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ENVIRONMENTAL PRODUCT DECLARATION

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

CMF **METFLOOR** METAL DECKING EAF COIL

CREATED WITH ONE CLICK LCA

GENERAL INFORMATION

MANUFACTURER

MANUFACTURER: VP-001	Construction Metal Forming
ADDRESS: VP-002	Unit 3 Mamhilad Technology Park, Mamhilad, Pontypool. NP4 0JJ, United Kingdom
CONTACT DETAILS: VP-003	info@cmf.uk.com
WEBSITE:	www.cmf.uk.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 1.0, 1 Feb 2022
SECTOR:	Construction product
CATEGORY OF EPD:	Design phase EPD
SCOPE OF THE EPD:	Cradle to gate, with modules C1-C4 & D
EPD AUTHOR:	Construction Metal Forming
EPD VERIFICATION:	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
EPD VERIFIER:	Haiha Nguyen, 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.

GENERAL INFORMATION

PRODUCT

PRODUCT NAME:	Metfloor Metal Decking EAF COIL
ADDITIONAL LABELS:	MF55, MF60 and MF80 Decking profiles.
PRODUCT REFERENCE:	MF55 Deck, MF60 Deck, MF80 Deck.
PLACE OF PRODUCTION:	Unit 3 Mamhilad Technology Park, Mamhilad, Pontypool. NP4 0JJ, United Kingdom
PERIOD FOR DATA:	March 2024 – May 2024
AVERAGING IN EPD:	Not applicable
VARIATION IN GWP-FOSSIL FOR A1-A3:	-

ENVIRONMENTAL DATA SUMMARY

DECLARED UNIT:	1 kg
DECLARED UNIT MASS:	1 kg
GWP-FOSSIL, A1-A3 (kgco2e):	8,51E-01
GWP-TOTAL, A1-A3 (kgco2e):	8,51E-01
SECONDARY MATERIAL, INPUTS (%):	96.2
SECONDARY MATERIAL OUTPUTS (%):	85
TOTAL ENERGY USE, A1-A3 (kWh):	8.59
TOTAL WATER USE, A1-A3 (m3e);	0

MANUFACTURER AND PRODUCT

ABOUT THE MANUFACTURER

As specialist designers, manufacturers and innovators of profiled MetFloor metal decking, industrial building systems and associated cold-formed steel products, CMF is actively engaged in efforts to minimize its carbon footprint and adopt sustainable practices.

Among its various new initiatives, the company has taken a major stride by adding a low carbon product In the decking range which is made from Electric Arc Furnace (EAF) recycled scrap steel vs traditional blast furnace steel.

Other initiatives include converting its fleet of diesel trucks to electric, and by adopting a 100% zero carbon electricity supply by British Gas, enabling greener operations and fostering a more environmentally friendly approach

PRODUCT DESCRIPTION

MetFloor low carbon product is available in three standard sizes and multiple gauges, and is available complete with edge trims, flashings and closures for the overall construction of composite floor slabs and the permanent shuttering of reinforced concrete. The process involved in these products Includes the separation and stock management of incoming steel, this allows customers to purchase the low carbon product manufactured from a specialist steel supplier.

The stock management at CMF is managed through our ERP system with clear identification on material for use. Each coil on delivery is identified with a specific coil number and that coil can be issued to specific jobs. Material control and traceability is managed through our ISO 9001 management systems and regular internal audits. This ensures customer product can be traced back to the mother coil allowing for separation for our low carbon metfloor product.

The MetFloor 55 dovetail profile provides an excellent mechanical key against the concrete slab, offering excellent shear bond performance, augmented by embossments in the profile webs and stiffened by ribs within the trough. MetFloor 55 presents a near-flat soffit and only a relatively thin slab is required to meet fire design requirements.

MetFloor 60 is a shallow trapezoidal composite floor deck available in a range of steel grades, and with a shoulder height of 60mm before the dovetail peak. The highly efficient second generation MetFloor 60 profile is the result of extensive research & development. With far greater unpropped spanning capabilities and reduce concrete consumption, MetFloor 60 offers exceptional acoustic attenuation and sustainability credentials. The 60mm profile includes trough stiffeners and joint laps formed asymmetrically to allow for interlocking and optimum stud positioning.

MetFloor 80 is the next step in our trapezoidal composite decking range, entering the third generation of composite slab profiles. MetFloor 80 is available in various steel grades, and measures 80mm to the shoulder. It is the latest in our decking profile redevelopments, and offers exceptional spanning capabilities beyond MetFloor 55 & 60. With the deeper profile, concrete consumption is reduced for more sustainable material usage whilst maintaining enhanced acoustic attenuation. MetFloor 80 is available with crushed ends, further improving acoustic and fire characteristics without the need for filler blocks at decking ends.

PRODUCT RAW MATERIAL MAIN COMPOSITION

RAW MATERIAL CATEGORY	AMOUNT, MASS- %	MATERIAL ORIGIN
Metals	100	Europe
Minerals	0	-
Fossil materials	0	-
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

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).

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed below.

PRODUCT STAGE	A1	X	Raw materials
	A2	X	Transport
	A3	X	Manufacturing
ASSEMBLY STAGE	A4	MND	Transport
	A5	MND	Assembly
USE STAGE	B1	MND	Use
	B2	MND	Maintenance
	B3	MND	Repair
	B4	MND	Replacement
	B5	MND	Refurbishment
	B6	MND	Operational energy use
	B7	MND	Operational water use
END-OF-LIFE STAGE	C1	X	Deconstruction/ demolish
	C2	X	Transport
	C3	X	Waste processing
	C4	X	Disposal
BEYOND THE SYSTEM BOUNDARIES	D	X	Reuse
		X	Recovery
		X	Recycling

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 included in this stage are fuels used by machines and handling of waste formed in the production processes at the manufacturing facilities. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

For low carbon metfloor products a specialist supplier is used and stock is managed through our ERP system.

The transportation distance is defined according to the PCR. 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. Empty returns are not taken into account as it is assumed that return trip is used by the transportation company to serve the needs of other clients. Transportation does not cause losses as product are packaged properly.

In this study allocation could not be avoided for raw materials, ancillary material, energy consumption and waste production as the information was only measured on factory or production process level. The inputs were allocated to studied product based on annual production volume (mass). Sorting of scrap metal was used in A3 to account for the waste material through the manufacturing process. A3 ancillary waste is assumed to be lost as vapour with the water as shown in A3 waste. The mineral oil is used for cooling and lubrication during processing. It is a typical cutting oil you would see in metal cutting operations but as we use for forming it is 10 x lower oil to water mixture than standard metal cutting operations. The packaging material of wood and plastic was excluded due to being less than 1%. Production occurs in the UK, thus the Ecoinvent market for electricity medium voltage datapoint was selected.

The Electric Arc Furnace Steel in this EDP produces around one third of the C02 compared to traditional blast furnace steel production.

Scrap steel is melted with the use of renewable produced electricity, lime, carbon and Oxygen is added to the process to remove any impurities to form a liquid iron. Ferro alloys are then added to the liquid Iron to form the steel required.

The steel then goes through a rolling mill and then a galvanising line.

Finished product is shipped to the UK via ships, to ports in the UK, then transported via road to CMF. The material arrives at CMF as the finished product and only requires cold forming through our cold forming machines, no other processing is required.

PRODUCT LIFE-CYCLE

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. Metal decking is produced through offsite construction so little transport is done once on site.

It was decided not to include the A4-A5 module within the life cycle assessment and it is therefore left out of scope.

PRODUCT USE AND MAINTENANCE (B1-B7)

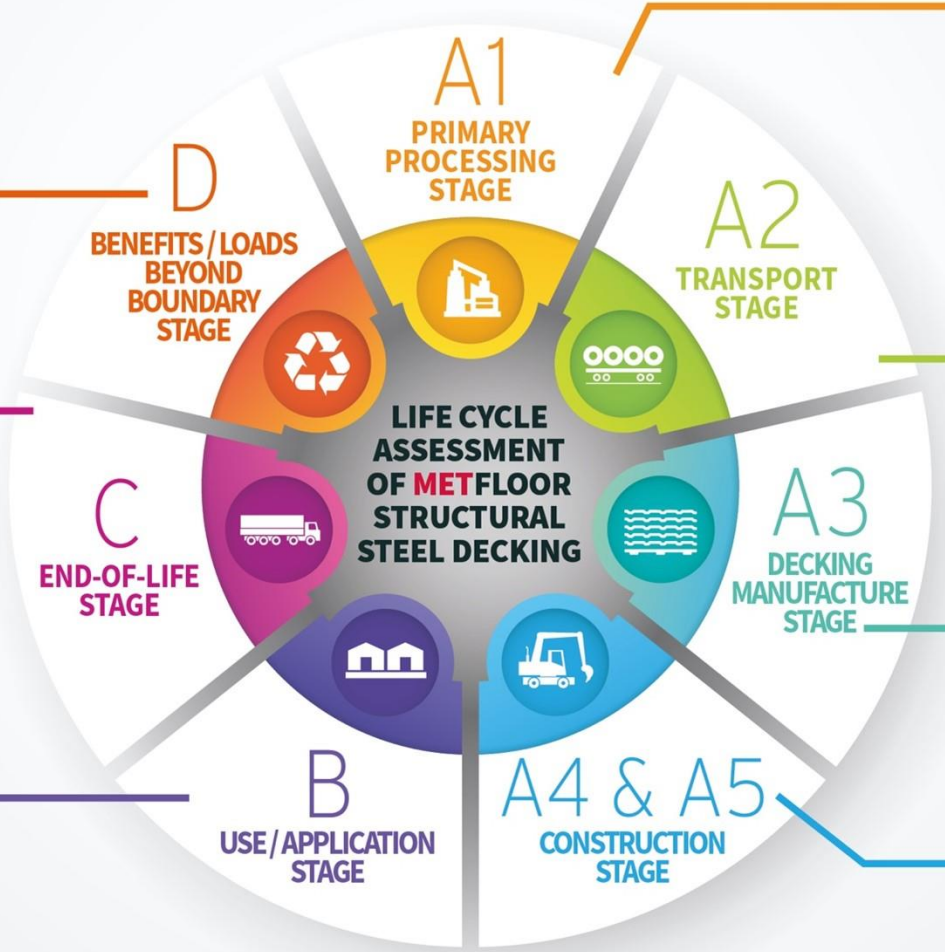
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Demolition is assumed to consume 0,01 kWh/kg of product. The source of energy is diesel fuel used by construction machines (C1). It is assumed that 100% of the waste is collected and transported to the waste treatment centre. Transportation distance to treatment is assumed as 50 km and the transportation method is assumed to be lorry (C2).

Approximately 85% of steel is assumed to be recycled based on World Steel Association, 2020 (C3). It is assumed that the remaining 15 % of steel is taken to landfill for final disposal (C4). The end-of-life product does not account for the benefit of recycling twice.

SYSTEM BOUNDARY



INCLUDES IMPACTS FROM
- RAW MATERIAL EXTRACTION AND PROCESSING (SCRAP STEEL)
- STEELMAKING, CASTING, AND PRODUCTION OF COLD ROLLED COIL
- PREPARATION OF RECYCLED SCRAP
- HOT DIP PROTECTIVE COATING
- RESPONSIBLE SOURCING OF MATERIALS TO BES 6001 STANDARD

INCLUDES IMPACTS FROM
- TRANSPORT OF HOT DIP GALVANISED STEEL COILS TO PONTYPOOL DECK MANUFACTURING SITE

INCLUDES IMPACTS FROM
- PROFILING AND CUTTING OF HOT DIP GALVANISED STEEL
- PACKAGING OF DECKS FOR DELIVERY TO SITE

INCLUDES IMPACTS FROM
- DELIVERY OF STEEL DECKS AND OTHER COMPONENTS TO SITE
- INSTALLATION OF COMPOSITE DECK SYSTEM AT CONSTRUCTION SITE

INCLUDES IMPACTS FROM
- USE OR APPLICATION OF THE COMPOSITE DECK IN A BUILDING
- MAINTENANCE, REPAIR, REPLACEMENT, REFURBISHMENT OF THE SYSTEM

INCLUDES IMPACTS FROM
- DECONSTRUCTION OF COMPOSITE DECK SYSTEM
- TRANSPORT FROM SITE TO END-OF-LIFE
- PROCESSING OF DECK SYSTEM FOR REUSE OR RECYCLING
- DISPOSAL TO LANDFILL OF STEEL (15%) AND OTHER SYSTEM COMPONENTS

INCLUDES IMPACTS FROM
- DECK REUSE (0%) AND RECYCLING OF THE STEEL COMPONENT (85%)

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	Not applicable
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

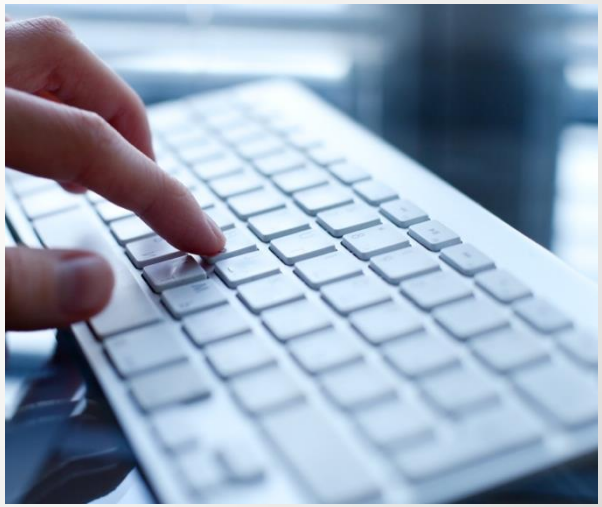
This EPD is product and factory specific and does not contain average calculations.

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

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 3.8 and One Click LCA databases were used as sources of environmental data.

CREATED WITH ONE CLICK LCA



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 CO2e	8,02E-01	4,13E-02	7,92E-03	8,51E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	9,20E-04	4,70E-03	4,89E-02	7,91E-04	0,00E+00
GWP – fossil	kg CO2e	8,02E-01	4,12E-02	7,91E-03	8,51E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	9,19E-04	4,69E-03	4,89E-02	7,90E-04	0,00E+00
GWP – biogenic	kg CO2e	0,00E+00	0,00E+00	5,20E-06	5,20E-06	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,68E-07	1,81E-06	8,96E-06	5,15E-07	0,00E+00
GWP – LULUC	kg CO2e	1,62E-04	2,07E-05	4,13E-06	1,86E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	9,15E-08	1,73E-06	4,87E-06	7,46E-07	0,00E+00
Ozone depletion pot.	kg CFC-11e	9,02E-11	9,53E-09	1,37E-09	1,10E-08	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,97E-10	1,08E-09	1,05E-08	3,20E-10	0,00E+00
Acidification potential	mol H+e	2,54E-03	5,68E-04	7,40E-05	3,18E-03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	9,55E-06	1,99E-05	5,08E-04	7,43E-06	0,00E+00
EPfreshwater[2)]	kg Pe	2,19E-06	2,41E-07	9,14E-08	2,52E-06	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	3,05E-09	3,84E-08	1,62E-07	8,28E-09	0,00E+00
EP-marine	kg Ne	5,70E-04	1,38E-04	2,81E-05	7,35E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	4,23E-06	5,90E-06	2,25E-04	2,57E-06	0,00E+00
EP-terrestrial	mol Ne	6,14E-03	1,53E-03	3,10E-04	7,98E-03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	4,64E-05	6,51E-05	2,47E-03	2,83E-05	0,00E+00
POCP ("smog")[3)]	kg NMVOCe	1,68E-03	4,23E-04	8,51E-05	2,19E-03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,28E-05	2,08E-05	6,78E-04	8,23E-06	0,00E+00
ADP-minerals & metals[4)]	kg Sbe	9,22E-05	8,51E-08	8,74E-07	9,32E-05	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	4,66E-10	1,10E-08	2,48E-08	1,82E-09	0,00E+00

MND = module not declared

ENVIRONMENTAL IMPACT DATA

ADP-fossil resources	MJ	9,35E+00	6,08E-01	1,23E-01	1,01E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,24E-02	7,05E-02	6,58E-01	2,17E-02	0,00E+00
Water use[5)]	m3e depr.	1,77E-01	2,50E-03	1,32E-03	1,81E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	3,32E-05	3,15E-04	1,77E-03	6,87E-05	0,00E+00

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation and Water use and optional indicators except Particulate matter and Ionizing radiation, human method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone health. The results of these environmental impact indicators shall be used with care as the formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion 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	0,00E+00	3,52E-09	1,75E-09	5,27E-09	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	2,56E-10	5,41E-10	1,36E-08	1,50E-10	0,00E+00
Ionizing radiation6)	kBq U235e	0,00E+00	3,03E-03	1,84E-03	4,87E-03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	5,68E-05	3,36E-04	3,02E-03	9,80E-05	0,00E+00
Ecotoxicity (freshwater)	CTUe	0,00E+00	4,68E-01	1,11E-01	5,80E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	7,43E-03	6,34E-02	3,96E-01	1,41E-02	0,00E+00
Human toxicity, cancer	CTUh	0,00E+00	1,80E-11	3,33E-12	2,14E-11	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	2,85E-13	1,56E-12	1,52E-11	3,53E-13	0,00E+00
Human tox. non-cancer	CTUh	0,00E+00	4,32E-10	9,57E-11	5,28E-10	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	5,38E-12	6,27E-11	2,86E-10	9,24E-12	0,00E+00
SQP7)	-	0,00E+00	5,16E-01	3,00E-02	5,46E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,61E-03	8,12E-02	8,55E-02	4,63E-02	0,00E+00

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel soil, from radon and from some construction materials is also not measured by this indicator; 7) cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

IMPACT CATEGORY	UNIT	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	2,08E+01	6,73E-03	2,28E-02	2,08E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	7,07E-05	7,94E-04	3,76E-03	1,88E-04	0,00E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	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
Total use of renew. PER	MJ	2,08E+01	6,73E-03	2,28E-02	2,08E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	7,07E-05	7,94E-04	3,76E-03	1,88E-04	0,00E+00
Non-re. PER as energy	MJ	9,36E+00	6,08E-01	1,27E-01	1,01E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,24E-02	7,05E-02	6,58E-01	2,17E-02	0,00E+00
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	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
Total use of non-re. PER	MJ	9,36E+00	6,08E-01	1,27E-01	1,01E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,24E-02	7,05E-02	6,58E-01	2,17E-02	0,00E+00
Secondary materials	kg	9,62E-01	2,04E-04	3,59E-05	9,62E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	4,84E-06	1,96E-05	2,58E-04	4,55E-06	0,00E+00
Renew. secondary fuels	MJ	0,00E+00	1,27E-06	1,43E-07	1,42E-06	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,58E-08	1,97E-07	8,42E-07	1,19E-07	0,00E+00
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	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	m3	4,30E-03	6,78E-05	3,31E-05	4,40E-03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	7,51E-07	9,13E-06	4,00E-05	2,37E-05	0,00E+00

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	3,03E-09	7,06E-04	2,63E-04	9,69E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,66E-05	9,34E-05	8,81E-04	0,00E+00	0,00E+00
Non-hazardous waste	kg	2,08E-02	9,93E-03	3,95E-03	3,47E-02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,16E-04	1,54E-03	6,19E-03	1,50E-01	0,00E+00
Radioactive waste	kg	2,90E-04	4,23E-06	9,24E-07	2,95E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	8,71E-08	4,71E-07	4,63E-06	0,00E+00	0,00E+00

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	MND	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	1,00E-02	1,00E-02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	8,50E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	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	MND	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

ENVIRONMENTAL IMPACT DATA

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 CO2e	7,67E-01	1,33E-02	7,81E-03	7,88E-01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	9,09E-04	4,64E-03	4,84E-02	7,74E-04	0,00E+00
Ozone depletion Pot.	kg CFC-11e	8,36E-15	2,45E-09	1,11E-09	3,56E-09	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,56E-10	8,55E-10	8,28E-09	2,53E-10	0,00E+00
Acidification	kg SO2e	1,47E-03	1,48E-04	5,47E-05	1,67E-03	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	6,81E-06	1,54E-05	3,62E-04	5,61E-06	0,00E+00
Eutrophication	kg PO43e	1,41E-04	1,87E-05	1,67E-05	1,76E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,58E-06	3,52E-06	8,41E-05	1,21E-06	0,00E+00
POCP ("smog")	kg C2H4e	2,56E-04	4,26E-06	1,46E-06	2,62E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,49E-07	6,03E-07	7,93E-06	2,35E-07	0,00E+00
ADPelements	kg Sbe	4,75E-06	2,69E-08	1,17E-07	4,90E-06	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	4,59E-10	1,07E-08	2,44E-08	1,79E-09	0,00E+00
ADP-fossil	MJ	7,97E+00	1,97E-01	1,26E-01	8,29E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	1,24E-02	7,05E-02	6,58E-01	2,17E-02	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.

CREATED WITH ONE CLICK LCA

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.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited

20.07.2024