Environmental Product Declaration

In accordance with ISO 14025:2006, ISO 21930:2017
and EN 15804:2012+A2:2019/AC:2021

Isover Cavity Wall Slab (CWS) 34 – 125 mm

Version: 1
Publication Date: 2025-05-22
Validity: 5 years
Valid Until: 2030-05-21

EPD Type: Single Product
Scope of the EPD®: Cradle-to-grave and Module D

Manufacturer Head Office Address: Saint-Gobain Isover UK Limited,
Saint-Gobain House, East Leake, Loughborough, LE12 6JU, England

Programme: The International EPD® System, www.environdec.com
Programme Operator: EPD International AB
EPD Registration Number: EPD-IES-0018315

General information

Company information

Manufacturer: Saint-Gobain Isover UK Limited
Site of manufacture: Whitehouse Industrial Estate, Runcorn, WA7 3DP, England
Management system-related certification: ISO 14001 [1], ISO 50001 [2], ISO 9001 [3], EUCEB certificate [4]

Product name: Isover Cavity Wall Slab (CWS) 34 125 mm
EPD for multiple products: ☒ No ☐ Yes
UN CPC code: 37990 - Non-metallic mineral products n.e.c. (including mineral wool, expanded mineral materials, worked mica, articles of mica, non-electrical articles of graphite or other carbon and articles of peat)

Owner of the declaration: Saint-Gobain Isover UK Limited
EPD® prepared by: Charnett Chau (charnett.chau@saint-gobain.com) and Sila Danik Dirihan (sila.danik@saint-gobain.com)

Geographical scope of the EPD®: UK (production), UK/Europe (use and disposal)
EPD® registration number: EPD-IES-0018315
Declaration issued: 2025-05-22 valid until 2030-05-21
Demonstration of verification: An independent verification of the declaration was made, according to ISO 14025:2010 [5]. This verification was external and conducted by the following third-party based on the PCR mentioned below.

Programme information

Programme:	The International EPD® System [6]
Address:	EPD International AB - Box 210 60 - SE-100 31 Stockholm - Sweden
Website:	www.environdec.com
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CEN standard EN 15804:2012 + A2:2019/AC:2021 [7] and ISO 21930:2017 [8] serve as the Core Product Category Rules (PCR)

Product category rules (PCR): PCR 2019:14 Construction Products, version 1.3.4 [9]
Complementary PCR: (c-PCR-005), 2024-05-03. Thermal insulation products (EN 16783:2024) [10]

PCR review was conducted by: The Technical Committee of the International EPD® System. See www.environdec.com for a list of members.
President: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact - Contact via info@environdec.com

Independent third-party verification of the declaration and data, according to ISO 14025:2006:
☐ EPD process certification ☒ EPD verification

Third-party individual verifier: Matthew Fishwick, Fishwick Environmental Ltd.
Email: matt@fishwickenvironmental.com | Approved by: The International EPD® System
Signature:

Procedure for follow-up of data during EPD validity involves third-party verifier: ☐ Yes ☒ No

The EPD owner has sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may 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 versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, 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 further information about comparability, see 15804:2012+A2:2019/AC:2021 and ISO 14025:2006.

Product description

Product description and description of use

This Environmental Product Declaration (EPD®) describes the environmental impacts of 1 m² of Isover Cavity Wall Slab (CWS) 34 125 mm glass mineral wool with a thermal resistance of 3.65 m^2.K/W and a thickness of 125 mm installed and used over its lifetime. Hence, functional unit (FU) = 1 m^2 Isover Cavity Wall Slab (CWS) 34 125 mm 3.65 m^2.K/W, in use for 60 years.

This EPD applies for one specific product produced in one single plant of Saint-Gobain Isover UK Limited, located in Runcorn, England. The production site uses natural raw materials (sand), recycled glass cullet, and fusion and fiberising techniques to produce glass wool. The products are obtained in the form of a “mineral wool mat” characterised with a soft and airy structure.

Isover Cavity Wall Slab (CWS) 34 125 mm is a glass mineral wool slab providing thermal performance in external masonry cavity walls. Manufactured with a water repellent binder, the strong, resilient and flexible slabs are 455 mm wide to fit between standard wall tie spacing.

Technical data/physical characteristics:

Parameter	Value/Description
Thermal resistance	3.65 m^2.K/W (EN 13162:2012 + A1:2015) [11]
Thermal conductivity	0.034 W/m.K (EN 13162:2012 + A1:2015) [11]
Reaction to fire	A1 (EN 13162:2012 + A1:2015) [11]
Density (nominal)	23.0 kg/m^3
Other certificates	Eurofins Indoor Air Comfort Gold [12] BBA certified [13]

Declaration of the main product components and/or materials

All raw materials contributing more than 5% to any environmental impact are listed in the following table.

Product components	Mass (%)	Post-consumer material content* - % of product	Biogenic carbon content (%)**
Glass Wool	> 94.0	~ 52	0
Additives	< 1.0	0	0
Binder	< 6.0	0	3.15 (per FU = 0.0054 kgC)
Total	100	~ 52	See *Information on Biogenic Carbon Content* table
Packaging materials	**Mass (kg)**	**Mass (%) vs product**	**Biogenic carbon content (%)****
Pallet	0.015	0.495	41 (per FU = 0.0062 kgC)
LDPE	0.068	2.23	0
Paper Label	0.00092	0.03	43 (per FU = 0.0004 kgC)
Ink	0.0001	0.003	28.4 (per FU = 0.00003 kgC)
Glue	0.0017	0.055	0
Total (all packaging)	0.086	2.82	See *Information on Biogenic Carbon Content* table

*Both externally and internally sourced glass cullet is used to produce glass wool, the average total cullet composition in glass wool produced in Runcorn is 84%.
**Biogenic carbon content in % is equivalent to carbon mass per overall mass of material (kgC/kg). Figure in brackets is the biogenic carbon content per the FU.

During the life cycle of the product, any hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” [14] has not been used in a percentage higher than 0.1% of the weight of the product. The verifier and the program operator do not make any claim nor have any responsibility for the legality of the product.

Raw material category	Product (mass %)	Packaging (mass %)
Bio-based	0.44	18.7
Fossil	0.72	81.2
Metal	0.33	0.0
Mineral	93.83	0.0
Other organic materials	4.39	0.081
Other inorganic materials	0.28	0.0

LCA calculation information

TYPE OF EPD	Cradle-to-grave and module D
FUNCTIONAL UNIT	1 m² Isover Cavity Wall Slab (CWS) 34 125 mm 3.65 m^2.K/W in use over 60 years Mass conversion: 2.88 kg/m^2
SYSTEM BOUNDARIES	A1-A5, B1-B7, C1-C4 and module D
REFERENCE SERVICE LIFE (RSL)	60 years. This is the amount of time that we recommend our products last without refurbishment and corresponds to standard building design life.
CUT-OFF RULES	Where there is not enough information, process energy and materials representing less than 1% of the whole energy and mass used can be excluded (if they do not cause significant impacts). The addition of all inputs and outputs excluded cannot be bigger than 5% of the mass and energy used, as well as emissions to the environment, per module. Construction of plants, production of machines and transportation systems, (i.e. any infrastructure) are excluded since the related flows are negligible compared to the production of the product and its lifetime. However, we note that some generic datasets used in the LCA model may include capital goods and infrastructure within their system boundaries. Flows related to human activities such as employee transport are also excluded.
ALLOCATIONS	Allocation criteria are based on the mass flow of products and co-products – i.e. mass allocation between different products produced at the manufacturing site. Where raw materials and energy usage cannot be directly attributed to individual products the total quantity used in the factory was divided by the total mass of products produced to achieve materials and energy per kilogram of product. The polluter pays and modularity principles have been followed. The impact arising from the treatment of waste generated within the system boundaries is allocated to the product until waste reaches the end-of-waste state.
GEOGRAPHICAL COVERAGE AND TIME PERIOD	Scope: UK (production), UK/Europe (use and disposal). Data is collected for manufacturing in Runcorn located in the UK. Manufacture data is for the 2023 calendar year.
BACKGROUND DATA SOURCE	Sphera Managed LCA Content (MLC) v2023.2 [15] and ecoinvent v.3.9.1 (cut-off version) [16].
SOFTWARE	Sphera LCA for Experts v10 [17].
LCA METHODOLOGY	In addition to EN 15804:2019+A2 and PCR 2019:14 v1.3.4, the study was carried out in accordance with ISO 14040:2006 [18], ISO 14044:2006 [19], and GPI for the International EPD® System v4.0 [20]. Note: EN 15804 reference package based on EF 3.1 has been used [21].
MULTIPLE PRODUCT APPROACH	Not applicable.

According to EN 15804:2012+A2:2019, EPDs of construction products may not be comparable if they do not comply with this standard. According to ISO 21930:2017, EPDs might not be comparable if they are from different programmes.

LCA scope

System boundaries (X=included. MND=module not declared).

Specific data used and variations are calculated, using the GWP-GHG indicator, over Modules A1-A4.

	PRODUCT STAGE			CONSTRUCTION STAGE		USE STAGE						END OF LIFE STAGE				BENEFITS / LOADS BEYOND THE SYSTEM BOUNDARY
	Raw material supply	Transport	Manufacturing	Transport	Construction/ Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse/recovery
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	EU/GLO		GB	GB/EU													

Specific data used*	58%
Variation products**	0%
Variation sites**	0%

*Share of specific data that is specified according to PCR 2019:14. We gathered site-specific data on the generation of electricity provided by contracted suppliers (using Guarantee of Origin), transportation data on distances, means of transportation, load factor, fuel/other energy consumption at the site. The value in the table is calculated on the share of impact deriving from LCI data from databases on transportation and energy that are combined with actual transportation and energy parameters.
**This is the maximum GWP-GHG difference between the different products and/or the same products produced at various manufacturing sites. Where there is only one site the default value of 0% is presented.

Life cycle stages

A1-A3, Product stage

Modules A1-A3 sit within the product stage of a building's life cycle, where raw and secondary materials are extracted and processed (A1) before being transported (A2) to manufacturing facilities for the production of building products (A3). Here we detail modules A1-A3 for Isover Cavity Wall Slab (CWS) 34 125 mm produced at the Runcorn, England manufacturing site. Information on the supply of materials and manufacturing of the product were based on primary data. Secondary data from Sphera MLC (2023.2) and ecoinvent (3.9.1) databases were used to obtain LCIs for input materials and the processing of waste materials. Electricity used during manufacture and warehousing was modelled based on the power mix purchased with a Guarantee of Origin (GO) from the UK market.

Aggregation of modules A1, A2, and A3 is an option in the EN 15804 standard, which is applied in this EPD.

A1: Raw materials supply
Raw materials that are required to manufacture Isover Cavity Wall Slab (CWS) 34 125 mm are supplied from the UK and various countries in Europe.

The use of electricity, fuels, and auxiliary materials required to produce these raw materials is taken into account. The environmental profile of these energy carriers is modelled for local conditions.

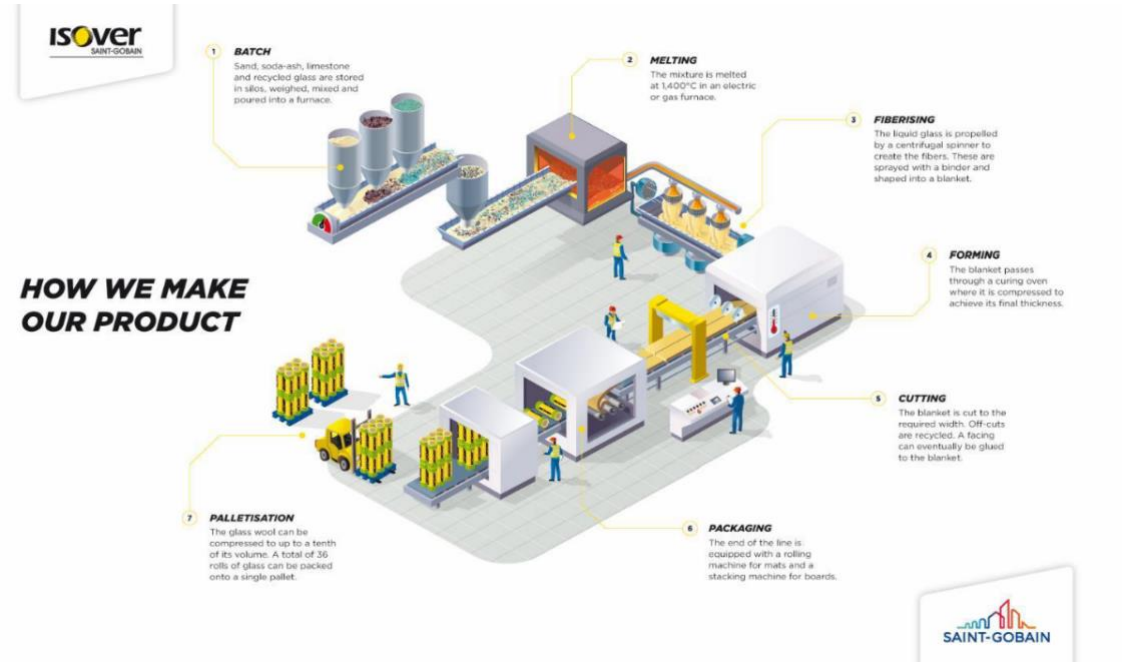
A2: Transport to the manufacturer
The raw materials are transported to the manufacturing site. The modelling includes road, sea and/or train transportation of each raw material and packaging materials. The modelling includes relevant product-specific transportation, by land, water and/or air.

A3: Manufacturing
See Process Flow Diagram for a complete breakdown of the manufacturing process.

In module A3, processes modelled include:

- The processing of any waste arising from the manufacturing process. Manufacturing waste processing was based on reports from waste contractors, however, where processes are unavailable from Sphera and ecoinvent databases, the worst-case process was used (landfill).
- The combustion of refinery products, such as natural gas, is related to the production process.
- Packaging-related flows (e.g. wooden pallets and polyethene packaging) in the production process and all upstream packaging are included. In addition, supply and transport of packaging material is also included. They are reported and allocated to the module where the packaging is applied. Data on packaging waste created during this step are then generated.

Manufacturing process flow diagram



Manufacturing in detail
The figure above shows the main processes associated with manufacturing Isover insulation products at the Saint-Gobain Isover manufacturing site in Runcorn, England.

Glass wool insulation is made by, firstly, batching raw materials including sand, soda ash, limestone and glass cullet then feeding them (after mixing) into the furnace for the melting

process. As shown in the process flow diagram, the materials are melted at 1400°C and at Runcorn, Isover employs a gas furnace for this manufacturing step. Once molten glass is formed, glass wool is made by propelling the liquid glass through a fiberiser (a centrifugal spinner). This is also where binder materials and optionally additives are added to shape and set characteristics of the product. Next is the forming stage where the product is cured in an oven where it is also compressed for a desired thickness. The product is then cut, packaged and stored before distribution.

A4-A5, Construction process stage

The construction process is divided into two modules: A4, Transport to the building site and A5, Installation in the building.

A4: Transport to the building site

Distribution distances of products were obtained by mapping the transport distances to the clients. The average distance was then taken along with the typical mode and load of transport to form the transport scenario. All clients were included in the calculation from the 2023 calendar year, no assumptions or cut-offs were made to find the average distribution distance. Additionally, it is assumed that no product is lost, broken or wasted during transportation due to the efficiency of our courier.

National parameters (98% of sales)	Value
Mode of transport and fuel e.g. long-distance truck, boat, etc.	Long-distance truck: 28t payload capacity Euro 0 – 6 mix Fuel type: Diesel
Road distance	246 km
Truck average load weight	5.06 tonnes
Truck average utilisation	17.6% (100% by volume)

Export parameters (2% of sales)*	Value
Mode of transport and fuel e.g. long-distance truck, boat, etc.	Long-distance truck: 28t payload capacity Euro 0 – 6 mix Fuel type: Diesel Container ship: 43000 t payload capacity Fuel type: Heavy fuel oil
Road distance	257 km
Truck average load weight	13.08 tonnes
Truck average utilisation	45.6% (100% by volume)
Sea distance	227 km
Ship average utilisation	70%

A5: Installation in the building

This module includes the installation of the product manually with the use of metal fasteners/screws as worse case scenarios; however no use of energy was modelled. 2% product loss is assumed, and the resupply of the losses was modelled. Primary and secondary packaging is assumed to be landfilled. A 100 km distance is assumed for the transport of waste products and packaging.

Parameter	Value/Description (per m^2)
Ancillary materials for installation	Steel accessories (modelled)
Waste output from installation	Product: 0.02 m^2 (100% landfilled) Pallet: 0.015 kg (100% landfilled) PE film: 0.069 kg (100% landfilled)

B1-B7, Use stage (excluding potential savings)

The use stage, related to the building fabric is separated into seven modules. The following describes the use of Isover Cavity Wall Slab (CWS) 34 125 mm over its reference service life.

B1: Use (or application of the installed product)
This module represents emissions to the environment from the installed product. Emissions to the environment are not attributable to Isover Cavity Wall Slab (CWS) 34 125 mm.

B2: Maintenance; B3: Repair; B4: Replacement; B5: Refurbishment
No maintenance, repair, replacement or refurbishment is required after the installation of Isover Cavity Wall Slab (CWS) 34 125 mm. Therefore, no impact has been accounted in these modules.

B6: Operational energy use; B7: Operational water use
Isover Cavity Wall Slab (CWS) 34 125 mm does not require any electricity or water use during operation of a building. Therefore, no impact has been accounted in these modules.

C1-C4, End-of-life stage

It is assumed that all Isover Cavity Wall Slab (CWS) 34 125 mm waste is landfilled at the end-of-life stage.

C1: Deconstruction, demolition
Demolition requires energy for mechanical operations, which is assumed to be 0.0437 MJ/kg.

C2: Transport to waste processing
As there is no data for the transport of waste after its use, a default distance of 100 km for an average truck used at 85% capacity was assumed.

C3: Waste processing for reuse, recovery and/or recycling
No Isover Cavity Wall Slab (CWS) 34 125 mm is assumed to be reused or recycled at the end-of-life stage.

C4: Disposal
100% landfill was assumed for Isover Cavity Wall Slab (CWS) 34 125 mm.

Description of the scenarios and additional technical information for the end of life:

Parameter	Value/Description
Collection process specified by type	100% collected with mixed demolition waste 2.88 kg of Isover Cavity Wall Slab (CWS) 34 125 mm
Recovery system specified by type	0% recycled
Disposal specified by type	100% to landfill
Assumptions for scenario development (e.g. transportation)	Waste is transported 100 km by truck from demolition site to landfill

D, Reuse/Recovery/Recycling potential

There is no inclusion of secondary materials in the product and packaging.

As no Isover Cavity Wall Slab (CWS) 34 125 mm is recycled or reused, module D impact results are zero.

LCA results

As specified in EN 15804:2012+A2:2019/AC:2021 and the Product Category Rules, the environmental impacts are declared and reported using the baseline characterisation factors from the EC-JRC. Specific data have been supplied by the manufacturing plant, and generic data come from Sphera and ecoinvent databases.

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

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

It is discouraged to use the results of Modules A1-A3 without considering the results of other modules, particularly, Modules C1-C4.

All figures refer to a functional unit of 1 m^2 of Isover Cavity Wall Slab (CWS) 34 125 mm 3.65 m^2.K/W, in use for 60 years.

The following results correspond to a product manufactured in Runcorn, England only.

Environmental impacts

Functional Unit: 1 m² of Isover Cavity Wall Slab (CWS) 34 125 mm 3.65 m².K/W, in use for 60 years	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS / LOADS BEYOND THE LIFE CYCLE
Environmental indicators	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recycling, recovery
Climate Change [kg CO_2 eq.]	2.59E+00	1.80E-01	3.31E-01	0	0	0	0	0	0	0	1.28E-02	2.10E-02	0	4.34E-02	0
Climate Change (fossil) [kg CO_2 eq.]	2.39E+00	1.78E-01	3.22E-01	0	0	0	0	0	0	0	1.28E-02	2.07E-02	0	4.31E-02	0
Climate Change (biogenic) [kg CO_2 eq.]	1.96E-01	4.69E-04	8.36E-03	0	0	0	0	0	0	0	1.62E-06	5.69E-05	0	2.20E-04	0
Climate Change (land use change) [kg CO_2 eq.]	1.66E-03	1.66E-03	1.45E-04	0	0	0	0	0	0	0	1.44E-06	1.96E-04	0	1.34E-04	0
Ozone depletion [kg CFC-11 eq.]	4.04E-06	1.57E-14	8.08E-08	0	0	0	0	0	0	0	2.04E-10	2.75E-15	0	1.45E-11	0
Acidification terrestrial and freshwater [Mole of H+ eq.]	9.50E-03	2.47E-04	8.21E-04	0	0	0	0	0	0	0	1.19E-04	2.69E-05	0	3.10E-04	0
Eutrophication freshwater [kg P eq.]	2.24E-04	6.55E-07	5.14E-06	0	0	0	0	0	0	0	3.94E-07	7.74E-08	0	1.28E-07	0
Eutrophication marine [kg N eq.]	2.31E-03	9.05E-05	2.41E-04	0	0	0	0	0	0	0	5.52E-05	9.43E-06	0	8.06E-05	0
Eutrophication terrestrial [Mole of N eq.]	2.66E-02	1.05E-03	2.22E-03	0	0	0	0	0	0	0	6.00E-04	1.10E-04	0	8.86E-04	0
Photochemical ozone formation - human health [kg NMVOC eq.]	7.60E-03	2.18E-04	6.58E-04	0	0	0	0	0	0	0	1.78E-04	2.36E-05	0	2.44E-04	0
Resource use, mineral and metals [kg Sb eq.][1]	1.29E-04	1.17E-08	7.85E-06	0	0	0	0	0	0	0	4.48E-09	1.40E-09	0	2.69E-09	0
Resource use, energy carriers [MJ][1]	3.90E+01	2.45E+00	3.45E+00	0	0	0	0	0	0	0	1.68E-01	2.88E-01	0	5.87E-01	0
Water deprivation potential [m³ world equiv.][1]	6.20E-01	2.07E-03	2.14E-02	0	0	0	0	0	0	0	5.67E-04	2.56E-04	0	5.31E-03	0

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

Resources use

Functional Unit: 1 m² of Isover Cavity Wall Slab (CWS) 34 125 mm 3.65 m².K/W, in use for 60 years	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS / LOADS BEYOND THE LIFE CYCLE
Resources use indicators	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recycling, recovery
Use of renewable primary energy (PERE) [MJ][2]	6.49E+01	1.73E-01	1.85E+00	0	0	0	0	0	0	0	9.58E-04	2.10E-02	0	9.38E-02	0
Primary energy resources used as raw materials (PERM) [MJ][2]	4.89E-01	0	-2.31E-01	0	0	0	0	0	0	0	0	0	0	-2.58E-01	0
Total use of renewable primary energy resources (PERT) [MJ][2]	6.53E+01	1.73E-01	1.62E+00	0	0	0	0	0	0	0	9.58E-04	2.10E-02	0	-1.64E-01	0
Use of non-renewable primary energy (PENRE) [MJ][2]	3.43E+01	2.45E+00	3.37E+00	0	0	0	0	0	0	0	1.68E-01	2.89E-01	0	5.88E-01	0
Non-renewable primary energy resources used as raw materials (PENRM) [MJ][2]	4.58E+00	0	-2.89E+00	0	0	0	0	0	0	0	0	0	0	-1.69E+00	0
Total use of non-renewable primary energy resources (PENRT) [MJ][2]	3.89E+01	2.45E+00	4.81E-01	0	0	0	0	0	0	0	1.68E-01	2.89E-01	0	-1.10E+00	0
Input of secondary material (SM) [kg]	2.20E+00	0	4.40E-02	0	0	0	0	0	0	0	0	0	0	0	0
Use of renewable secondary fuels (RSF) [MJ]	5.88E-29	0	1.18E-30	0	0	0	0	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels (NRSF) [MJ]	6.91E-28	0	1.38E-29	0	0	0	0	0	0	0	0	0	0	0	0
Use of net fresh water (FW) [m³]	2.85E-02	1.91E-04	1.13E-03	0	0	0	0	0	0	0	1.32E-05	2.30E-05	0	1.58E-04	0

[2] From PCR 2019:14 v1.3.4 (Annex 3), Option A was used to calculate the primary energy use indicators.

Waste category and output flows

Functional Unit: 1 m² of Isover Cavity Wall Slab (CWS) 34 125 mm 3.65 m².K/W, in use for 60 years	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS / LOADS BEYOND THE LIFE CYCLE
Waste category and output flows	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recycling, recovery
Hazardous waste disposed (HWD) [kg]	2.95E-04	9.07E-12	6.07E-06	0	0	0	0	0	0	0	1.13E-06	8.96E-13	0	6.56E-08	0
Non-hazardous waste disposed (NHWD) [kg]	1.04E+00	3.53E-04	1.88E-01	0	0	0	0	0	0	0	1.04E-03	4.41E-05	0	2.96E+00	0
Radioactive waste disposed (RWD) [kg]	9.87E-05	3.17E-06	6.23E-05	0	0	0	0	0	0	0	1.84E-08	5.41E-07	0	6.55E-06	0
Components for re-use (CRU) [kg]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Materials for Recycling (MFR) [kg]	3.52E-02	0	7.05E-04	0	0	0	0	0	0	0	0	0	0	0	0
Material for Energy Recovery (MER) [kg]	1.19E-04	0	2.38E-06	0	0	0	0	0	0	0	0	0	0	0	0
Exported electrical energy (EEE) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported thermal energy (EET) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Optional indicators

Functional Unit: 1 m² of Isover Cavity Wall Slab (CWS) 34 125 mm 3.65 m².K/W, in use for 60 years	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS / LOADS BEYOND THE LIFE CYCLE
Optional indicators	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recycling, recovery
Respiratory inorganics [Disease incidences]	1.15E-07	1.56E-09	1.08E-08	0	0	0	0	0	0	0	3.28E-09	1.90E-10	0	3.85E-09	0
Ionising radiation - human health [kBq U235 eq.][3]	1.04E-01	4.58E-04	8.27E-03	0	0	0	0	0	0	0	7.98E-05	8.07E-05	0	7.64E-04	0
Ecotoxicity freshwater [CTUe][4]	9.58E+01	1.72E+00	2.49E+00	0	0	0	0	0	0	0	7.89E-02	2.06E-01	0	3.17E-01	0
Cancer human health effects [CTUh][3]	2.90E-09	3.47E-11	3.56E-10	0	0	0	0	0	0	0	4.10E-12	4.19E-12	0	4.85E-11	0
Non-cancer human health effects [CTUh][3]	2.10E-08	1.53E-09	2.03E-09	0	0	0	0	0	0	0	2.81E-11	1.86E-10	0	5.10E-09	0
Land use [Pt]	1.25E+01	1.02E+00	7.44E-01	0	0	0	0	0	0	0	1.12E-02	1.20E-01	0	1.64E-01	0

[3] The ionising radiation category deals mainly with the eventual impact of low-dose ionising radiation on the human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure, or radioactive waste disposal in underground facilities. Potential ionising radiation from the soil, radon and some construction materials is also not measured by this indicator.

[4] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

Additional voluntary indicators from EN 15804 (according to ISO 21930:2017)

Functional Unit: 1 m² of Isover Cavity Wall Slab (CWS) 34 125 mm 3.65 m².K/W, in use for 60 years	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS / LOADS BEYOND THE LIFE CYCLE
Environmental indicators	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recycling, recovery
GWP-GHG [kg CO_2 eq.][5]	2.39E+00	1.80E-01	3.23E-01	0	0	0	0	0	0	0	1.28E-02	2.09E-02	0	4.32E-02	0

[5] The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originall defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Biogenic carbon content		PRODUCT STAGE A1 / A2 / A3
	Biogenic carbon content in product [kg]	5.43E-03
	Biogenic carbon content in packaging [kg]	6.29E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

The product contains biogenic carbon due to the additives used. Biogenic carbon associated with packaging is due to use of wooden pallets.

Additional information

Electricity information

Type of information	Description
Electricity purchaser	Saint-Gobain Isover UK Ltd
Electricity provider	Smartest Energy
Electricity mix	Hydro – 14.85%; Wind – 53.83%, Solar PV – 18.08%, Waste to Energy – 3.74%, Biomass – 3.06%, Thermal – 6.17%, Anaerobic – 0.29%
Reference year	2023
Type of dataset	Sphera Database 2023.2, all datasets reference 2023 emissions: Hydro - "GB: Electricity from hydro power Sphera" Thermal and Anaerobic - "GB: Electricity from biogas Sphera" Solar PV - "GB: Electricity from photovoltaic Sphera" Biomass - "GB: Electricity from biomass Sphera" Wind - "GB: Electricity from wind power Sphera" Waste to Energy - "GB: Electricity from waste Sphera"
GWP-GHG **CO_2 emission kg CO_2 eq. / kWh**	Certificate issue = 0 kg CO_2 eq / kWh Modelled impact = 0.059 kg CO_2 eq / kWh

Data quality

Inventory data quality is judged by geographical, temporal, and technological representativeness. To cover these requirements and to ensure reliable results, first-hand industry data crossed with LCA background datasets were used. The data were collected from internal/supplier records and reporting documents. After evaluating the inventory, according to the defined ranking in the LCA report, the assessment reflects good inventory data quality.

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