

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Insulation (Rolljet)
Purmo Group



EPD HUB, HUB-2213

Publishing date 1 June 2025, last updated on 1 June 2025, valid until 1 June 2030.





GENERAL INFORMATION

MANUFACTURER

Manufacturer	Purmo Group
Address	Lierestaße 68 38690 Goslar OT Vienenburg Germany
Contact details	info@purmo.de
Website	purmo.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 1.1, 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-A5, and modules C1-C4, D
EPD author	Thomas Schulz - Purmo
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	Insulation (Rolljet)
Additional labels	Rolljet 20-2; 25-2;30-2;35-3
Product reference	FBMC430100100000
Place of production	Vienenburg, Germany
Period for data	January 2023-December 2023
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	-9.42% / +28.25% %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1m ²
Declared unit mass	0,744 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	3,08E+00
GWP-total, A1-A3 (kgCO ₂ e)	3,08E+00
Secondary material, inputs (%)	14,4
Secondary material, outputs (%)	28,8
Total energy use, A1-A3 (kWh)	12
Net freshwater use, A1-A3 (m ³)	0,05



PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Today, the Purmo Group is the European market leader in our industry. Our 3,300 professionals work at more than 50 locations in 26 countries worldwide, producing, selling and distributing quality products to our customers all over the world. The Purmo Group is headquartered in Helsinki, Finland.

PRODUCT DESCRIPTION

Insulation rolls are made of polystyrene foam in accordance with DIN EN 13163. They are subject to continuous quality control by independent monitoring institutes and are quality-certified; in addition to the CE marking, insulation rolls are labelled with the RAL quality mark. The thermal conductivities are 0.035-0.045W/mK, depending on the insulation material. The top layer of the insulation roll consists of a composite foil with a 30 mm wide foil overhang on the long side with adhesive strips and integrated anchor fabric that provides a secure hold for the barbed clips.

Further information can be found at purmo.com.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	0	-
Fossil materials	100	Germany / Austria
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	1m ²
Mass per declared unit	0,744 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	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.

There are 2 suppliers for the raw materials: one in Austria and one in Germany. The supplied polystyrene is cut in the plant by sawing to create a so-called predetermined breaking point. Adhesive is applied to the polystyrene panels via the adhesive application element and a fabric film is applied via a pressure roller. The glued polystyrene panels are cut to a length of 10 metres. After cutting, the product is rolled up on a reel. We consider 3% of production losses. 60% of the production losses goes to reuse, 40% of it goes to landfilling as conservative assumption. We assume a distance between production loss treatment and production site of 25km.

We calculated electricity, heat and compressed air utilisation by allocation with the annual utilisation and corresponding annual production volume.

The plastic bag is then pulled over this reel and sealed with two adhesive strips. The rolls are then placed on pallets for internal transport and driven to the storage location using a forklift truck.

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.

The goods are loaded loose onto the lorry without pallets and delivered to the customer by lorry. We calculated the A4 distance as average distance between closest and farthest client. We assume 2% of production losses, that we assumed as sent to landfilling as conservative assumption. There is no electricity need for installation of the product.

In A5, plastic packaging are also treated, we modelled it taken the European statistic for plastic (32.5% recycled. 42,5 incineration with energy recovery and 25% to landfilling. We took 50km as distance between installation site and waste treatment facilities, as conservative assumption.



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)

We did not consider Energy for demolition as the product can be uninstalled with manual hand tools.

We assumed 50km for C2 distances between installation site and waste treatment facilities.

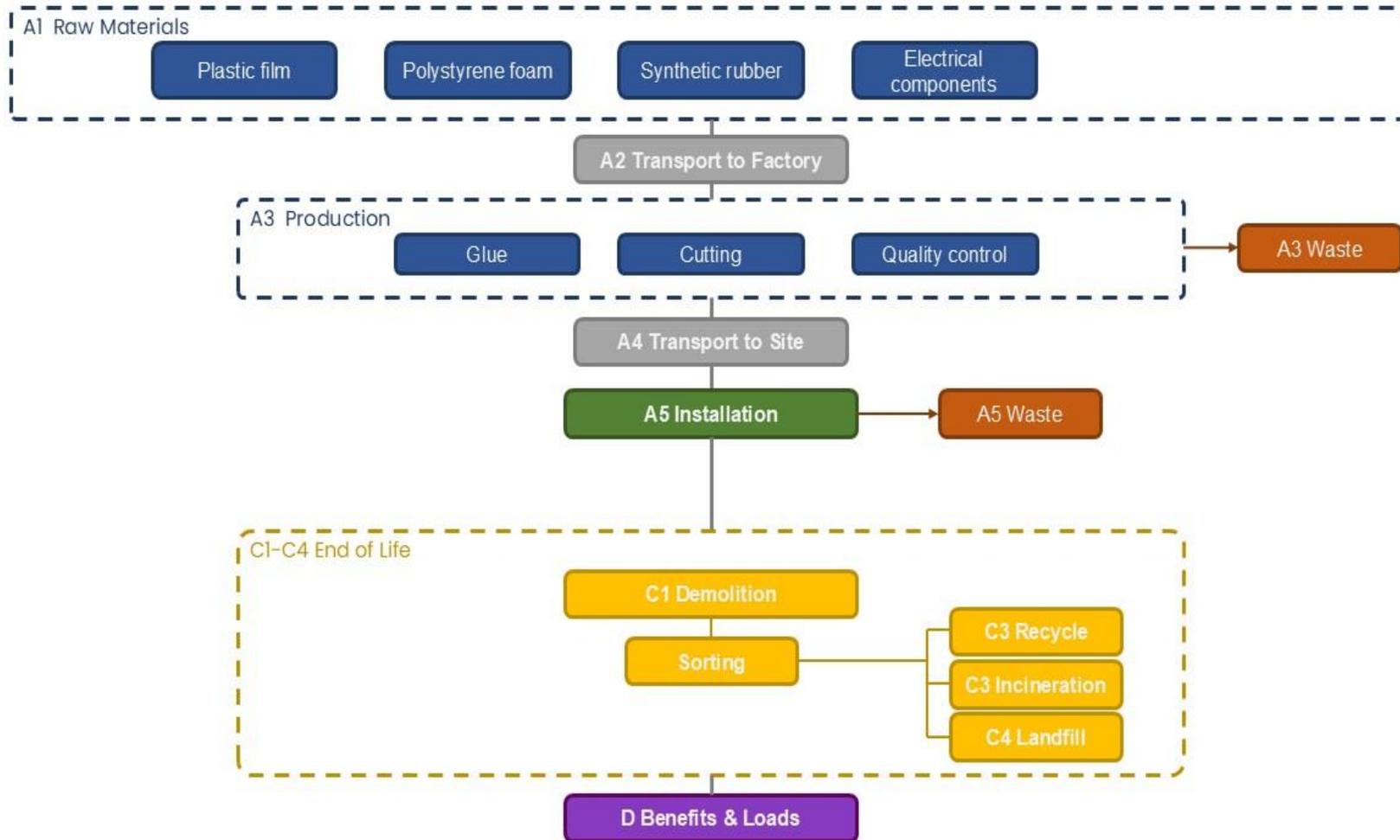
Polysterene foam end of life is approx. 7% is incinerated 64% and 29% is disposed of in landfill (Plastics Europe Final report Plastic waste from B&C in EU 2018). Polyethylene goes to recycling, incineration and landfilling according to EU statistic scenario (Plastics Europe (2021)). Adhesive follow a conservative assumption of landfilling.

In Module D, we included the benefits and load of recycling and incineration with energy recovery of:

- the A3 packaging leaving in A5 installation wastes for incineration with energy recovery and recycling (plastic and adhesive)
- the Polystyrene and Polyethylene sent to recycling and incineration with energy recovery in C3.



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

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Representative product
Variation in GWP-fossil for A1-A3	-9.42% / +28.25%

This EPD cover different thicknesses of polystyrene thicknesses (from 20mm to 35 mm). The representative case modelled in this EPD is the 30mm thickness.

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

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	2,52E+00	6,18E-02	5,07E-01	3,08E+00	6,86E-02	2,64E-01	MND	0,00E+00	3,44E-03	1,34E+00	3,19E-02	-3,43E+00						
GWP – fossil	kg CO ₂ e	2,51E+00	6,17E-02	5,06E-01	3,08E+00	6,86E-02	2,64E-01	MND	0,00E+00	3,44E-03	1,34E+00	3,19E-02	-3,39E+00						
GWP – biogenic	kg CO ₂ e	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,66E-02						
GWP – LULUC	kg CO ₂ e	1,05E-03	2,47E-05	5,09E-04	1,59E-03	2,80E-05	3,85E-05	MND	0,00E+00	1,29E-06	1,56E-05	2,36E-06	-3,93E-03						
Ozone depletion pot.	kg CFC ₋₁₁ e	5,90E-08	1,37E-08	1,33E-08	8,61E-08	1,51E-08	2,67E-09	MND	0,00E+00	7,97E-10	1,40E-09	6,71E-10	-9,65E-08						
Acidification potential	mol H ⁺ e	9,73E-03	2,57E-04	2,35E-03	1,23E-02	2,84E-04	2,97E-04	MND	0,00E+00	1,35E-05	1,97E-04	1,92E-05	-1,03E-02						
EP-freshwater ²⁾	kg Pe	6,66E-05	5,18E-07	2,12E-05	8,83E-05	5,79E-07	1,91E-06	MND	0,00E+00	2,85E-08	3,87E-07	3,73E-08	-4,46E-04						
EP-marine	kg Ne	1,55E-03	7,52E-05	4,07E-04	2,04E-03	8,29E-05	6,11E-05	MND	0,00E+00	3,75E-06	8,77E-05	1,40E-05	-1,84E-03						
EP-terrestrial	mol Ne	1,69E-02	8,29E-04	4,51E-03	2,22E-02	9,14E-04	6,49E-04	MND	0,00E+00	4,14E-05	9,39E-04	7,08E-05	-2,16E-02						
POCP (“smog”) ³⁾	kg NMVOCe	1,23E-02	2,55E-04	1,92E-03	1,45E-02	2,78E-04	3,46E-04	MND	0,00E+00	1,38E-05	2,33E-04	2,74E-05	-6,33E-03						
ADP-minerals & metals ⁴⁾	kg Sbe	4,73E-06	2,01E-07	7,86E-06	1,28E-05	2,39E-07	3,16E-07	MND	0,00E+00	8,16E-09	1,51E-07	7,66E-09	-7,29E-06						
ADP-fossil resources	MJ	5,97E+01	9,00E-01	1,27E+01	7,34E+01	9,93E-01	1,55E+00	MND	0,00E+00	5,24E-02	1,74E-01	5,16E-02	-5,30E+01						
Water use ⁵⁾	m ³ e depr.	1,84E+00	3,96E-03	3,34E-01	2,18E+00	4,35E-03	5,02E-02	MND	0,00E+00	2,34E-04	3,42E-02	3,12E-04	-8,47E-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.



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	1,79E+00	1,05E-02	6,52E-01	2,46E+00	1,16E-02	5,29E-02	MND	0,00E+00	5,90E-04	9,32E-03	9,78E-04	-6,60E+00						
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Total use of renew. PER	MJ	1,79E+00	1,05E-02	6,52E-01	2,46E+00	1,16E-02	5,29E-02	MND	0,00E+00	5,90E-04	9,32E-03	9,78E-04	-6,60E+00						
Non-re. PER as energy	MJ	3,32E+01	9,00E-01	6,79E+00	4,09E+01	9,93E-01	9,02E-01	MND	0,00E+00	5,24E-02	1,74E-01	5,16E-02	-4,65E+01						
Non-re. PER as material	MJ	3,05E+01	0,00E+00	5,06E+00	3,56E+01	0,00E+00	-5,95E+00	MND	0,00E+00	0,00E+00	-2,10E+01	-8,67E+00	5,53E+00						
Total use of non-re. PER	MJ	6,37E+01	9,00E-01	1,18E+01	7,65E+01	9,93E-01	-5,05E+00	MND	0,00E+00	5,24E-02	-2,08E+01	-8,62E+00	-4,10E+01						
Secondary materials	kg	1,07E-01	2,87E-04	1,63E-02	1,24E-01	3,27E-04	2,67E-03	MND	0,00E+00	1,45E-05	5,37E-04	1,84E-05	1,60E-01						
Renew. secondary fuels	MJ	8,41E-03	3,58E-06	4,26E-03	1,27E-02	4,24E-06	2,55E-04	MND	0,00E+00	1,47E-07	3,91E-06	7,07E-07	-3,45E-05						
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Use of net fresh water	m ³	4,51E-02	1,08E-04	8,32E-03	5,36E-02	1,17E-04	1,13E-03	MND	0,00E+00	6,77E-06	1,76E-04	5,52E-05	-2,43E-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	6,48E-02	1,28E-03	3,12E-02	9,73E-02	1,43E-03	2,50E-03	MND	0,00E+00	6,93E-05	1,23E-03	0,00E+00	-2,37E-01						
Non-hazardous waste	kg	1,85E+00	2,05E-02	9,08E-01	2,78E+00	2,28E-02	1,76E-01	MND	0,00E+00	1,14E-03	4,38E-01	2,09E-01	-2,09E+01						
Radioactive waste	kg	5,50E-05	5,96E-06	1,43E-05	7,53E-05	6,56E-06	1,82E-06	MND	0,00E+00	3,51E-07	2,59E-07	0,00E+00	-1,79E-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	0,00E+00	0,00E+00	1,34E-02	1,34E-02	0,00E+00	2,68E-04	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	4,70E-02	MND	0,00E+00	0,00E+00	1,14E-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	6,10E-02	MND	0,00E+00	0,00E+00	1,00E-01	0,00E+00	0,00E+00						
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,80E-01	MND	0,00E+00	0,00E+00	2,05E+01	0,00E+00	0,00E+00						

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

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	2,37E+00	6,11E-02	4,87E-01	2,92E+00	6,79E-02	2,59E-01	MND	0,00E+00	3,41E-03	1,34E+00	2,59E-02	-3,35E+00						
Ozone depletion Pot.	kg CFC ₁₁ e	6,00E-08	1,09E-08	1,13E-08	8,22E-08	1,20E-08	2,42E-09	MND	0,00E+00	6,31E-10	1,22E-09	5,32E-10	-8,39E-08						
Acidification	kg SO ₂ e	8,19E-03	2,00E-04	1,96E-03	1,03E-02	2,21E-04	2,44E-04	MND	0,00E+00	1,06E-05	1,41E-04	1,46E-05	-8,46E-03						
Eutrophication	kg PO ₄ ³ e	2,05E-03	4,58E-05	9,23E-04	3,02E-03	5,08E-05	3,96E-04	MND	0,00E+00	2,39E-06	1,71E-04	1,25E-03	-1,60E-02						
POCP (“smog”)	kg C ₂ H ₄ e	3,13E-03	8,06E-06	2,30E-04	3,37E-03	8,99E-06	6,99E-05	MND	0,00E+00	4,35E-07	3,84E-06	4,70E-06	-6,10E-04						
ADP-elements	kg Sbe	4,67E-06	1,96E-07	7,84E-06	1,27E-05	2,33E-07	3,13E-07	MND	0,00E+00	7,91E-09	1,44E-07	7,40E-09	-7,18E-06						
ADP-fossil	MJ	5,97E+01	9,00E-01	1,27E+01	7,34E+01	9,93E-01	1,55E+00	MND	0,00E+00	5,24E-02	1,74E-01	5,16E-02	-5,29E+01						



ENVIRONMENTAL IMPACTS – GWP-GHG

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	2,52E+00	6,18E-02	5,07E-01	3,08E+00	6,86E-02	2,64E-01	MND	0,00E+00	3,44E-03	1,34E+00	3,19E-02	-3,39E+00						

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

01.06.2025

