ENVIRONMENTAL PRODUCT DECLARATION

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

Hydroprufe 9000
Premcrete

EPD HUB, HUB-2403
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Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Premcrete
Address	44 Macadam Way, West Portway, Andover, Hampshire, United Kingdom, SP10 3XW
Contact details	Sales@premcrete.com
Website	www.premcrete.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023 EN 17388-2 Flexible sheets for waterproofing - Part 2: Cradle to gate with options
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with modules C1-C4, D
EPD author	Simon Smallridge
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Imane Uald Lamkaddam as an authorized verifier for EPD Hub

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	Hydroprufe 9000
Additional labels	
Product reference	
Place of production	Hampshire, United Kingdom
Period for data	01/07/23 -30/06/24
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1m2
Declared unit mass	0.3886 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	1.69E+00
GWP-total, A1-A3 ($kgCO_2e$)	1.68E+00
Secondary material, inputs (%)	48.7
Secondary material, outputs (%)	79.4
Total energy use, A1-A3 (kWh)	7.68
Net freshwater use, A1-A3 (m^3)	0.03

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

For over 40 years, Premcrete Ltd. has been a trusted supplier of innovative groundwork solutions for major construction and infrastructure projects. As a leading British manufacturer, we provide a comprehensive range of structural waterproofing and gas protection membranes, alongside products such as ground heave protection, concrete repair solutions, technical grouts, and joint sealants.

Premcrete has earned the confidence of groundworks contractors nationwide by delivering reliable, high-performance solutions tailored to the unique challenges of modern infrastructure. Manufactured locally with sustainability in mind, our products combine technical excellence with a focus on reducing environmental impact. We support our clients with dedicated technical assistance and quality control training to ensure successful project outcomes.

Premcrete's solutions have contributed to the Great British tradition of excellence and reliability, supporting hundreds of clients across more than nine infrastructure sectors. Whether safeguarding critical substructures or repairing concrete, Premcrete stands as a trusted partner for durable, sustainable construction.

PRODUCT DESCRIPTION

HYDROPRUFE 9000 is a virgin polyethylene, reinforced gas membrane, incorporating an aluminium core, that provides an effective barrier to ground gases including methane, carbon dioxide and radon for the lifetime of the structure to which it has been installed. The polyester reinforcement component of the multi-layered membrane reduces the risk of tearing the membrane during the installation phase. HYDROPRUFE 9000 is suitable for welding using suitable hot air welding equipment or the laps may simply be tape jointed using butyl tape or foil girth tape.

Further information can be found at www.premcrete.com.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	11%	UK
Minerals		
Fossil materials	89%	UK
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	0.073

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1m2
Mass per declared unit	0.3886 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		
×	×	×	MND	MND	MND	MND	MND	MND	MND	MND	MND	×	×	×	×	×		
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 provider dismantles mattress and creates flexible EOL PU bales. We receive these bales at the plant and at the beginning of the process line, bales are opened and EOL PU foam is shredded and grinded to obtain calibrated granulates. These granulates are then mixing with low melt polyester with appropriate mass balance and go into curing.

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.

Annual delivery rates are taken into consideration for transportation scenario. There is no significant weight loss due to the emission of the rest of the pentane in the product during transportation. Transportation impacts occurred from delivering of the product cover direct exhaust emissions of fuel, environmental impacts of fuel production, as well as related infrastructure emissions. (A4) 5% weight loss has been considered during installation, used ancillary materials are cut-off. (A5)

PRODUCT USE AND MAINTENANCE (B1-B7)

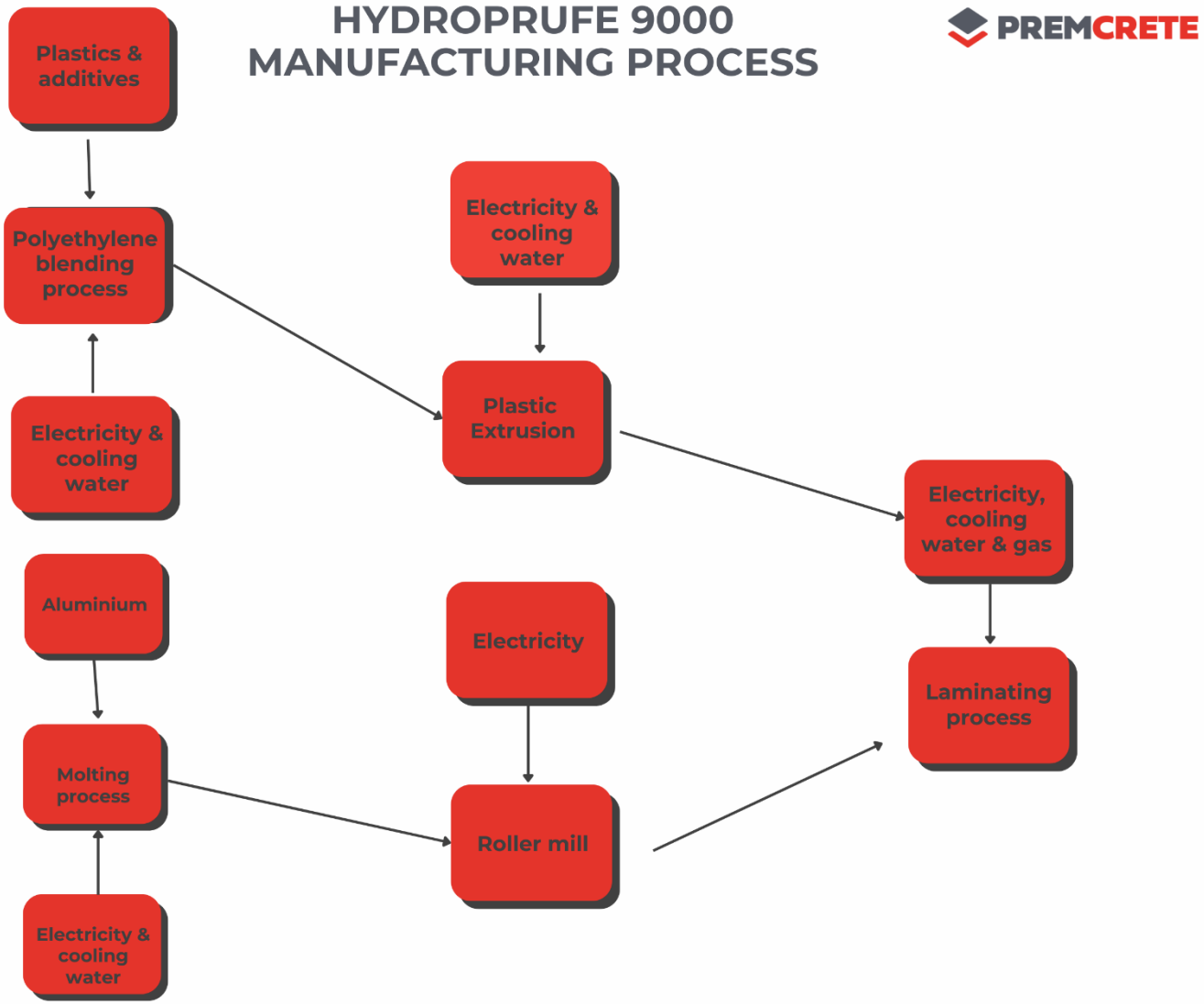
This EPD does not cover use phase. Air, soil and water impacts during the use phase have not been studied.

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

PRODUCT END OF LIFE (C1-C4, D)

Consumption of energy and natural resources in demolition process is assumed to be negligible. (C1) The distance for transportation to disposal is assumed as 50 km and the transportation method is assumed to be lorry. (C2) Considering the manufacturer's information, 50% of end-of-life product is assumed to be incinerated and other 50% is landfilled. (C3, C4) Due to the incineration process, energy is generated. (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	Allocated by mass or volume
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	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	%

No averaging

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_2e	1.55E+00	1.86E-02	1.11E-01	1.68E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.28E-03	3.27E-03	5.35E-01	1.64E-02	-5.67E-01
GWP – fossil	kg CO_2e	1.54E+00	1.86E-02	1.35E-01	1.69E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.28E-03	3.27E-03	5.14E-01	1.37E-02	-5.58E-01
GWP – biogenic	kg CO_2e	0.00E+00	4.13E-10	-2.36E-02	-2.36E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	2.09E-02	2.64E-03	-4.94E-04
GWP – LULUC	kg CO_2e	1.03E-02	7.83E-06	1.82E-04	1.05E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.27E-07	1.30E-06	1.18E-05	1.17E-06	-7.92E-03
Ozone depletion pot.	kg CFC_{-11}e	7.40E-08	4.28E-09	8.70E-09	8.70E-08	MND	MND	MND	MND	MND	MND	MND	MND	MND	2.73E-10	7.64E-10	7.62E-10	3.10E-10	-3.59E-08
Acidification potential	mol H^+e	9.20E-03	5.37E-05	4.72E-04	9.72E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.33E-05	1.65E-05	9.55E-05	9.30E-06	-4.21E-03
EP-freshwater[2)]	kg Pe	5.66E-05	1.47E-07	3.88E-06	6.06E-05	MND	MND	MND	MND	MND	MND	MND	MND	MND	4.23E-09	2.33E-08	2.94E-07	2.08E-08	-2.50E-05
EP-marine	kg Ne	1.39E-03	1.08E-05	1.15E-04	1.52E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	5.88E-06	5.60E-06	3.96E-05	8.25E-06	-5.04E-04
EP-terrestrial	mol Ne	1.49E-02	1.20E-04	1.15E-03	1.62E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	6.44E-05	6.17E-05	4.23E-04	3.35E-05	-5.68E-03
POCP ("smog")[3)]	kg NMVOCe	5.03E-03	4.58E-05	2.84E-04	5.36E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.77E-05	1.76E-05	1.07E-04	1.31E-05	-1.80E-03
ADP-minerals & metals[4)]	kg Sbe	8.40E-06	6.69E-08	1.32E-06	9.79E-06	MND	MND	MND	MND	MND	MND	MND	MND	MND	6.48E-10	1.16E-08	1.38E-07	3.67E-09	-9.81E-07
ADP-fossil resources	MJ	2.57E+01	2.78E-01	3.19E+00	2.91E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.72E-02	4.90E-02	1.00E-01	2.44E-02	-6.50E+00
Water use[5)]	m^3e depr.	1.08E+00	1.37E-03	4.53E-02	1.13E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	4.62E-05	2.27E-04	1.67E-02	1.58E-04	-3.66E-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	1.08E-07	1.52E-09	2.67E-09	1.13E-07	MND	MND	MND	MND	MND	MND	MND	MND	MND	3.56E-10	2.93E-10	1.04E-09	1.80E-10	-4.98E-08
Ionizing radiation[6]	kBq U235e	1.80E-01	1.51E-03	1.03E-01	2.84E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	7.90E-05	2.56E-04	7.14E-04	1.20E-04	-9.86E-02
Ecotoxicity (freshwater)	CTUe	3.56E+01	2.33E-01	2.37E+00	3.82E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.03E-02	4.07E-02	3.36E-01	1.39E+00	-1.43E+01
Human toxicity, cancer	CTUh	2.17E-09	7.28E-12	5.73E-11	2.24E-09	MND	MND	MND	MND	MND	MND	MND	MND	MND	3.96E-13	1.25E-12	4.04E-11	8.52E-13	-1.16E-09
Human tox. non-cancer	CTUh	3.65E-08	2.28E-10	1.68E-09	3.84E-08	MND	MND	MND	MND	MND	MND	MND	MND	MND	7.47E-12	4.13E-11	8.79E-10	1.98E-11	-1.78E-08
SQP[7]	-	5.87E+00	2.03E-01	1.93E+00	8.01E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	2.23E-03	3.48E-02	1.37E-01	5.72E-02	-1.62E+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	4.68E+00	4.47E-03	7.49E-01	5.43E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	9.82E-05	7.00E-04	7.79E-03	5.31E-04	-3.20E+00
Renew. PER as material	MJ	0.00E+00	0.00E+00	2.23E-01	2.23E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-1.98E-01	-2.46E-02	1.00E-03
Total use of renew. PER	MJ	4.68E+00	4.47E-03	9.72E-01	5.66E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	9.82E-05	7.00E-04	-1.90E-01	-2.41E-02	-3.20E+00
Non-re. PER as energy	MJ	1.88E+01	2.78E-01	3.10E+00	2.22E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.72E-02	4.90E-02	1.00E-01	2.45E-02	-6.44E+00
Non-re. PER as material	MJ	1.40E+01	0.00E+00	-7.46E-02	1.39E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-1.02E+01	-3.68E+00	1.80E-02
Total use of non-re. PER	MJ	3.28E+01	2.78E-01	3.03E+00	3.61E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.72E-02	4.90E-02	-1.01E+01	-3.66E+00	-6.42E+00
Secondary materials	kg	1.89E-01	9.78E-05	3.95E-04	1.90E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	6.73E-06	1.64E-05	3.90E-04	8.56E-06	4.68E-04
Renew. secondary fuels	MJ	1.19E-02	1.02E-06	6.04E-04	1.25E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	2.20E-08	1.80E-07	3.81E-06	3.33E-07	-1.37E-05
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	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
Use of net fresh water	m^3	2.59E-02	3.77E-05	9.29E-04	2.69E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.04E-06	6.18E-06	1.01E-04	2.57E-05	-9.03E-03

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	2.74E-01	3.34E-04	7.13E-03	2.81E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	2.30E-05	5.53E-05	1.12E-03	2.03E-06	-1.42E-01
Non-hazardous waste	kg	2.36E+00	6.22E-03	1.38E-01	2.50E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.62E-04	9.79E-04	1.82E-01	9.46E-02	-1.23E+00
Radioactive waste	kg	6.19E-05	1.91E-06	2.60E-05	8.98E-05	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.21E-07	3.38E-07	2.54E-07	2.44E-09	-3.37E-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	MND	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	0.00E+00	0.00E+00	2.62E-03	2.62E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	1.44E-01	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	3.28E-03	3.28E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	1.65E-01	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	5.29E-02	5.29E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	2.67E+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_2e	1.50E+00	1.84E-02	1.33E-01	1.65E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.26E-03	3.24E-03	5.14E-01	1.26E-02	-5.47E-01
Ozone depletion Pot.	kg CFC_{-11}e	6.28E-08	3.39E-09	7.65E-09	7.39E-08	MND	MND	MND	MND	MND	MND	MND	MND	MND	2.16E-10	6.05E-10	6.62E-10	2.46E-10	-3.01E-08
Acidification	kg SO_2e	7.76E-03	4.41E-05	3.76E-04	8.18E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	9.46E-06	1.25E-05	6.92E-05	7.10E-06	-3.61E-03
Eutrophication	kg PO_4^3e	2.61E-03	9.87E-06	1.64E-04	2.79E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	2.20E-06	2.88E-06	9.59E-05	5.26E-04	-1.07E-03
POCP (“smog”)	kg C_2H_4e	6.00E-04	2.21E-06	1.98E-05	6.22E-04	MND	MND	MND	MND	MND	MND	MND	MND	MND	2.07E-07	4.25E-07	2.62E-06	2.35E-06	-2.50E-04
ADP-elements	kg Sbe	8.20E-06	6.53E-08	1.32E-06	9.59E-06	MND	MND	MND	MND	MND	MND	MND	MND	MND	6.37E-10	1.14E-08	1.35E-07	3.55E-09	-8.92E-07
ADP-fossil	MJ	2.57E+01	2.78E-01	3.19E+00	2.91E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.72E-02	4.90E-02	1.00E-01	2.44E-02	-6.49E+00

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_2e	1.55E+00	1.86E-02	1.35E-01	1.70E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	1.28E-03	3.27E-03	5.14E-01	1.37E-02	-5.66E-01

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.

Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited

31.01.2025