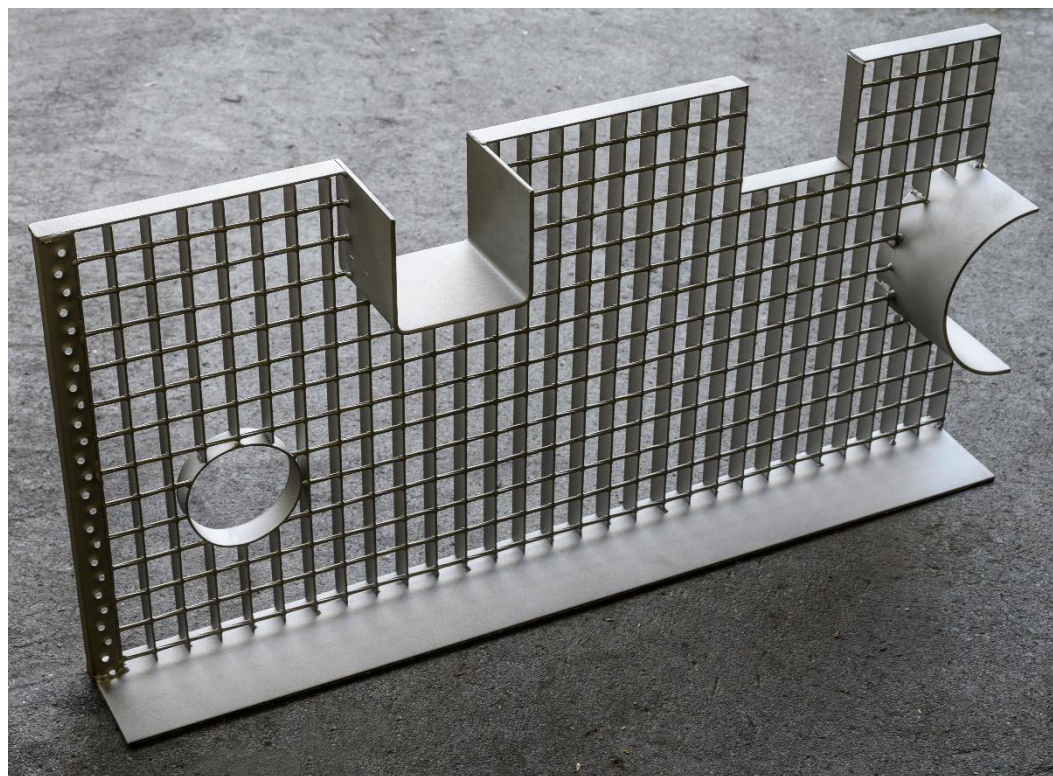


ENVIRONMENTAL PRODUCT DECLARATION

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

Platform gratings without protection
Mostostal Siedlce Sp. z o.o.



EPD HUB, HUB-2861

Publishing date 24 January 2025, last updated on 24 January 2025, valid until 23 January 2030.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Mostostal Siedlce Sp. z o.o.
Address	Terespolska 12, 08-110 Siedlce, Poland
Contact details	kraty-handel@polimex.pl
Website	https://www.mostostal.siedlce.pl/en/

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, and modules C1-C4, D
EPD author	Luiza Matusik-Karska, Viverno Sp. z o.o.
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <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	Platform gratings without protection
Additional labels	-
Product reference	-
Place of production	Siedlce, Poland
Period for data	1.01.2022-31.12.2022
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	-

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 ton
Declared unit mass	1000 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	2,87E+03
GWP-total, A1-A3 (kgCO ₂ e)	2,80E+03
Secondary material, inputs (%)	32.4
Secondary material, outputs (%)	90
Total energy use, A1-A3 (kWh)	9720
Net fresh water use, A1-A3 (m ³)	33.9

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Mostostal Siedlce belongs to the capital group Polimex-Mostostal, European leading manufacturers of steel structures. It specializes in production of steel structures and platform grates and in anti-corrosion protection of steel structures, including in particular the hot galvanization techniques. The company is also very active in the area of sales of transport and storage pallet for gas cylinders, construction materials pallets, various types of containers, racks, frames and other small structures. The company has the production area of 83 000 m². Mostostal Siedlce manufactures steel products on the basis of the technical documentation of customer and on the basis of internal documentation, developed by constructors working at the Company. Documentation is developed according to the standards: PN, DIN, EN, EUROCODES, GOST in the following languages: Polish, Russian, German and English. The highest quality of products and services is confirmed with Certificates of the Integrated System including the following standards: ISO 9001, ISO 14001, PN-N-18001, OHSAS 18001, PN-EN ISO 3834, EN 1090. The Platform Grates Plant is the holder of the Technical Approval ITB and mark "B" concerning platform grates and stairway steps. The Company has already received six times the prestigious European Medal for the product and services jointly awarded by the Committee for European Integration and Business Centre Club. In 2000 the Platform Grates Plant was awarded with the European Medal.

PRODUCT DESCRIPTION

The EPD covers platform gratings which are manufactured in accordance with DIN 24537 standard, in Mostostal Siedlce, Poland. Due to very good strength to weight ratio as well as easy installation and utility values, our gratings can be used as platforms in communication flights in industrial plants, pedestrian bridges, protection of hatches and ducts. Platform gratings are produced using two techniques, welding and pressing, using modern CNC production lines.

Further information can be found at <https://www.mostostal.siedlce.pl/en/platform-gratings/offer/>

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	100	Europe
Minerals	-	-
Fossil materials	-	-
Bio-based materials	-	-

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	18.8

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 ton
Mass per declared unit	1000 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	MND	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 materials as wire and steel sheets are properly prepared before the final process. In the cutting process water is used. Platform gratings are produced using two techniques, welding and pressing.

The manufacturing process requires electricity and fuels for the different equipment. The production facility use gas heating. Part of the steel waste generated at the plant is directed for reuse in production processes and

the rest for recycling. The finished products are properly packed and loaded on trucks to be transported to construction site.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Module A4:

Average distance of transportation from production plant to building site is assumed as 100 km and the transportation method is assumed to be a truck (EURO 5, 16 tonnes total load).

Module A5:

Installation (A5) is excluded from the calculations.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

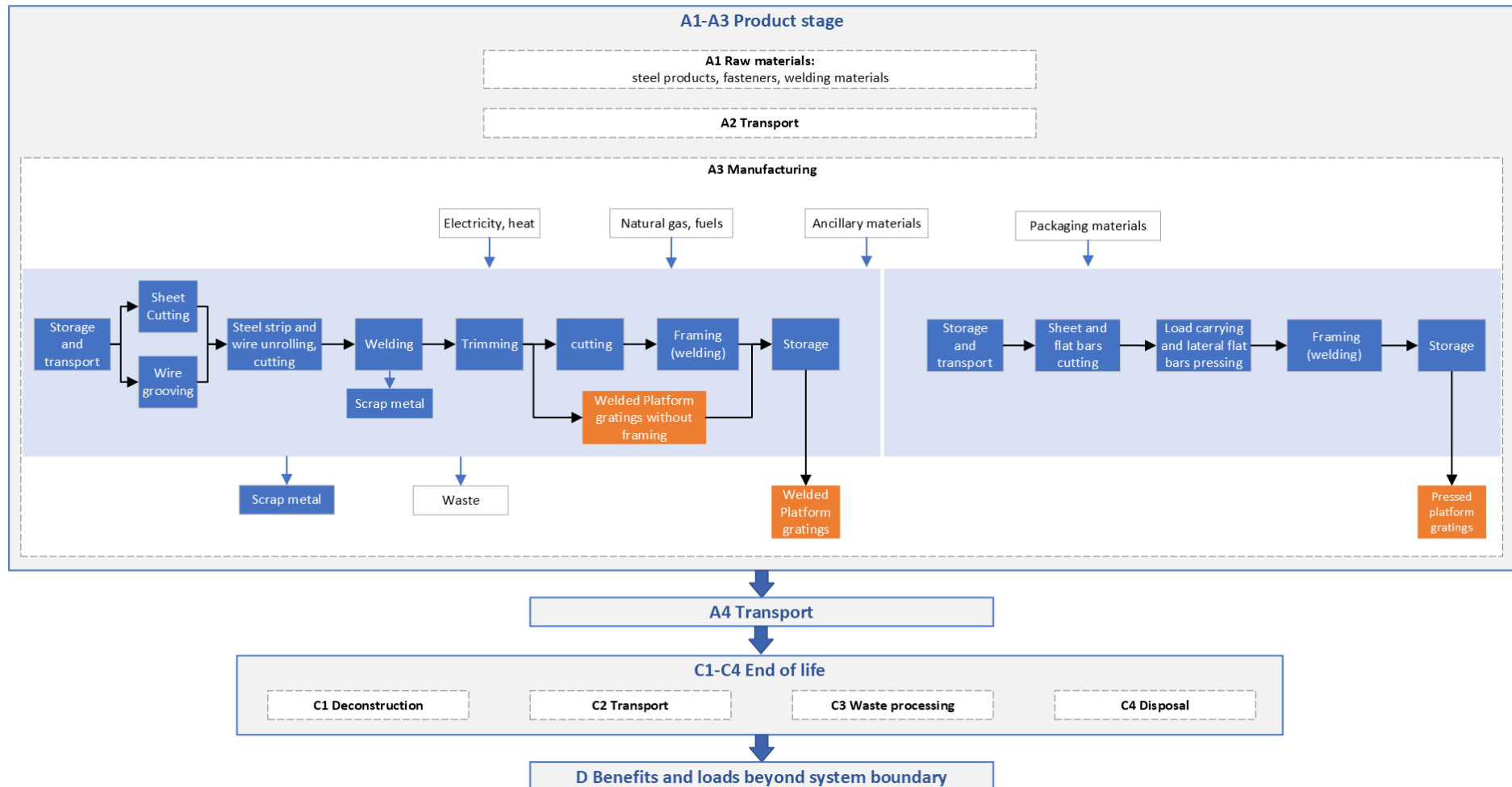
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Demolition is assumed to take 0,01 kWh/kg of product. It is assumed that 100% of the waste is collected (C1). The average waste transportation distance is estimated to be 50 km and the transportation method is assumed to be >32 metric ton, EURO6 truck (C2). It is assumed that 100% of the waste is collected and transported for further treatment. 85% of steel is assumed to be recycled (C3) and 15% of steel is taken to landfill for final disposal (C4) based on World Steel Association, 2020. Due to the recycling process the end-of-life product is converted into a recycled steel (D).

Plastic packaging waste is assumed to be landfilled (C4). Wood packaging waste is assumed to be incinerated with energy recovery (C3). Benefits due to energy export are taken into account (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	Partly allocated by mass/volume and partly by revenue
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	-

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

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.8, 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	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	2,45E+03	6,97E+01	2,83E+02	2,80E+03	1,74E+01	MND	MND	MND	MND	MND	MND	MND	MND	3,31E+00	4,73E+00	8,80E+01	8,39E-01	-6,21E+02
GWP – fossil	kg CO ₂ e	2,44E+03	6,97E+01	3,52E+02	2,87E+03	1,74E+01	MND	MND	MND	MND	MND	MND	MND	MND	3,31E+00	4,73E+00	1,91E+01	8,38E-01	-6,21E+02
GWP – biogenic	kg CO ₂ e	0,00E+00	0,00E+00	-6,89E+01	-6,89E+01	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	6,89E+01	0,00E+00	0,00E+00
GWP – LULUC	kg CO ₂ e	1,88E+00	2,84E-02	1,61E-01	2,07E+00	7,08E-03	MND	MND	MND	MND	MND	MND	MND	MND	3,30E-04	1,84E-03	2,46E-02	7,47E-04	6,23E-01
Ozone depletion pot.	kg CFC ₁₁ e	1,14E-04	1,54E-05	2,52E-05	1,55E-04	3,83E-06	MND	MND	MND	MND	MND	MND	MND	MND	7,07E-07	1,11E-06	2,36E-06	3,21E-07	-1,77E-05
Acidification potential	mol H ⁺ e	1,05E+01	2,88E-01	2,14E+00	1,29E+01	7,18E-02	MND	MND	MND	MND	MND	MND	MND	MND	3,44E-02	1,54E-02	2,52E-01	7,46E-03	-2,46E+00
EP-freshwater ²⁾	kg Pe	1,07E-01	5,88E-04	3,14E-02	1,39E-01	1,46E-04	MND	MND	MND	MND	MND	MND	MND	MND	1,10E-05	4,00E-05	1,01E-03	8,31E-06	-6,35E-03
EP-marine	kg Ne	8,58E+01	8,42E-02	2,90E-01	8,61E+01	2,10E-02	MND	MND	MND	MND	MND	MND	MND	MND	1,52E-02	3,38E-03	5,72E-02	2,65E-03	-2,96E-02
EP-terrestrial	mol Ne	2,33E+01	9,29E-01	3,23E+00	2,75E+01	2,31E-01	MND	MND	MND	MND	MND	MND	MND	MND	1,67E-01	3,75E-02	6,61E-01	2,84E-02	-6,40E+00
POCP (“smog”) ³⁾	kg NMVOCe	2,35E+02	2,83E-01	9,72E-01	2,36E+02	7,04E-02	MND	MND	MND	MND	MND	MND	MND	MND	4,59E-02	1,45E-02	1,81E-01	8,28E-03	-3,46E+00
ADP-minerals & metals ⁴⁾	kg Sbe	2,56E-02	2,42E-04	3,78E-04	2,62E-02	6,04E-05	MND	MND	MND	MND	MND	MND	MND	MND	1,68E-06	1,15E-05	2,51E-03	1,83E-06	-1,86E-02
ADP-fossil resources	MJ	2,64E+04	1,01E+03	4,29E+03	3,17E+04	2,51E+02	MND	MND	MND	MND	MND	MND	MND	MND	4,45E+01	7,40E+01	2,57E+02	2,18E+01	-5,27E+03
Water use ⁵⁾	m ³ e depr.	1,07E+03	4,42E+00	8,15E+01	1,16E+03	1,10E+00	MND	MND	MND	MND	MND	MND	MND	MND	1,20E-01	3,30E-01	5,91E+00	6,98E-02	2,41E+02

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO₄e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	1,79E-04	5,93E-06	1,11E-05	1,96E-04	1,48E-06	MND	MND	MND	MND	MND	MND	MND	MND	9,22E-07	5,37E-07	3,21E-06	1,50E-07	-2,17E-05
Ionizing radiation ⁶⁾	kBq U235e	1,40E+02	4,69E+00	1,59E+01	1,60E+02	1,17E+00	MND	MND	MND	MND	MND	MND	MND	MND	2,05E-01	3,54E-01	2,83E+00	9,87E-02	2,61E+00
Ecotoxicity (freshwater)	CTUe	6,77E+04	9,30E+02	4,79E+03	7,35E+04	2,32E+02	MND	MND	MND	MND	MND	MND	MND	MND	2,68E+01	6,58E+01	1,15E+03	1,43E+01	-1,44E+04
Human toxicity, cancer	CTUh	1,78E-05	2,61E-08	2,03E-07	1,80E-05	6,50E-09	MND	MND	MND	MND	MND	MND	MND	MND	1,03E-09	1,61E-09	4,99E-08	3,56E-10	6,15E-06
Human tox. non-cancer	CTUh	6,89E-05	8,65E-07	5,11E-06	7,49E-05	2,15E-07	MND	MND	MND	MND	MND	MND	MND	MND	1,94E-08	6,34E-08	1,61E-06	9,29E-09	3,65E-05
SQP ⁷⁾	-	7,97E+03	6,98E+02	6,97E+03	1,56E+04	1,74E+02	MND	MND	MND	MND	MND	MND	MND	MND	5,79E+00	8,51E+01	5,09E+02	4,66E+01	-2,36E+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 ⁸⁾	MJ	2,45E+03	1,18E+01	8,76E+02	3,34E+03	2,95E+00	MND	MND	MND	MND	MND	MND	MND	MND	2,54E-01	8,33E-01	4,49E+01	1,94E-01	-7,98E+02
Renew. PER as material	MJ	0,00E+00	0,00E+00	5,75E+02	5,75E+02	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-5,75E+02	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,45E+03	1,18E+01	1,45E+03	3,91E+03	2,95E+00	MND	MND	MND	MND	MND	MND	MND	MND	2,54E-01	8,33E-01	-5,30E+02	1,94E-01	-7,98E+02
Non-re. PER as energy	MJ	2,64E+04	1,01E+03	4,25E+03	3,17E+04	2,51E+02	MND	MND	MND	MND	MND	MND	MND	MND	4,45E+01	7,40E+01	2,57E+02	2,18E+01	-5,27E+03
Non-re. PER as material	MJ	0,00E+00	0,00E+00	3,08E+01	3,08E+01	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-1,98E+01	-1,09E+01	0,00E+00
Total use of non-re. PER	MJ	2,64E+04	1,01E+03	4,28E+03	3,17E+04	2,51E+02	MND	MND	MND	MND	MND	MND	MND	MND	4,45E+01	7,40E+01	2,37E+02	1,08E+01	-5,27E+03
Secondary materials	kg	3,24E+02	3,32E-01	2,39E+00	3,27E+02	8,27E-02	MND	MND	MND	MND	MND	MND	MND	MND	1,74E-02	2,05E-02	2,96E-01	4,59E-03	4,14E+02
Renew. secondary fuels	MJ	2,99E-01	4,30E-03	1,01E+01	1,04E+01	1,07E-03	MND	MND	MND	MND	MND	MND	MND	MND	5,70E-05	2,07E-04	1,46E-02	1,21E-04	-8,23E-02
Non-ren. secondary fuels	MJ	9,03E-23	0,00E+00	0,00E+00	9,03E-23	0,00E+00	MND	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	2,66E+01	1,19E-01	7,17E+00	3,39E+01	2,97E-02	MND	MND	MND	MND	MND	MND	MND	MND	2,70E-03	9,56E-03	1,72E-01	2,38E-02	-1,69E+01

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	8,72E+02	1,45E+00	3,05E+01	9,04E+02	3,62E-01	MND	MND	MND	MND	MND	MND	MND	MND	5,96E-02	9,75E-02	1,71E+00	0,00E+00	-3,71E+02
Non-hazardous waste	kg	3,90E+03	2,32E+01	1,44E+03	5,37E+03	5,78E+00	MND	MND	MND	MND	MND	MND	MND	MND	4,19E-01	1,60E+00	1,05E+02	1,50E+02	-1,33E+03
Radioactive waste	kg	1,12E-01	6,67E-03	6,96E-03	1,26E-01	1,66E-03	MND	MND	MND	MND	MND	MND	MND	MND	3,13E-04	4,99E-04	1,48E-03	0,00E+00	-8,82E-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	1,50E-03	0,00E+00	3,84E+00	3,84E+00	0,00E+00	MND	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	1,10E+00	0,00E+00	0,00E+00	1,10E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	8,50E+02	0,00E+00	0,00E+00
Materials for energy rec	kg	7,86E-04	0,00E+00	0,00E+00	7,86E-04	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	5,03E+01	0,00E+00	0,00E+00
Exported energy	MJ	1,72E-01	0,00E+00	0,00E+00	1,72E-01	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	5,13E+02	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – FRENCH NATIONAL COMPLEMENTS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-elements	kg Sbe	2,54E-02	2,37E-04	3,74E-04	2,60E-02	5,90E-05	MND	MND	MND	MND	MND	MND	MND	MND	1,65E-06	1,12E-05	2,51E-03	1,80E-06	-1,86E-02
Hazardous waste disposed	kg	8,72E+02	1,45E+00	3,05E+01	9,04E+02	3,62E-01	MND	MND	MND	MND	MND	MND	MND	MND	5,96E-02	9,75E-02	1,71E+00	0,00E+00	-3,71E+02
Non-haz. waste disposed	kg	3,88E+03	2,32E+01	1,44E+03	5,35E+03	5,78E+00	MND	MND	MND	MND	MND	MND	MND	MND	4,19E-01	1,60E+00	1,05E+02	1,50E+02	-1,33E+03
Air pollution	m³	9,31E+05	1,07E+04	8,79E+04	1,03E+06	2,67E+03	MND	MND	MND	MND	MND	MND	MND	MND	4,54E+02	8,46E+02	8,20E+03	1,74E+02	-3,42E+05
Water pollution	m³	1,26E+04	8,01E+01	1,57E+03	1,43E+04	2,00E+01	MND	MND	MND	MND	MND	MND	MND	MND	1,97E+00	5,19E+00	4,03E+02	3,27E+00	1,40E+03

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 compliance 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.

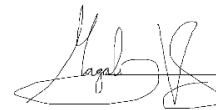
I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

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

24.01.2025



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