ENVIRONMENTAL PRODUCT DECLARATION

According to ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

CLIMAVER® Neto

Version 4
Date of publication: 2018/07/17
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Validity: 5 years
Valid until: 2030/06/18
Scope of the EPD®: Spain and Portugal

THE INTERNATIONAL EPD® SYSTEM

Operator of the International EPD System Programme:
EPD® INTERNATIONAL AB
www.environdec.com
Registration number: EPD-IES-0001362:001 (S-P-01362)

Manufacturer's address:
Calle Príncipe de Vergara 132, 28002, Madrid, Spain.

An EPD should provide up-to-date information, and can be updated if conditions change.
Therefore, the declared validity is subject to continued registration and publication on www.environdec.com

This is a translation of the EPD with registration number EPD-IES-0001362:001 (S-P-01362) that can be accessed at www.environdec.com and is published for reasons of convenience. In case of discrepancies, the original version will prevail.

General Information

Programme information

PROGRAMME:	The International EPD® System
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The CEN EN 15804:2012 + A2:2019:2021 standard is used as main Product Category Rules (PCR)

Product Category Rules (PCR): PCR 2019:14 Construction Products, version 1.3.4
Complementary PCR (c-PCR-005), 2025-04-08. Thermal insulation products (EN 16783:2024)

PCR revision performed by: The International EPD® System Technical Committee. Refer to www.environdec.com for a list of members.

Reviewer: Claudia A. Peña. Universidad de Concepción, Chile. The review panel can be contacted through the Secretariat www.environdec.com/contact - Contact via info@environdec.com

Independent third-party audit of the declaration and data in accordance with ISO 14025:2006
☐ Verification of the EPD by an individual auditor☒

Third party verification: Marcel Gómez - info@marcelgomez.com
Approved by: The International EPD® System

The procedure for monitoring data during the validity period of the EPD involves a third-party auditor:☐ Yes No☒

The EPDs which are within the same product category, but registered in different EPD programmes or not compliant with the EN 15804 standard, might not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully aligned PCRs or PCR versions; cover products with identical functions, technical performance and use (e.g. identical declared/functional units); have equivalent system boundaries and data descriptions; apply equivalent data quality requirements, data collection methods and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations and be valid at the time of comparison. For more information on comparability, refer to EN 15804:2012+A2:2019/AC:2021 and ISO 14025: 2006.

Product Description

Company Information

Manufacturer: Saint-Gobain Isover Ibérica S.L.
Production plant: Avenida del Vidrio s/n, 19200, Azuqueca de Henares, Spain
Certification related to the management system: The production plant features management systems certified according to ISO 9001, ISO 14001.
Usage programme: EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works - Environmental Product Declaration: Core rules for the product category of construction products and the International EPD® System
PCR identification: PCR 2019:14 version 1.3.4, for construction products and construction services Complementary PCR (c-PCR-005) 2025-04-08. Thermal insulation products (EN 16783:2024)
Prepared by: IVL Swedish Environmental Research Institute, International EPD Secretariat
A CPC CODE: 37990 - Non-metallic mineral products n.e.c.
Declaration owner: Saint-Gobain Isover Ibérica S.L.
Product name and represented manufacturer: CLIMAVER® Neto, manufactured by Saint-Gobain Isover Ibérica S.L.
EPD® prepared by: Alfonso Diez (Isover Certification and Development), Nicolás Bermejo (Technical and Sustainability Manager) and Patricia Jiménez (Saint-Gobain LCA core team)
Contact: Isover, alfonso.diez@saint-gobain.com,
nicolas.bermejo@saint-gobain.com
Geographical scope of the EPD®: Spain and Portugal
EPD® **registration number:** EPD-IES-0001362:001 (S-P-01362)
Declaration issued: 2025/06/19 valid until: **2030/06/18**
Verification demonstration: an independent verification of the declaration was carried out, in accordance with ISO 14025:2006. This verification was external, carried out by a third party on the basis of the PCR mentioned above.

Product Description and Use

This Environmental Product Declaration (EPD®) details the environmental impact of 1 m² of mineral wool with a thermal resistance of 0.78 K.m²/W of **CLIMAVER® Neto.** High-density ISOVER rigid glass wool panel; the external facing is covered with kraft paper and glass mesh reinforced matt aluminium foil, which acts as a vapour barrier, and the internal facing with a black reinforced glass Neto fabric with high mechanical resistance. CLIMAVER® Neto is used for the installation of networks of self-supporting air-distribution ducts in thermal installations within ventilation and air-conditioning systems in buildings.

This EPD applies to a specific product from a single Saint-Gobain Isover Ibérica plant, and is based on the most representative thickness.

Isover's production plant in Azuqueca de Henares uses raw materials of natural origin (sand, volcanic rock, depending on the desired product), as well as recycled materials, and uses melting and fiberising techniques to produce mineral wool. Mineral wool products are characterised by a lightweight structure composed mostly of air, which remains immobile due to interwoven filaments.

Naturally, the best insulator Earth, is still dry air at 10 °C: its thermal conductivity factor, expressed in λ, is 0.025 W/(m.K) (watts divided by metre per Kelvin degree). The thermal conductivity of mineral wool is close to that of still air, as its lambda varies from 0.030 W/(m.K) for the most efficient to at least 0.045 W/(m.K). Given its intertwined structure, mineral wool is a porous material that traps air, making it one of the best materials for insulation. The porous and elastic structure of the wool also absorbs airborne noise and hits the wool, which provides acoustic correction within the facility. Mineral wool containing non-combustible materials does not feed fire nor spread flames.

Mineral wool insulation is used in both buildings and industrial facilities. It guarantees a high level of comfort, reduces energy costs, minimises carbon dioxide (CO_2) emissions, prevents heat loss through roofs, walls, floors, pipes and boilers, reduces noise pollution, and certain types of mineral wool also protect homes and industrial facilities from fire hazards. Mineral wool products last for the lifetime of the building, or as long as the insulated building component remains part of the building.

Technical data/physical characteristics:
Thermal resistance of the product: 0.78 K.m²/W (UNE EN 12667)
The thermal conductivity of mineral wool is: 0.032 W/(m·K) (UNE EN 12667)
Reaction to fire: B-s1,d0 (UNE EN 12667)
Density: 70 Kg/m³ approx

Declaration of the Main Components and/or Product Materials

Description of the main components and/or materials for 1m^2 of mineral wool, with a thermal resistance of 0.78 K.m^2/W for the calculation of the EPD®:

PARAMETER	VALUE
Quantity for one m^2	2.08 kg/m^2 of finished product
Thickness	25mm
Coating	Glass fabric, Glass veil Reinforced Kraft Aluminium
Packaging for transport and distribution	Polyethylene: 0.0059 kg/m² Cardboard: 0.004 kg/m² Pallet: 0.167 kg/m²
Product used for installation	None

Description of the Main Components and/or Product Materials:

Product components	Weight (%)	Weight of post-consumption material (%)	Weight of biogenic material (%)
Mineral materials	15 - 25%	0%	0%
Recycled glass	50 - 79%	100%	0%
Glass fabric	5%	0%	0%
Glass veil	2%	0%	0%
Reinforced Kraft Aluminium	7%	0%	1.2%
Gluing	0 - 12%	0%	0.1%
Addition	100%	59.7%	1.3%
Packaging materials	**Weight (kg)**	**Weight-% (vs. product)**	**Biogenic material, weight- kg C/kg of product**
POLYETHYLENE	0.0059	0.28%	0
CARDBOARD	0.004	0.19%	0.002
WOOD	0.167	8.02%	0.08

During the product's useful life cycle, no hazardous substance included in the 'List of Candidate Substances of Very High Concern (SVHC) for authorisation" have been used in a percentage above 0.1% of product weight. The auditor and the operator of the programme make no claims or have any responsibility with regards to the legality of the product.

Information for Calculating the LCA

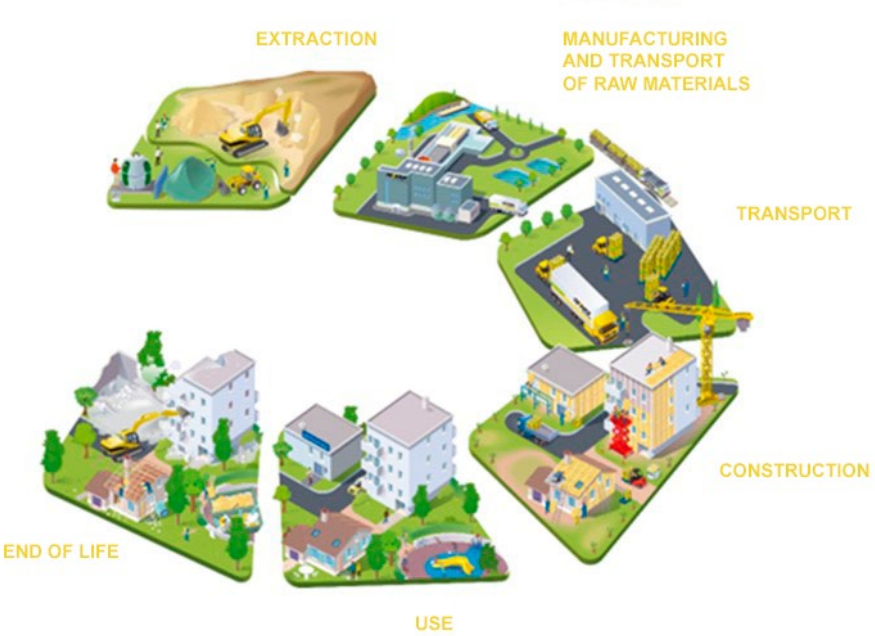
TYPE OF EPD	From cradle to grave and module D
FUNCTIONAL UNIT	Providing thermal insulation in 1 m² of product, with a thermal resistance of 0.78 m^2.K/W for 50 years of *service life.*
SYSTEM LIMITS	From cradle to grave + Module D = A + B + C + D
REFERENCE SERVICE LIFE (RSL)	The Reference Service Life (RSL) of the insulation product is 50 years. This period of 50 years is the amount of time we recommend that our products last without being renovated, and corresponds to the standard service life of the building design.
CUT-OFF CRITERIA	If there is insufficient information, process energy and materials accounting for less than 1% of the energy and total mass used can be excluded (if they do not cause a significant impact). The sum of all excluded products and inputs may not exceed 5% of the total energy and mass used, as well as the environmental emissions produced, and less than 5% of the energy in the remaining modules is excluded. Flows related to human activities such as transport of employees are excluded. Plant construction, machine production and transport systems are excluded, as the related flows are assumed to be insignificant compared to the production of the construction product, in comparison with the service life period of these systems.
ASSIGNMENTS	The allocation criteria are based on mass. 'Polluter pays' and modularity principles have been followed.
GEOGRAPHICAL COVERAGE AND TIME PERIOD	The data is collected from the Isover plant in Azuqueca de Henares, Spain. Data collected for the year 2024 Module D + Cradle to grave study.
SOURCE OF BACKGROUND DATA	Sphera 2023.2 and ecoinvent v.3.9.1 databases
SOFTWARE	Sphera LCA for experts (GaBi) 10

Scope of the LCA

System limits (X=included. MND = Module Not Declared)

	PRODUCT STAGE			CONSTRUCTION STAGE		USAGE STAGE							END OF LIFE STAGE				BURDENS AND BENEFITS BEYOND SYSTEM LIMIT
	Raw material supply	Transport	Manufacture	Transport	Construction-Installation process	Use	Maintenance	Repair	Replacement	Restoration	Use of operational energy	Operational water use	Demolition of demolition	Transport	Waste processing	Provision	Reuse-recovery
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Declared modules	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geographical region	ES	ES	ES	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT	ES-PT
Specific data used	44.2% GWP- GHG																
Variation between products	0%																
Variation between factories	0%																

Life cycle stages



A1-A3, Product Stage

Stage description: The product stage for mineral wool products is subdivided into 3 modules A1, A2 and A3, which correspond to 'Raw material supply', 'Transport to manufacturer' and 'Manufacturing', respectively.

The unification of modules A1, A2 and A3 is a possibility contemplated by standard EN 15804:2012+A2:2019/AC:2021. This rule applies to this EPD.

A1, Raw material supply
This module includes the extraction and processing of all raw materials and the energy upstream of the manufacturing process.

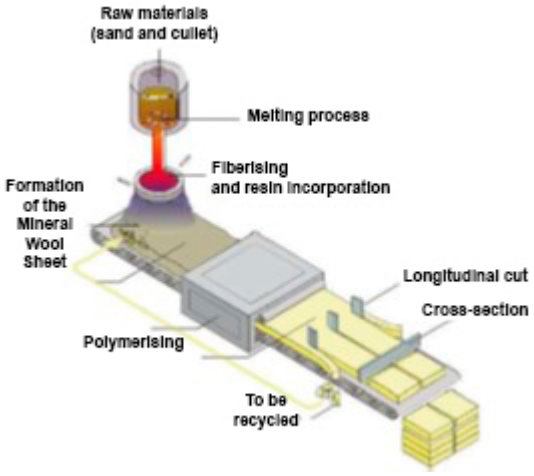
Specifically, the supply of raw materials covers the production of binding components and the sources of origin (quarry) of the raw materials for the production of mineral wool (e.g. sand, borax, basalt, slag... depending on the desired material). In addition to these raw materials, recycled materials (recycled glass, aggregates) are also used as input materials.

A2, Transport to manufacturer
The raw materials are transported to the manufacturing point. In our case, the models include: road, sea and rail (average values) for each raw material.

A3, Manufacturing
This module includes manufacturing and packaging the product. Specifically, it covers the manufacture of glass, resin, mineral wool (including the melting and fiberising processes shown in the flowchart) and packaging. This module also includes emissions and waste generated during manufacturing.

Manufacturing Process Flowchart

System diagram: Glass wool: The manufacture of glass wool is based on the melting of mainly recycled glass with sands. Once the liquid glass is obtained, it is passed through a fiberising system which, by using air and the centrifugal force produced by the rotation of the disc, produces filaments that are impregnated with a thermosetting resin to form a random felt. This felt is polymerised in a 250 °C oven.
On leaving the oven, the product is cut and the coatings, if any, are attached; then, it is packed in polyethylene or cardboard.



A4-A5, Construction Process Stage

Stage description: The construction process is divided into 2 modules: A4, transport to the site, and A5, installation in the building. Since there is a loss of product during installation, the compensation quantification of the raw material (A5) and its transportation to the site (A4) are considered.

A4, Transportation to the site: This module includes transportation from the production gate to the construction site. Transportation is calculated based on a scenario with the parameters described in the following table.

PARAMETER	VALUE
Type of fuel and vehicle consumption, or type of vehicle used for transport; i.e., long-distance truck, ship, etc.	Cargo truck, maximum load weight 27 t and consumption of 0.38 litres per km
Distance	450km
Capacity usage (including empty returns)	100% capacity by volume 30% empty returns
Apparent density of the transported products*	30- 200 kg/m^3
Volumetric capacity usage factor	1

* *Isover products feature a compression factor between 1 and 5. Bulk mass/most common truck, 110 m³ volume.*

A5, Installation in the building: No additional accessories were considered for the insulation product in the implementation phase. No power required to install the product (manual installation without tools).

PARAMETER	VALUE/DESCRIPTION	
Materials waste at the construction site before waste processing, generated during the installation of the product (specified by type)	5%	
Distance	50 km to landfill by truck	
Output materials (specified by type) as a result of on-site waste treatment, e.g. collection for recycling, for energy recovery, disposal (specified by route)	Polyethylene: 0.0059 kg/m² Cardboard: 0.006 kg/m² Pallet: 0.052 kg/m²	landfill landfill Reused 7 times and incinerated at end of life

B1-B7, Usage Stage (excluding possible savings)

Stage description: The usage stage is divided into the following modules:

- B1: Use
- B2: Maintenance
- B3: Repair
- B4: Replacement
- B5: Restoration
- B6: Operational use of energy
- B7: Operational water use

Description of scenarios and additional technical information:
The product has a service life of 50 years. This assumes that the product will last on site during this period without the need to carry out any maintenance, repair, replacement or refurbishment. Therefore, it has no impact on this stage.

C1-C4, End of Life Stage

Stage description: this stage includes the following modules:

C1, Deconstruction, demolition
The deconstruction and/or dismantling of insulating product is part of the entire building demolition process. In our case, the influence on the final result is minimal.

C2, Transportation to waste processing
The model used for transport applies (see A4, transport to site).

C3, Waste processing for reuse, value assessment and/or recycling
The product is considered as landfilled without reuse, recovery or recycling.

C4, Disposal
Mineral wool is assumed to be 100% landfilled.

Description of scenarios and additional technical information:

PARAMETER	VALUE/DESCRIPTION
Collection process specified by type	All product, including any surfaces, is collected together with any mixed construction waste. **2.08** kg mineral wool (collected with mixed construction waste)
Recovery system specified by type	There is no recovery, recycling or reuse of the product once it has reached its end-of-life phase.
Disposal specified by type	The product, together with mixed construction waste from demolition, is deposited in landfills. **2.08** kg of mineral wool is deposited in landfills.
Assumptions for the development of scenarios (e.g., transport)	Waste going to landfill is transported 50 km by truck from the deconstruction/demolition sites to the landfill.

D, Potential for Reuse/Recovery/Recycling

100% of waste is sent to landfills. There is no reuse, recovery or recycling of this product. Therefore, no recycling benefits are reported at stage D.

LCA Results

As specified in standard EN 15804: 2012+A2:2019/AC:2021 and the Product Category Rules, environmental impacts are declared and reported using the ILCD reference characterisation factors. Raw material and energy consumption as well as transport distances, were taken directly from the manufacturing plant. EN15804 characterisation factors based on FE 3.1.

The estimated impact results are only relative statements that do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins or risks.

All emissions to air, water and land, and all materials and energy used, have been included.

Results for the impact categories, abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity (non-cancer) and ecotoxicity (freshwater) can be very uncertain in LCAs that include capital goods/infrastructure in generic datasets, where infrastructure/capital goods are major contributors to the total results. This is because the infrastructure/capital goods LCI data used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

This EPD includes module C; we strongly advise against using the results from modules A1-A3 without considering module C results.

All results refer to a functional unit of 1 m^2 of mineral wool with a thermal resistance of 0.78 $K.m^2/W$ for a thickness of 25 mm. For results for other values of commercial thickness, refer to the appendix.

Environmental impacts

1. Environmental indicators	PRODUCT STAGE	CONSTRUCTION STAGE		USAGE STAGE							END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING
	A1 / A2 / A3	Transport A4	Installation A5	Use B1	B2 Maintenance	Repair B3	Replacement B4	B5 Restoration	B6 Use of operational energy	B7 Operational water use	C1 Deconstruction/ Demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, value assessment, recycling
Climate change [kg CO2 eq.]	2,83E+00	7,02E-02	4,67E-01	0	0	0	0	0	0	0	8,04E-03	7,33E-03	0	1,42E-01	0
Climate change (fossil) [kg CO2 eq.]	3,23E+00	6,94E-02	1,65E-01	0	0	0	0	0	0	0	8,04E-03	7,24E-03	0	4,07E-02	0
Climate change (biogenic) [kg CO2 eq.]	-4,03E-01	1,84E-04	3,02E-01	0	0	0	0	0	0	0	1,01E-06	1,94E-05	0	1,01E-01	0
Climate change (land use change) [kg CO2 eq.]	2,01E-03	6,53E-04	1,10E-04	0	0	0	0	0	0	0	9,05E-07	6,67E-05	0	9,30E-05	0
Ozone layer depletion [kg CFC-11 eq.]	2,34E-06	6,17E-15	1,17E-07	0	0	0	0	0	0	0	1,28E-10	9,37E-16	0	2,12E-10	0
Terrestrial and freshwater acidification [Mole of H+ eq.]	2,73E-02	7,96E-05	1,38E-03	0	0	0	0	0	0	0	7,45E-05	9,17E-06	0	2,40E-04	0
Freshwater eutrophication [kg P eq.]	3,46E-04	2,57E-07	1,76E-05	0	0	0	0	0	0	0	2,47E-07	2,63E-08	0	3,58E-06	0
Marine eutrophication [kg N eq.]	3,68E-03	2,72E-05	2,49E-04	0	0	0	0	0	0	0	3,46E-05	3,21E-06	0	1,96E-04	0
Terrestrial eutrophication [Mole of N eq.]	9,29E-02	3,21E-04	4,71E-03	0	0	0	0	0	0	0	3,75E-04	3,76E-05	0	7,06E-04	0
Photochemical ozone formation in human health [kg NMVOC eq.]	9,31E-03	6,91E-05	5,00E-04	0	0	0	0	0	0	0	1,11E-04	8,04E-06	0	2,42E-04	0
Use of resources, minerals and metals [kg Sb eq.][1]	7,84E-05	4,58E-09	3,92E-06	0	0	0	0	0	0	0	2,81E-09	4,77E-10	0	5,46E-09	0
Resource use, energy carriers [MJ][1]	5,00E+01	9,58E-01	2,54E+00	0	0	0	0	0	0	0	1,05E-01	9,81E-02	0	4,16E-01	0
Water deprivation potential [m³ world equiv.] [1]	9,29E-01	8,12E-04	4,74E-02	0	0	0	0	0	0	0	3,55E-04	8,70E-05	0	3,47E-03	0

Use of resources

[1] The results of this environmental impact indicator shall be used with caution, as the uncertainties of these results are high, or because the experience with the indicator is limi

2. Resources, Use Indicators

	PRODUCT STAGE	CONSTRUCTION STAGE		USAGE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
	A1 / A2 / A3	Transport A4	Installation A5	Use B1	B2 Maintenance	Repair B3	Replacement B4	B5 Restoration	B6 Use of operational energy	B7 Operational water use	C1 Deconstruction/Demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, value assessment, recycling
Use of primary energy renewable (PERE) [MJ]	6,01E+01	6,78E-02	3,01E+00	0	0	0	0	0	0	0	6,00E-04	7,14E-03	0	2,05E-02	0
Primary renewable energy use indicator resources excluding P.E.R. resources used as material (PERM) [MJ]	4,08E+00	0,00E+00	-1,85E+00	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0
Total use of renewable primary energy resources (PERT) [MJ]	6,42E+01	6,78E-02	1,16E+00	0	0	0	0	0	0	0	6,00E-04	7,14E-03	0	2,05E-02	0
Use of primary energy non-renewable (PENRE) [MJ]	4,14E+01	9,60E-01	2,11E+00	0	0	0	0	0	0	0	1,05E-01	9,85E-02	0	4,16E-01	0
Primary non-renewable energy use indicator resources excluding P.E.R. resources used as material (PERM) [MJ]	8,65E+00	0,00E+00	4,33E-01	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0
Total use of non-renewable primary energy resources (PENRT) [MJ]	5,00E+01	9,60E-01	2,54E+00	0	0	0	0	0	0	0	1,05E-01	9,85E-02	0	4,16E-01	0
Secondary material input (SM) [kg]	1,33E+00	0,00E+00	6,63E-02	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0
Use of renewable secondary fuels (RSF) [MJ]	3,60E-22	0,00E+00	1,80E-23	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0
Use of non-renewable secondary fuels (NRSF) [MJ]	4,23E-21	0,00E+00	2,11E-22	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0
Net freshwater use (FW) [m^3]	2,40E-02	7,47E-05	1,22E-03	0	0	0	0	0	0	0	8,26E-06	7,82E-06	0	8,66E-05	0

Outflows and Waste Category

3-Outflows and Waste Category	PRODUCT STAGE	CONSTRUCTION STAGE		USAGE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
	A1 / A2 / A3	Transport A4	Installation A5	Use B1	B2 Maintenance	Repair B3	Replacement B4	B5 Restoration	B6 Use of operational energy	B7 Operational water use	C1 Deconstruction/ Demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, value assessment, recycling
Hazardous waste disposed (HWD) [kg]	5,71E-04	3,55E-12	2,86E-05	0	0	0	0	0	0	0	7,08E-07	3,05E-13	0	2,69E-08	0
Non-hazardous waste disposed (NHWD) [kg]	1,05E+00	1,38E-04	2,11E-01	0	0	0	0	0	0	0	6,48E-04	1,50E-05	0	1,99E+00	0
Radioactive waste disposed (RWD) [kg]	3,12E-04	1,24E-06	1,52E-05	0	0	0	0	0	0	0	1,15E-08	1,84E-07	0	7,74E-06	0
Components for re-use (CRU) [kg]	0,00E+00	0,00E+00	1,37E-01	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0
Materials for recycling (MFR) [kg]	3,64E-02	0,00E+00	1,82E-03	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0
Material for energy recovery (MER) [kg]	0,00E+00	0,00E+00	0,00E+00	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0
Exported energy electrical (EEE) [MJ]	0,00E+00	0,00E+00	0,00E+00	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0
Exported energy thermal (EET) [MJ]	0,00E+00	0,00E+00	0,00E+00	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0	0,00E+00	0

Additional voluntary indicators for standard EN 15804: 2012+A2:2019/AC:2021 (as per ISO 21930:2017)

	PRODUCT STAGE	CONSTRUCTION STAGE		USAGE STAGE							END OF LIFE STAGE				REUSE, RECOVERY, RECYCLING
Environmental indicators	A1 / A2 / A3	Transport A4	Installation A5	Use B1	B2 Maintenance	Repair B3	Replacement B4	B5 Restoration	B6 Use of operational energy	B7 Operational water use	C1 Deconstruction/Demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, value assessment, recycling
Global warming potential (GWP-GHG) [kg CO2 eq.][2]	3,41E+00	7,02E-02	2,23E-01	0	0	0	0	0	0	0	8,04E-03	7,33E-03	0	1,56E-01	0

[2] The indicator includes all greenhouse gases included in GWP-total, but excludes absorption and emissions of biogenic carbon dioxide and biogenic carbon stored in the product. Therefore, this indicator is almost the same as the GWP indicator originally defined in standard EN 15804:2012+A1:2013.

Information on biogenic carbon content

Biogenic Carbon Content		PRODUCT STAGE A1 / A2 / A3
	Biogenic carbon content in the product [kg]	2,75E-02
	Biogenic carbon content in packaging [kg]	8,23E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg CO2.

The product contains biogenic carbon due to the additives used. In terms of packaging, biogenic carbon is quantified due to the use of wooden pallets.

Additional information:

Information on Electricity

The factory located in Azuqueca de Henares uses energy with Certified Guarantee of Origin (GO's). Thus, the electricity mix considered for the manufacture of the product under study is modelled according to the electricity mix described in the Guarantee of Origin certificate. The amount of electricity purchased with Guarantee of Origin covers 100% of the electricity consumption at the manufacturing site.

TYPE OF INFORMATION	DESCRIPTION
Location	Electricity purchased by Saint-Gobain.
Percentage of electricity covered by Guarantee of Origin	100% of the energy consumed is covered by the GO certificate
Energy sources for electricity	Percentage of energy sources: 34.8% wind, 7.1% photovoltaic, 13.8% hydraulic, 29.1% solar thermal, 15.3% biomass.
Type of dataset	From cradle to gate, from the Gabi and ecoinvent databases
Source	Guarantee of Origin certificate.
Emissions of CO_2 kg CO_2 eq. kWh	0.0045 kg CO_2 eq/kWh - Climate Change - Fossil indicator

Data quality

The quality of the inventory data is judged by geographical, temporal and technological representativeness. To meet these requirements and ensure reliable results, first-hand industry data were used in conjunction with LCA background datasets. Data were collected from internal records and reporting documents from SG Isover España SL After assessing the inventory, according to the classification defined in the LCA report, the assessment reflects good quality of the inventory data.

Changes from the Previous Version

Update to EN 15804:2012+A2:2019/AC:2021, to new PCR version 1.3.4, calculation method, new ecoinvent 3.9.1. database and 2024 inventory.

References

1. EN 15804:2012+A2:2019/AC:2021 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
2. EN 16783:2017 Thermal insulation products - Product category rules (PCR) for factory made and in-situ formed products for preparing environmental product declarations
3. EPD International. General Program Instructions (GPI) for the International EPD® System (version 4.0) www.environdec.com.
4. The International EPD System PCR 2019:14 Construction products and Construction services. Version 1.3.4.
5. European Chemical Agency, Candidate List of substances of very high concern for Authorization. https://echa.europa.eu/candidate-list-table
6. LCA CLIMAVER® Neto Report.

ENGLISH SUMMARY

Saint-Gobain Isover

Saint-Gobain Isover Ibérica, S.L. is part of the Saint-Gobain Group, the world leader in light and sustainable construction. Isover offer innovative and energy-efficient solutions that contribute to environmental protection, and is the world leader in the manufacture of insulating materials. It offers, in mineral wool, the most complete range of thermal and acoustic insulation and fire protection solutions.

Product

This environmental declaration refers to CLIMAVER® Neto that is a rigid panel made of high-density ISOVER glass wool covered on the outer surface with a matte aluminum sheet reinforced with kraft paper and glass mesh, which acts as a vapor barrier. On its inner surface, it is covered with a new glass-reinforced net fabric which is black in colour and has a high mechanical resistance. CLIMAVER® Neto is used to install self-supporting air distribution duct networks in thermal installations for HVAC and ventilation in buildings.

Functional Unit

The functional unit is to provide the thermal insulation of **1 m² of product CLIMAVER® Neto with a thermal resistance of 0.78 m².K/W and a thickness of 25 mm with a weight of 2,08 kg/m², for 50 years of service life.**

System boundaries

This present study is called “cradle to grave + module D. It includes all the life cycle stages of the product (manufacturing, transport to construction site, installation, use and end of life)

Life cycle stages

This EPD covers information modules A1-3, A4-5, B1-7, C1-4, and D module as specified below:

A1-A3 Product Stage: A1 Raw material supply covers the production of binder components and the sourcing (quarry) of raw materials for the production of mineral wool. In addition to these raw materials, recycled materials are also used as input. A2 transport to the manufacturer includes distances by road, sea, and rail (average values) for each raw material. A3, manufacturing, includes the production of glass, resin, mineral wool, and packaging. This module also includes emissions and waste generated during manufacturing.

A4-A5 Construction Process Stage: A4, transport to the site, includes transportation from the production gate to the site. A5, installation in the building does not consider any additional accessories for installation. A 5% waste of mineral wool is considered, and packaging is included as output material.

B1-B7 Use Stage (excluding potential savings): The product has no impact at this stage as it does not require maintenance, repair, replacement, or renovation during its reference service life.

C1-C4 End-of-Life Stage: C1 deconstruction, demolition of the product is part of the demolition of the entire building. C2 transport to waste treatment: the model used for transportation is applied. C3 waste treatment for reuse, recovery, and/or recycling: the product is considered to be deposited in landfills without reuse, recovery, or recycling. C4 disposal: it is assumed that mineral wool is 100% deposited in landfills.

D Potential for reuse/recovery/recycling: no recycling benefits are reported.

Additional information

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Results

The results refers to a 1m² functional unit of mineral wool with a thermal resistance of 0.78 m². K.W-1 for a thickness of 25 mm for 50 years of service life.