

ENVIRONMENTAL PRODUCT DECLARATION

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

INCA WFS net®
by Flameguard



EPD HUB, HUB-2321

Publishing date 5 December 2024, last updated on 5 December 2024, valid until 5 December 2024.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	FG Sweden AB
Address	BOX 2048, 135 02 Tyresö, Stockholms län, Sweden
Contact details	info@flameguard.se
Website	https://flameguard.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 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	Not relevant
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Alexander Mathisen, Gidås Sustainability Agency
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	INCA WFS net® by Flameguard
Additional labels	Not relevant
Product reference	254545
Place of production	Vung Tau, Vietnam
Period for data	01.01.2023 - 31.12.2023
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	Not relevant

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 meter of fire net
Declared unit mass	0.4875 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	1,20E+00
GWP-total, A1-A3 (kgCO ₂ e)	1,15E+00
Secondary material, inputs (%)	0.28
Secondary material, outputs (%)	0.00
Total energy use, A1-A3 (kWh)	4.37
Net freshwater use, A1-A3 (m ³)	0.01

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Flameguard has been working since 2010 to provide construction companies in Scandinavia and the Baltics with building technical fire protection for properties. We are an importer and distributor of various brands with leading product solutions in passive fire protection and we fire protect properties of all sizes.

PRODUCT DESCRIPTION

The fire net INCA WFS net® by Flameguard is a new and safe fire sealing system with fire class EI 30 / EI 45 / E 60 for air gaps in the facade and eaves, applications where air movement is needed in the initial position, but where a completely tight construction (EI) is immediately desired in the event of Fire. INCA WFS net® by Flameguard has a Swedish type approval.

INCA WFS net® by Flameguard is delivered in lengths of 120 cm x 15 cm and is designed for use in air gaps between 25-45 mm behind the facade cladding, at the height of the sill, at the level of the joist, and in the ventilated eaves.

The system is easy to assemble and consists of a high-performance fire-swelling metal mesh in combination with an aluminum insect mesh. The system ensures the necessary ventilation of the air gap and the insect net's function is primarily to create a protection zone against falling dirt and other material above the fire-swelling metal mesh.

The INCA WFS net® by Flameguard fire net works with maximum function without the risk of fire spreading above the fire limit that is created. In the event of a fire, sticking flames, sparks and heat become trapped in the fire-swelling mesh. At 150°C, the material begins to expand (50 times its own thickness) and quickly seals the mesh's openings and prevents extensive fire spread.

Further information can be found at <https://flameguard.se/>.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Materials that do not clearly belong to any of the below stated material categories have been categorized as mineral materials.

Raw material category	Amount, mass %	Material origin
Metals	16,9%	Vietnam
Minerals	83,1%	Taiwan
Fossil materials	0,0 %	-
Bio-based materials	0,0 %	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0.000
Biogenic carbon content in packaging, kg C	0.012

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 meter of fire net
Mass per declared unit	0.4875 kg
Functional unit	Not relevant, use phase not included
Reference service life	Not relevant, use phase not included

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	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.

The fire net is produced by coating metal mesh with intumescent mass. The coating process is performed by hand and therefore, no energy is consumed during the manufacturing stage. Due to a resource-efficient manufacturing

process, production losses of intumescent mass are minimal. The product is packaged with corrugated board on pallets.

If transport modes and distances were unknown for certain materials, which is the case for the waste transportation in A3, a transport distance of 50 km was assumed, in combination with Lorry, 16-32 tonne, EURO 5 being the chosen transport mode. These assumptions were made for all life cycle modules unless longer distances or other modes (e.g. sea or air travel) were relevant. The production waste is assumed to be sent to landfill.

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.

An installation loss of 5% has been assumed. The installation loss is related to adaption of the product to fit the building at the installation site.

While 100 % of the wood packaging is assumed to be sorted for municipal incineration, an efficiency rate of 73 % when recovering energy and electricity during incineration of the wood packaging has been assumed. The paper packaging has been assumed to be sorted for recycling. The transport distance from the customer to the nearest waste treatment plant was set to 50 km, in combination with Lorry, 16-32 tonne, EURO 5 being the chosen transport mode.

The product is assumed to be installed entirely by hand. Therefore, energy consumption in the form of electricity and other fuels has been set to zero during installation.

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)

The end-of-life stage C1-C4 & D includes:

- Deconstruction/demolition (C1)
- Transport to waste management facility (C2)
- Waste processing for reuse, recovery and/or recycling (C3)
- Waste disposal (C4)

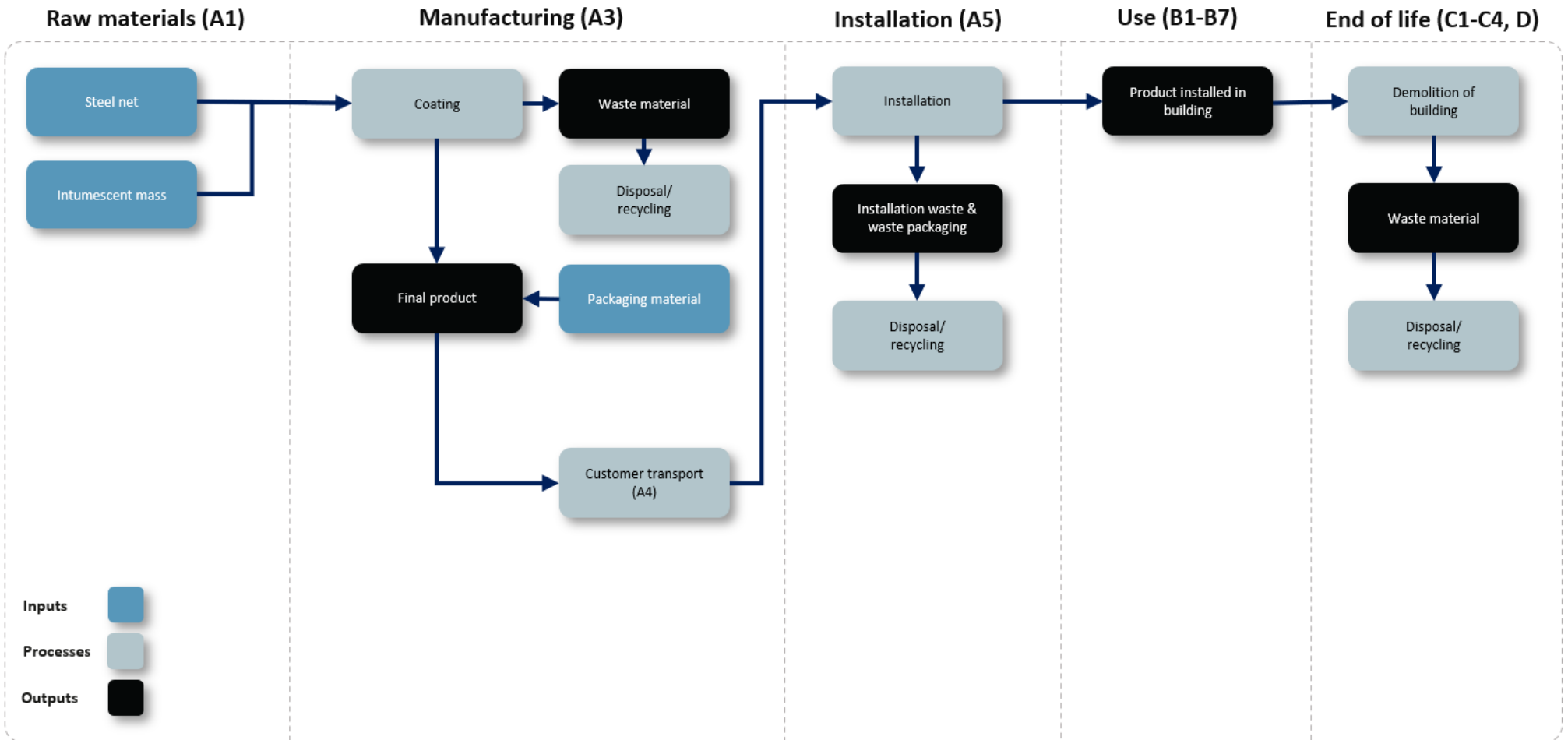
Waste processing and disposal credits are assigned to module D.

Module D includes reuse, recovery and/or recycling potentials conveyed as benefits and net impacts. While 95 % of the waste wood from packaging is assumed to be incinerated in a municipal incineration plant, an efficiency rate of 73 % when recovering heat and electricity during incineration has been assumed. 95 % of the corrugated board packaging has been assumed to be recycled. The remaining 5 % of both wood and paper packaging have been assumed to go to landfill.

When dismantling the fire net, demolition of the entire building where the product is installed is assumed. Energy consumption for demolition, in the form of diesel consumption in used construction machinery, has been stated to be 36 MJ per ton of demolished building (Erlandsson & Pettersson, 2015).

If transport modes and distances were unknown for certain materials, a transport distance of 50 km was assumed, in combination with Lorry, 16-32 tonne, EURO 5 being the chosen transport mode.

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, all data have been collected and provided specifically for the studied product by the manufacturer. Therefore, no allocation assumptions or calculations have been made.

Data type	Allocation
Raw materials	No allocation
Packaging material	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	No allocation

AVERAGES AND VARIABILITY

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

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.

Other literature used in the calculations is listed below:

Erlandsson, M., & Pettersson, D. (2015). Klimatpåverkan för byggnader med olika energiprestanda. IVL underlagsrapport till kontrollstation 2015.

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	1,16E+00	1,77E-02	-1,88E-02	1,15E+00	1,55E-01	1,13E-01	MND	MND	MND	MND	MND	MND	MND	1,61E-03	4,23E-03	0,00E+00	4,80E-03	-2,59E-02
GWP – fossil	kg CO ₂ e	1,15E+00	1,77E-02	2,51E-02	1,20E+00	1,54E-01	6,91E-02	MND	MND	MND	MND	MND	MND	MND	1,61E-03	4,23E-03	0,00E+00	5,13E-03	-2,57E-02
GWP – biogenic	kg CO ₂ e	3,33E-04	0,00E+00	-4,40E-02	-4,37E-02	0,00E+00	4,40E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	-3,33E-04	0,00E+00
GWP – LULUC	kg CO ₂ e	6,87E-04	1,02E-05	1,75E-04	8,73E-04	9,97E-05	4,96E-05	MND	MND	MND	MND	MND	MND	MND	1,61E-07	1,73E-06	0,00E+00	5,20E-06	-1,73E-04
Ozone depletion pot.	kg CFC-11e	2,53E-08	3,69E-09	2,11E-09	3,11E-08	3,14E-08	3,35E-09	MND	MND	MND	MND	MND	MND	MND	3,45E-10	9,33E-10	0,00E+00	1,56E-09	-2,03E-09
Acidification potential	mol H ⁺ e	9,47E-03	3,32E-04	1,30E-04	9,93E-03	3,78E-03	6,93E-04	MND	MND	MND	MND	MND	MND	MND	1,68E-05	1,75E-05	0,00E+00	4,33E-05	-1,34E-04
EP-freshwater ²⁾	kg Pe	4,93E-05	1,05E-07	1,63E-06	5,11E-05	7,57E-07	2,62E-06	MND	MND	MND	MND	MND	MND	MND	5,34E-09	3,57E-08	0,00E+00	7,97E-08	-1,63E-06
EP-marine	kg Ne	1,14E-03	8,32E-05	6,81E-05	1,30E-03	9,25E-04	1,16E-04	MND	MND	MND	MND	MND	MND	MND	7,42E-06	5,11E-06	0,00E+00	1,48E-05	-6,70E-05
EP-terrestrial	mol Ne	1,27E-02	9,24E-04	3,83E-04	1,40E-02	1,03E-02	1,24E-03	MND	MND	MND	MND	MND	MND	MND	8,14E-05	5,64E-05	0,00E+00	1,62E-04	-3,80E-04
POCP (“smog”) ³⁾	kg NMVOCe	3,60E-03	2,44E-04	8,09E-05	3,92E-03	2,69E-03	3,39E-04	MND	MND	MND	MND	MND	MND	MND	2,24E-05	1,72E-05	0,00E+00	4,70E-05	-7,94E-05
ADP-minerals & metals ⁴⁾	kg Sbe	1,69E-05	4,28E-08	1,49E-07	1,70E-05	3,04E-07	8,80E-07	MND	MND	MND	MND	MND	MND	MND	8,18E-10	1,47E-08	0,00E+00	1,73E-08	-1,43E-07
ADP-fossil resources	MJ	1,28E+01	2,38E-01	3,18E-01	1,33E+01	2,02E+00	7,85E-01	MND	MND	MND	MND	MND	MND	MND	2,17E-02	6,13E-02	0,00E+00	1,19E-01	-3,20E-01
Water use ⁵⁾	m ³ e depr.	4,72E-01	8,84E-04	1,34E-02	4,86E-01	6,87E-03	2,51E-02	MND	MND	MND	MND	MND	MND	MND	5,83E-05	2,68E-04	0,00E+00	6,92E-04	-1,29E-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	2,84E-08	1,01E-09	2,44E-09	3,19E-08	6,84E-09	2,07E-09	MND	MND	MND	MND	MND	MND	MND	4,49E-10	3,60E-10	0,00E+00	8,68E-10	-2,46E-09
Ionizing radiation ⁶⁾	kBq 11235e	1,30E-02	1,10E-03	1,06E-03	1,52E-02	9,34E-03	1,37E-03	MND	MND	MND	MND	MND	MND	MND	9,97E-05	2,85E-04	0,00E+00	5,68E-04	-1,11E-03
Ecotoxicity (freshwater)	CTUe	1,60E+01	1,87E-01	1,28E+00	1,75E+01	1,45E+00	9,90E-01	MND	MND	MND	MND	MND	MND	MND	1,30E-02	5,65E-02	0,00E+00	8,78E-02	-1,28E+00
Human toxicity, cancer	CTUh	3,93E-10	8,70E-12	2,40E-11	4,26E-10	8,32E-11	2,75E-11	MND	MND	MND	MND	MND	MND	MND	5,00E-13	1,58E-12	0,00E+00	3,70E-12	-1,82E-11
Human tox. non-cancer	CTUh	1,62E-08	1,53E-10	3,62E-10	1,67E-08	1,08E-09	9,26E-10	MND	MND	MND	MND	MND	MND	MND	9,43E-12	5,25E-11	0,00E+00	5,84E-11	-3,54E-10
SQP ⁷⁾	-	6,88E+00	1,01E-01	1,50E+00	8,48E+00	6,19E-01	4,80E-01	MND	MND	MND	MND	MND	MND	MND	2,82E-03	4,24E-02	0,00E+00	2,89E-01	-1,04E+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	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	2,29E+00	2,25E-03	2,45E-01	2,54E+00	1,69E-02	1,29E-01	MND	MND	MND	MND	MND	MND	MND	1,24E-04	7,18E-04	0,00E+00	2,06E-03	-2,15E-01
Renew. PER as material	MJ	0,00E+00	0,00E+00	3,85E-01	3,85E-01	0,00E+00	-3,85E-01	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	2,29E+00	2,25E-03	6,30E-01	2,92E+00	1,69E-02	-2,57E-01	MND	MND	MND	MND	MND	MND	MND	1,24E-04	7,18E-04	0,00E+00	2,06E-03	-2,15E-01
Non-re. PER as energy	MJ	1,27E+01	2,38E-01	3,13E-01	1,32E+01	2,02E+00	7,80E-01	MND	MND	MND	MND	MND	MND	MND	2,17E-02	6,13E-02	0,00E+00	1,19E-01	-3,17E-01
Non-re. PER as material	MJ	8,46E+00	0,00E+00	4,96E-03	8,47E+00	0,00E+00	-4,96E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	-8,46E+00	0,00E+00
Total use of non-re. PER	MJ	2,11E+01	2,38E-01	3,18E-01	2,17E+01	2,02E+00	7,75E-01	MND	MND	MND	MND	MND	MND	MND	2,17E-02	6,13E-02	0,00E+00	-8,34E+00	-3,17E-01
Secondary materials	kg	1,36E-03	9,35E-05	2,77E-02	2,91E-02	8,49E-04	1,52E-03	MND	MND	MND	MND	MND	MND	MND	8,50E-06	2,02E-05	0,00E+00	4,27E-05	-2,75E-02
Renew. secondary fuels	MJ	1,84E-05	6,75E-07	2,80E-03	2,82E-03	4,36E-06	1,41E-04	MND	MND	MND	MND	MND	MND	MND	2,78E-08	2,61E-07	0,00E+00	1,64E-06	-1,96E-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	1,13E-02	2,20E-05	3,17E-04	1,17E-02	1,62E-04	6,03E-04	MND	MND	MND	MND	MND	MND	MND	1,32E-06	7,24E-06	0,00E+00	1,28E-04	-3,06E-04

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	4,82E-02	3,36E-04	1,39E-03	5,00E-02	2,81E-03	2,72E-03	MND	MND	MND	MND	MND	MND	MND	2,90E-05	8,82E-05	0,00E+00	0,00E+00	-1,42E-03
Non-hazardous waste	kg	1,99E+00	4,14E-03	3,00E-02	2,03E+00	2,97E-02	1,35E-01	MND	MND	MND	MND	MND	MND	MND	2,04E-04	1,41E-03	0,00E+00	4,87E-01	-2,94E-02
Radioactive waste	kg	5,71E-06	1,63E-06	5,56E-07	7,89E-06	1,40E-05	1,17E-06	MND	MND	MND	MND	MND	MND	MND	1,53E-07	4,05E-07	0,00E+00	0,00E+00	-5,49E-07

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	2,77E-02	MND	MND	MND	MND	MND	MND	MND	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	2,98E-03	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	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 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 ₂ e	1,14E+00	1,75E-02	2,66E-02	1,18E+00	1,53E-01	7,08E-02	MND	MND	MND	MND	MND	MND	MND	1,60E-03	4,19E-03	0,00E+00	5,04E-03	-2,72E-02
Ozone depletion Pot.	kg CFC ₁₁ e	2,17E-08	2,93E-09	1,77E-09	2,64E-08	2,49E-08	2,74E-09	MND	MND	MND	MND	MND	MND	MND	2,73E-10	7,39E-10	0,00E+00	1,24E-09	-1,69E-09
Acidification	kg SO ₂ e	8,14E-03	2,64E-04	9,21E-05	8,49E-03	3,03E-03	5,82E-04	MND	MND	MND	MND	MND	MND	MND	1,19E-05	1,36E-05	0,00E+00	3,28E-05	-9,59E-05
Eutrophication	kg PO ₄ ³ e	2,09E-03	3,27E-05	7,46E-05	2,20E-03	3,48E-04	1,36E-04	MND	MND	MND	MND	MND	MND	MND	2,77E-06	3,13E-06	0,00E+00	1,05E-05	-7,43E-05
POCP (“smog”)	kg C ₂ H ₄ e	3,58E-04	7,21E-06	6,33E-06	3,72E-04	8,03E-05	2,35E-05	MND	MND	MND	MND	MND	MND	MND	2,61E-07	5,54E-07	0,00E+00	1,33E-06	-6,31E-06
ADP-elements	kg Sbe	1,68E-05	4,18E-08	1,23E-07	1,70E-05	2,98E-07	8,77E-07	MND	MND	MND	MND	MND	MND	MND	8,05E-10	1,44E-08	0,00E+00	1,67E-08	-1,17E-07
ADP-fossil	MJ	1,28E+01	2,38E-01	3,14E-01	1,33E+01	2,02E+00	7,85E-01	MND	MND	MND	MND	MND	MND	MND	2,17E-02	6,13E-02	0,00E+00	1,19E-01	-3,16E-01

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	1,15E+00	1,77E-02	2,51E-02	1,20E+00	1,54E-01	6,91E-02	MND	MND	MND	MND	MND	MND	MND	1,61E-03	4,23E-03	0,00E+00	5,13E-03	-2,57E-02

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.

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

05.12.2024

