packaging, recycled raw materials lead to avoided virgin material production and the energy recovered from incineration replaces electricity and heat from primary sources. Benefits and loads from incineration and recycling are included in Module D.

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging materials	No allocation
Ancillary materials	Not applicable
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	Not applicable

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. 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[1)]	kg CO_2e	4,84E+00	1,33E-02	-8,94E-02	4,77E+00	3,77E-01	2,82E-01	MND	MND	MND	MND	MND	MND	MND	1,67E-03	9,25E-03	1,75E-02	6,47E-03	-2,83E+00
GWP – fossil	kg CO_2e	4,84E+00	1,33E-02	1,62E-01	5,01E+00	3,77E-01	2,93E-02	MND	MND	MND	MND	MND	MND	MND	1,66E-03	9,25E-03	1,75E-02	6,47E-03	-2,65E+00
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	-2,53E-01	-2,53E-01	0,00E+00	2,53E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,70E-01
GWP – LULUC	kg CO_2e	8,51E-03	5,42E-06	7,93E-04	9,31E-03	2,26E-04	5,85E-06	MND	MND	MND	MND	MND	MND	MND	2,47E-06	3,77E-06	6,69E-06	5,97E-06	-5,42E-03
Ozone depletion pot.	kg CFC_{-11}e	2,75E-07	2,93E-09	1,11E-08	2,89E-07	7,89E-08	5,90E-10	MND	MND	MND	MND	MND	MND	MND	8,15E-11	2,04E-09	5,07E-10	1,98E-09	-1,11E-07
Acidification potential	mol H^+e	3,64E-02	5,50E-05	8,49E-04	3,73E-02	7,98E-03	4,11E-05	MND	MND	MND	MND	MND	MND	MND	9,47E-06	3,83E-05	5,29E-05	5,49E-05	-2,15E-02
EP-freshwater[2)]	kg Pe	2,37E-04	1,12E-07	8,18E-06	2,46E-04	1,99E-06	3,14E-07	MND	MND	MND	MND	MND	MND	MND	2,06E-07	7,80E-08	2,27E-07	8,52E-08	-1,47E-04
EP-marine	kg Ne	6,15E-03	1,61E-05	3,42E-04	6,51E-03	1,99E-03	1,24E-05	MND	MND	MND	MND	MND	MND	MND	1,18E-06	1,12E-05	1,29E-05	1,90E-05	-3,25E-03
EP-terrestrial	mol Ne	6,81E-02	1,77E-04	2,31E-03	7,06E-02	2,21E-02	1,30E-04	MND	MND	MND	MND	MND	MND	MND	1,34E-05	1,23E-04	1,41E-04	2,07E-04	-3,93E-02
POCP ("smog")[3)]	kg NMVOCe	2,05E-02	5,40E-05	6,27E-04	2,12E-02	5,83E-03	3,61E-05	MND	MND	MND	MND	MND	MND	MND	3,70E-06	3,75E-05	4,10E-05	5,97E-05	-1,04E-02
ADP-minerals & metals[4)]	kg Sbe	5,03E-04	4,63E-08	8,04E-07	5,03E-04	8,41E-07	6,28E-08	MND	MND	MND	MND	MND	MND	MND	1,45E-08	3,21E-08	4,70E-07	2,04E-08	-4,26E-04
ADP-fossil resources	MJ	5,32E+01	1,93E-01	2,32E+00	5,57E+01	5,05E+00	8,55E-02	MND	MND	MND	MND	MND	MND	MND	3,33E-02	1,34E-01	5,94E-02	1,47E-01	-2,69E+01
Water use[5)]	m^3e depr.	1,43E+00	8,43E-04	8,59E-02	1,52E+00	1,83E-02	6,04E-03	MND	MND	MND	MND	MND	MND	MND	7,61E-04	5,86E-04	2,46E-03	7,51E-04	-5,39E-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	3,66E-07	1,13E-09	1,48E-08	3,82E-07	1,99E-08	1,27E-09	MND	MND	MND	MND	MND	MND	MND	2,97E-11	7,90E-10	3,36E-09	1,13E-09	-2,18E-07
Ionizing radiation[6)]	kBq U235e	2,91E-01	8,94E-04	6,44E-03	2,99E-01	2,39E-02	1,05E-03	MND	MND	MND	MND	MND	MND	MND	8,05E-04	6,22E-04	6,06E-04	6,61E-04	-1,27E-01
Ecotoxicity (freshwater)	CTUe	2,41E+02	1,77E-01	6,26E+00	2,48E+02	3,74E+00	6,48E-01	MND	MND	MND	MND	MND	MND	MND	2,23E-02	1,23E-01	1,41E+00	1,03E+01	-1,68E+02
Human toxicity, cancer	CTUh	4,69E-09	4,98E-12	2,29E-10	4,93E-09	1,93E-10	1,57E-11	MND	MND	MND	MND	MND	MND	MND	7,62E-13	3,46E-12	3,54E-11	4,69E-12	3,43E-10
Human tox. non-cancer	CTUh	1,31E-07	1,65E-10	2,09E-09	1,34E-07	3,03E-09	3,04E-10	MND	MND	MND	MND	MND	MND	MND	2,62E-11	1,15E-10	4,01E-10	7,26E-11	-7,99E-08
SQP[7)]	-	1,69E+01	1,33E-01	1,57E+01	3,27E+01	1,92E+00	3,76E-02	MND	MND	MND	MND	MND	MND	MND	4,94E-03	9,33E-02	1,04E-01	3,68E-01	-1,29E+01

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	4,52E+00	2,26E-03	1,67E+00	6,19E+00	4,79E-02	8,39E-03	MND	MND	MND	MND	MND	MND	MND	5,91E-03	1,57E-03	9,29E-03	2,21E-03	-3,29E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	2,21E+00	2,21E+00	0,00E+00	-2,21E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,79E+00
Total use of renew. PER	MJ	4,52E+00	2,26E-03	3,89E+00	8,41E+00	4,79E-02	-2,20E+00	MND	MND	MND	MND	MND	MND	MND	5,91E-03	1,57E-03	9,29E-03	2,21E-03	-1,50E+00
Non-re. PER as energy	MJ	5,30E+01	1,93E-01	1,96E+00	5,52E+01	5,05E+00	8,55E-02	MND	MND	MND	MND	MND	MND	MND	3,33E-02	1,34E-01	5,94E-02	1,47E-01	-2,69E+01
Non-re. PER as material	MJ	1,57E-01	0,00E+00	3,59E-01	5,16E-01	0,00E+00	-3,59E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-1,18E-01	-3,92E-02	-1,16E-02
Total use of non-re. PER	MJ	5,32E+01	1,93E-01	2,32E+00	5,57E+01	5,05E+00	-2,73E-01	MND	MND	MND	MND	MND	MND	MND	3,33E-02	1,34E-01	-5,82E-02	1,08E-01	-2,69E+01
Secondary materials	kg	1,07E-02	6,34E-05	1,14E-01	1,25E-01	2,03E-03	9,15E-05	MND	MND	MND	MND	MND	MND	MND	3,43E-06	4,40E-05	6,30E-05	4,99E-05	3,45E-01
Renew. secondary fuels	MJ	7,10E-04	8,21E-07	2,86E-02	2,93E-02	1,23E-05	4,32E-07	MND	MND	MND	MND	MND	MND	MND	3,08E-08	5,69E-07	2,86E-06	1,02E-06	1,30E-03
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	3,52E-02	2,27E-05	2,01E-03	3,73E-02	4,49E-04	3,18E-05	MND	MND	MND	MND	MND	MND	MND	2,64E-05	1,58E-05	7,03E-05	1,60E-04	-1,85E-02

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	6,37E-01	2,77E-04	9,91E-03	6,47E-01	6,75E-03	4,31E-04	MND	MND	MND	MND	MND	MND	MND	1,22E-04	1,93E-04	4,25E-04	0,00E+00	-3,93E-01
Non-hazardous waste	kg	7,60E+00	4,43E-03	1,63E-01	7,77E+00	7,93E-02	8,28E-02	MND	MND	MND	MND	MND	MND	MND	9,47E-03	3,08E-03	2,06E-02	6,23E-01	-4,50E+00
Radioactive waste	kg	1,27E-04	1,27E-06	3,44E-06	1,32E-04	3,50E-05	4,24E-07	MND	MND	MND	MND	MND	MND	MND	2,27E-07	8,85E-07	3,07E-07	0,00E+00	-5,72E-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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,12E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	3,68E-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	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
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,84E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	7,74E-02	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	4,72E+00	1,32E-02	1,66E-01	4,89E+00	3,74E-01	3,16E-02	MND	MND	MND	MND	MND	MND	MND	1,65E-03	9,15E-03	1,88E-02	6,34E-03	-2,57E+00
Ozone depletion Pot.	kg CFC_{-11}e	2,29E-07	2,32E-09	9,35E-09	2,41E-07	6,25E-08	4,86E-10	MND	MND	MND	MND	MND	MND	MND	7,07E-11	1,62E-09	4,13E-10	1,57E-09	-9,32E-08
Acidification	kg SO_2e	3,02E-02	4,29E-05	6,34E-04	3,09E-02	6,37E-03	3,19E-05	MND	MND	MND	MND	MND	MND	MND	8,07E-06	2,98E-05	4,22E-05	4,16E-05	-1,79E-02
Eutrophication	kg PO_4^3e	2,33E-02	9,84E-06	3,77E-04	2,37E-02	7,66E-04	4,64E-05	MND	MND	MND	MND	MND	MND	MND	7,18E-06	6,84E-06	3,17E-05	2,14E-05	-6,13E-03
POCP (“smog”)	kg C_2H_4e	2,75E-03	1,74E-06	6,71E-05	2,82E-03	1,71E-04	2,79E-06	MND	MND	MND	MND	MND	MND	MND	3,30E-07	1,21E-06	4,12E-06	1,58E-06	-8,85E-04
ADP-elements	kg Sbe	5,01E-04	4,52E-08	6,96E-07	5,02E-04	8,24E-07	6,20E-08	MND	MND	MND	MND	MND	MND	MND	1,45E-08	3,13E-08	4,69E-07	1,96E-08	-4,26E-04
ADP-fossil	MJ	5,32E+01	1,92E-01	2,30E+00	5,57E+01	5,05E+00	8,55E-02	MND	MND	MND	MND	MND	MND	MND	3,33E-02	1,34E-01	5,94E-02	1,47E-01	-2,69E+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

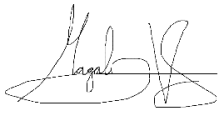
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried 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
26.01.2024



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VERIFIED ISO 14025