ENVIRONMENTAL PRODUCT DECLARATION

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

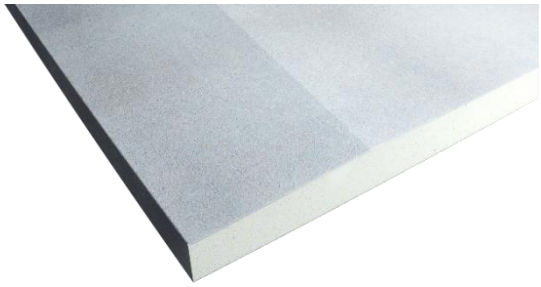
Glasroc® H Ocean™– Wetroom Board

THE INTERNATIONAL EPD® SYSTEM

The International EPD®
Programme operator: EPD international AB
Registration number:
S-P: EPD-IES-0000393:001 (S-P-00393)

Version: 4
Date of publication: 2025/06/06
Validity: 5 years
Valid until: 2030/06/05
Date of issued: 2013/08/27
Scope of the EPD®: Sweden and other Nordic countries

ECO PLATFORM EPD VERIFIED



An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

SAINT-GOBAIN

Programme information

PROGRAMME:	The International EPD® System
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CEN standard EN 15804:2012+A2:2019/AC:2021 as the Core Product Category Rules (PCR)

Product category rules (PCR): PCR 2019:14 Construction Products, version 1.3.2

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 verifier: Andrew Norton, Renuables Ltd. E-mail: a.norton@renuables.co.uk

Approved by: The International EPD© System

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

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 EN 15804 and ISO 14025

Product information

Company information

Manufacturer: Saint-Gobain Sweden AB, Gyproc
Production plant(s): Bålsta plant at Kalmarleden 50, 746 24 Bålsta, Sweden
Management system-related certification: S-EN ISO 9001, SS-EN ISO 14001, SS-EN ISO 50001, SS-ISO 45001
Programme used: EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works – Environmental product declaration - core rules for the product category of construction product and The International EPD® System
PCR identification: PCR 2019:14 version 1.3.2 for Construction products
Prepared by: IVL Swedish Environmental Research Institute, EPD International Secretariat
UN CPC CODE: 37530 Articles of plaster or of composition based on plaster
Owner of the declaration: Saint-Gobain Sweden AB, Gyproc
Product name and manufacturer represented: Glasroc® H Ocean™– Wetroom Board
EPD® prepared by: Malin Dalborg (Saint-Gobain N&B) and Saint-Gobain LCA central team. The intended use of this EPD is for B2B communication.
Geographical scope of the EPD®: 2024
EPD® registration number: EPD-IES-0000393:001 (S-P-00393)
Declaration issued: 2013/08/27, date of revision: 2025/06/06, valid until: 2030/06/05
Demonstration of verification: An independent verification of the declaration was made, according to ISO 14025:2010. This verification was external and conducted by the following third party based on the PCR mentioned above.

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

Product description

Product description and description of use

This Environmental Product Declaration (EPD®) describes the environmental impacts of 1m^2 of installed Glasroc® H Ocean™ – Wetroom Board, 12,5 mm with a weight of 10,0 kg/m^2 with a useful life of 50 years.

Glasroc H Ocean wetroom board is Gyproc's recommended solution for wet room walls in homes, hotels, or other premises with similar moisture load. The board has very good moisture and mold resistance, which provides a safer solution than conventional plasterboard.

The main components of Glasroc H Ocean are gypsum and fiberglass. The boards have surface-coated fiberglass mats and a core of impregnated and fiberglass-reinforced gypsum. The board is available in 900 mm (GHOE 13) and 1200 mm width (GHO13).

This EPD is based on a representative product. Glasroc® H Ocean is a specific product produced at one specific plant, Gyproc Bålsta located in Sweden. The data is collected at Gyproc Bålsta and is representative of the year 2024.

To calculate the result for 1 kg of Glasroc H Ocean wetroom board, divide the result with the weight of the plasterboard: 10,0 kg/m (conversion factor 1/10,0 = 0,10).

Main GTIN: 7318936617715, 7318936623310, 7318936618439.

Technical data

Parameter	Value / Description
EN Classification	GM-H1 (EN 15283-1:2008 + A1:2009)
Reaction to fire	A2-s1, d0 (EN 15283-1:2008 + A1:2009)
Water vapour resistance factor, μ	< 0,10 (EN 15283-1:2008 + A1:2009)
Thermal conductivity	0,25 W/m•K (EN 15283-1:2008 + A1:2009)

Declaration of the main product components and/or materials

Description of the main components and/or materials:

Product components	Weight (%)	Post-consumer recycled material weight (%)	Biogenic material, (kg C/DU)
Gypsum Natural	60 – 75%	0%	0 kg
Gypsum Recycled	25 – 30%	84%	0 kg
Additives	0,5 – 5%	0%	0 kg
Glass fibre veil	5 – 10%	0%	0,08 kg
Sum	100%		
Packaging materials	**Weight (kg/DU)**	**Weight versus the product and packaging (%)**	**Weight biogenic carbon, (kg C/DU)**
Gypsum culls	0,167 kg	1,64%	0 kg
LDPE Film	0,009 kg	0,08%	0 kg
Sum	0,175 kg		

At the date of issue of this declaration, there is no “Substance of Very High Concern” (SVHC) in concentration above 0.1% by weight, and neither do their packaging, following the European REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals). The verifier and the program operator do not make any claim nor have any responsibility of the legality of the product.

LCA calculation information

TYPE OF EPD	Cradle to gate with options and optional modules (A+B+C+D)
DECLARED UNIT	1 m² of installed board with a weight of 10,0 kg/m²
SYSTEM BOUNDARIES	Mandatory stages = A1-A3; C1-C4 and D; Optional stages = A4-A5; B1-B7
REFERENCE SERVICE LIFE (RSL)	The Reference Service Life (RSL) of the Gypsum product is 50 years. This 50-year value is the amount of time that we recommend our products last for without refurbishment and corresponds to standard building design life.
CUT-OFF RULES	In the case that there is not enough information, the 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 the inputs and outputs excluded cannot be bigger than the 5% of the whole mass and energy used, as well of the emissions to environment occurred. Flows related to human activities such as employee transport are excluded. The construction of plants, production of machines and transportation systems are excluded since the related flows are supposed to be negligible compared to the production of the building product when compared at these systems lifetime level.
ALLOCATIONS	Allocation has been avoided when possible and when not possible a mass allocation has been applied. The polluter pays and the modularity principles as well have been followed.
GEOGRAPHICAL COVERAGE AND TIME PERIOD	Scope: Sweden* Data is collected from one production site Gyproc Bålsta located in Sweden. Data collected for the year 2024 *Additional result for Denmark, Norway and Finland under Additional information
BACKGROUND DATA SOURCE	The databases Sphera 2023.2 and ecoinvent v.3.9.1
SOFTWARE	Sphera LCA for experts (GaBi) 10

LCA scope

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

	PRODUCT STAGE			CONSTRUCTION STAGE		USE STAGE						END OF LIFE STAGE				BENEFITS AND 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	GLO	GLO	SE	SE	SE	-	-	-	-	-	-	-	SE	SE	SE	SE	SE

Specific data used	>44,5% GWP- Fossil
Variation products	One site one product
Variation sites	One site one product

Life cycle stages

A1-A3. Product stage

The product stage of plaster products is subdivided into 3 modules A1, A2 and A3 respectively “raw material supply”, “transport to manufacturer” and “manufacturing”.

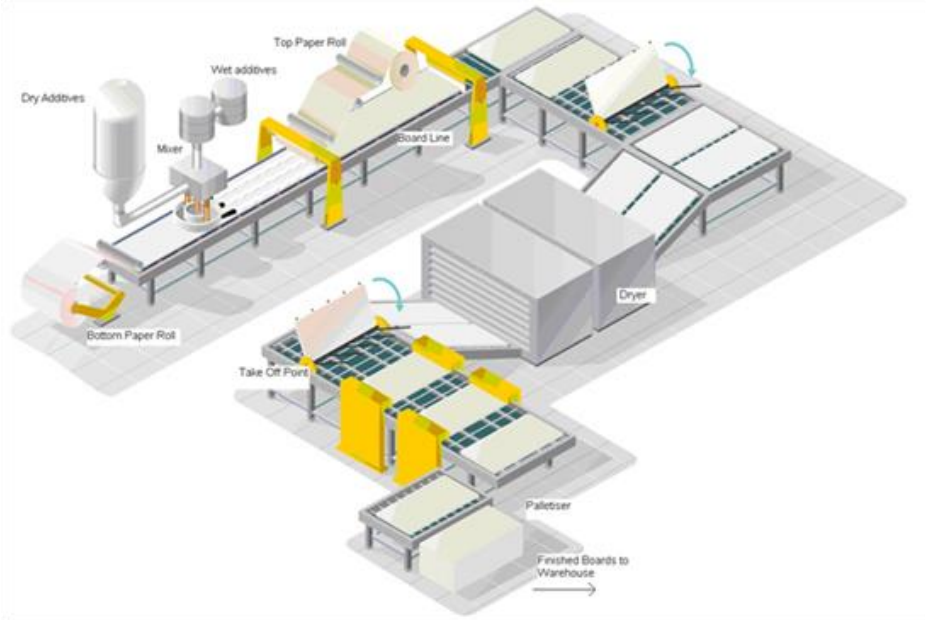
A1. Raw materials supply
This module includes the extraction and transformation of raw materials.

A2. Transport to the manufacturer
This module includes the transportation of raw materials and packaging to the manufacturing site. The modelling includes road, boat and/or train transportation.

A3. Manufacturing
This module includes the manufacture of products and the manufacture of packaging. The production of packaging material is considered at this stage. The processing of any waste arising from this stage is also included.

Manufacturing process flow diagram

System diagram:



Manufacturing in detail:
The initial materials are homogenously mixed to form a gypsum slurry that is spread via multiple hose outlets onto a glass fibre veil on a moving conveyor belt. A second glass fibre veil is fed onto the production line from above to form the plasterboard. The plasterboard continues along the production line where it is finished, dried, and cut to size.

A4-A5. Construction process stage

The construction process is divided into 2 modules: A4, Transport to the building site and A5, Installation in the building.

A4. Transport to the building site: This module includes transport from the production gate to the building site. Transport is calculated based on a scenario with the parameters described in the following table.

PARAMETER	VALUE
Fuel type and consumption of vehicle or vehicle type used for transport e.g., long distance truck, boat, etc.	Freight truck, maximum load weight 27 t, and consumption of 0.38 liters per km. Real load is 24 t
Distance	300 km by truck (Sweden)*
Capacity utilisation (including empty returns)	68% (30% empty returns)
Bulk density of transported products	800 kg/m^3
Volume capacity utilisation factor	1

*Result for transport to Denmark, Norway and Finland, see additional information.

A5. Installation in the building:
This module includes the parameters for installing the product at the building site. All installation materials and their waste processing are included.

PARAMETER	VALUE
Ancillary materials for installation (specified by materials)	Jointing compound 0,33 kg/m^2 Jointing tape 1,23 m/m^2 board (0,004 kg/ m^2) Screws 8 units /m^2 board (0,010 kg/m^2)
Water use	0,158 liters/m^2
Other resource use	None
Quantitative description of energy type (regional mix) and consumption during the installation process	None
Wastage of materials on the building site before waste processing, generated by the product's installation (specified by type)	Plasterboard: 0,50 kg/ m^2 (5% scrap rate) Jointing Compound: 0,0165 kg/m^2 (5% scrap rate) Jointing Tape: 0,0002 kg/m^2 (5% scrap rate) Screws: 0,0005 kg/m^2 (5% scrap rate) LDPE film: 0,009 kg/m^2 (100% scrap rate) Gypsum culls: 0,167 kg/m^2 (100% scrap rate)
Output materials (specified by type) as results of waste processing at the building site e.g., of collection for recycling, for energy recovering, disposal (specified by route)	Plasterboard: 60% landfilled, 40% recycled Ancillaries: 100% landfilled Packaging: LDPE: 90% landfilled, 10% recycled Gypsum culls: 100% landfilled
Direct emissions to ambient air, soil, and water	None

B1-B7. Use stage (excluding potential savings)

The use stage is divided into the following modules:

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

The product has a reference service life of 50 years. This assumes that the product will last in situ with no requirements for maintenance, repair, replacement, or refurbishment throughout this period. Therefore, it has no impact at this stage.

C1-C4. End of Life Stage

This stage includes the next modules:
C1: Deconstruction, demolition: The de-construction and/or dismantling of the product take part of the demolition of the entire building. In our case, the energy is considered 0.05 MJ/m².
C2: Transport to waste processing
C3: Waste processing for reuse, recovery and/or recycling
C4: Waste disposal; including physical pre-treatment and site management.

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

PARAMETER	VALUE/DESCRIPTION
C1: Energy for de-construction / demolition	0,045 MJ/kg per demolished product.
C1: Collection process specified by type	Plasterboard and glass fibre veil: 40% collected separately for recycling and 60% collected with mixed deconstruction and demolition waste for landfill. Other deconstruction waste is 100% collected with mixed deconstruction and demolition waste for landfill
C2: Assumptions for scenario development (e.g. transportation)	The waste will be transported by truck with 24 t payload, using diesel as a fuel and consuming 0,38 liters per km. Distance to waste treatment facilities 50 km
C3: Recovery system specified by type	40% plasterboard is recycled
C4: Disposal specified by type	60% plasterboard + 100% ancillary materials used for installation are landfilled

D. Reuse/recovery/recycling potential

In end of life 40% recycling (60% of wastes are landfilled) has been assumed using local demolition waste data.

Module D considers the benefits and loads beyond the system boundary resulting from recycling and energy recovery processes.

Module D includes:

- the benefits and loads from the net flows of recycled gypsum and glass fiber veil leaving the product system and substituting the same primary materials.
- the benefits from the net flows of energy related to packaging sent to incineration with energy recovery and substituting steam and electricity production based on EC district heating.

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 characterization factors are from the ILCD. Raw materials and energy consumption, as well as transport distances have been taken directly from the manufacturing plant. Characterisation factors EN15804 based on EF 3.1.

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.

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

The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, noncancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods 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 including module C, we strongly advise against using the results of modules A1-A3 without considering the results of module C.

Results refer to a declared unit of 1m^2 of installed Glasroc® H Ocean™ – Wetroom Board 12,5 mm with a weight of 10,0 kg/m^2.

To calculate the result for 1 kg of Glasroc H Ocean wetroom board, divide the result with the weight of the plasterboard: 10,0 kg/m (conversion factor 1/10,0 = 0,10).

The following results refer to a single product manufactured in a single plant:

Environmental Impacts

Environmental indicators	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE
	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, recovery, recycling
Climate Change (total) [kg CO2 eq.]	4,09E+00	2,36E-01	4,02E-01	0	0	0	0	0	0	0	5,10E-02	4,10E-02	1,67E-02	3,99E-01	-1,13E-02
Climate Change (fossil) [kg CO2 eq.]	4,41E+00	2,33E-01	3,00E-01	0	0	0	0	0	0	0	5,10E-02	4,05E-02	1,66E-02	4,64E-02	-1,12E-02
Climate Change (biogenic) [kg CO2 eq.]	-3,22E-01	6,06E-04	1,02E-01	0	0	0	0	0	0	0	6,43E-06	1,05E-04	4,51E-05	3,52E-01	-5,44E-05
Climate Change (land use change) [kg CO2 eq.]	2,95E-03	2,15E-03	2,59E-04	0	0	0	0	0	0	0	5,74E-06	3,74E-04	8,41E-06	4,55E-05	-2,46E-05
Ozone depletion [kg CFC-11 eq.]	7,67E-05	2,04E-14	3,47E-06	0	0	0	0	0	0	0	8,11E-10	3,54E-15	3,73E-10	1,15E-09	-4,00E-10
Acidification terrestrial and freshwater [Mole of H+ eq.]	1,45E-02	2,63E-04	8,72E-04	0	0	0	0	0	0	0	4,72E-04	4,65E-05	8,85E-05	3,45E-04	-4,52E-05
Eutrophication freshwater [kg P eq.]	3,90E-04	8,48E-07	2,48E-05	0	0	0	0	0	0	0	1,57E-06	1,47E-07	1,78E-06	3,18E-06	-5,75E-06
Eutrophication marine [kg N eq.]	4,03E-03	8,97E-05	2,77E-04	0	0	0	0	0	0	0	2,19E-04	1,60E-05	3,39E-05	1,27E-04	-6,64E-06
Eutrophication terrestrial [Mole of N eq.]	4,25E-02	1,06E-03	2,61E-03	0	0	0	0	0	0	0	2,38E-03	1,89E-04	3,64E-04	1,36E-03	-6,29E-05
Photochemical ozone formation - human health [kg NMVOC eq.]	1,19E-02	2,28E-04	7,89E-04	0	0	0	0	0	0	0	7,05E-04	4,05E-05	1,23E-04	5,96E-04	-2,15E-05
Resource use, mineral and metals [kg Sb eq.][1]	1,28E-05	1,51E-08	1,31E-06	0	0	0	0	0	0	0	1,78E-08	2,62E-09	1,16E-07	5,39E-08	-3,26E-09
Resource use, energy carriers [MJ][1]	9,01E+01	3,16E+00	4,90E+00	0	0	0	0	0	0	0	6,65E-01	5,49E-01	2,89E-01	1,08E+00	-8,33E-02
Water deprivation potential [m³ world equiv.][1]	1,30E+00	2,68E-03	1,12E-01	0	0	0	0	0	0	0	2,25E-03	4,66E-04	9,71E-03	4,57E-02	-8,31E-04

[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 experienced with the indicator

Resource Use

Resources Use indicators	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE
	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, recovery, recycling
Use of renewable primary energy (PERE) [MJ][2]	3,37E+00	2,24E-01	3,73E-01	0	0	0	0	0	0	0	3,80E-03	3,89E-02	8,74E-02	2,51E-02	5,56E-03
Primary energy resources used as raw materials (PERM) [MJ] [2]	3,04E-01	0	3,66E-02	0	0	0	0	0	0	0	0	0	-1,39E-02	0	0
Total use of renewable primary energy resources (PERT) [MJ] [2]	3,67E+00	2,24E-01	4,09E-01	0	0	0	0	0	0	0	3,80E-03	3,89E-02	7,35E-02	2,51E-02	5,56E-03
Use of non-renewable primary energy (PENRE) [MJ] [2]	8,94E+01	3,17E+00	4,89E+00	0	0	0	0	0	0	0	6,65E-01	5,51E-01	5,26E-01	1,08E+00	-8,30E-02
Non-renewable primary energy resources used as raw materials (PENRM) [MJ] [2]	4,49E+00	0	2,21E-02	0	0	0	0	0	0	0	0	0	-1,45E-01	0	0
Total use of non-renewable primary energy resources (PENRT) [MJ] [2]	9,39E+01	3,169	4,91E+00	0	0	0	0	0	0	0	6,65E-01	5,51E-01	3,81E-01	1,08E+00	-8,30E-02
Input of secondary material (SM) [kg]	2,79E+00	0	1,27E-01	0	0	0	0	0	0	0	0	0	0	0	0
Use of renewable secondary fuels (RSF) [MJ]	2,62E-24	0	1,19E-25	0	0	0	0	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels (NRSF) [MJ]	3,083E-23	0	1,396E-24	0	0	0	0	0	0	0	0	0	0	0	0
Use of net fresh water (FW) [m3]	3,15E-02	2,47E-04	2,72E-03	0	0	0	0	0	0	0	5,24E-05	4,28E-05	2,26E-04	1,07E-03	7,37E-07

[2] From EPD International Construction Product PCR 1.3.2 (Annex 3). The option B was reatined to calculate the primary energy use indicators.

Waste Category & Output flows

	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE
Waste Category & 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, recovery, recycling
Hazardous waste disposed (HWD) [kg]	2,33E-04	1,17E-11	1,09E-05	0	0	0	0	0	0	0	4,49E-06	2,04E-12	1,51E-06	5,15E-06	-8,28E-07
Non-hazardous waste disposed (NHWD) [kg]	1,87E+00	4,57E-04	5,35E-01	0	0	0	0	0	0	0	4,11E-03	7,94E-05	1,81E-02	6,97E+00	-1,09E-02
Radioactive waste disposed (RWD) [kg]	6,35E-03	4,10E-06	2,84E-04	0	0	0	0	0	0	0	7,31E-08	7,12E-07	8,23E-07	1,27E-06	1,60E-05
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]	1,03E+00	0	2,40E-01	0	0	0	0	0	0	0	0	0	4,38E+00	0	0
Material for Energy Recovery (MER) [kg]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exported electrical energy (EEE) [MJ]	0	0	5,44E-02	0	0	0	0	0	0	0	0	0	0	0	0
Exported thermal energy (EET) [MJ]	0	0	9,67E-02	0	0	0	0	0	0	0	0	0	0	0	0

Additional voluntary indicators from EN 15804

	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				REUSE, RECOVERY RECYCLING
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, recovery, recycling
GWP-GHG [kg CO2 eq.][3]	4,43E+00	2,36E-01	4,37E-01	0	0	0	0	0	0	0	5,10E-02	4,10E-02	1,67E-02	3,92E-01	-1,13E-02

[3] 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.

Information on biogenic carbon content

Biogenic Carbon Content		PRODUCT STAGE A1 / A2 / A3
	Biogenic carbon content in product [kg]	8,35E-02
	Biogenic carbon content in packaging [kg]	0,00E+00

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

The product contains biogenic carbon due to the additives used and a small amount of biogenic carbon in the product due to the packaging material of the glass fiber veil.

Additional information:

Electricity information

The Gyproc Bålsta factory based in Sweden uses electricity with Guarantee of Origin certificate (GO's). Hence, the electricity mix considered for the manufacturing of the studied product is modelled according to the electricity mix described in the Guarantee of Origin certificate. The amount of electricity purchased with GO's covers 100% of the electricity consumption on the manufacturing site.

Type of information	Description
Location	Electricity purchased by Saint-Gobain Sweden AB
Share of electricity covered by Guarantee of Origin	100% of the energy consumption is covered by the GO
Energy sources for electricity	Share of energy sources: 100% Nuclear
Type of dataset	Cradle to gate from GaBi and ecoinvent databases
Source	Guarantee of Origin certificate: Entilios (Supplier of GO) Dataset Gabi EU-28: Electricity from nuclear power
CO_2 emission kg CO_2 eq. / kWh	0,00458 kg of CO_2 eq/kWh Climate Change - fossil indicator

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 was collected from internal records and reporting documents from Saint-Gobain Sweden - Gyproc. After evaluating the inventory, according to the defined ranking in the LCA report, the assessment reflects good inventory data quality.

Transport to other countries

The transport to building site (A4) in the main result is based on Sweden. Transport to other countries has been calculated, and a full set of indicators for A4 can be found below. The following transport assumptions have been made:

Country	Truck (km)	Ship (km)	Rail (km)
Denmark	700	0	0
Finland	300	400	0
Norway	500	0	0

	Denmark (A4)	Finland (A4)	Norway (A4)
Environmental indicators			
Climate Change (total) [kg CO_2 eq.]	4,02E-01	2,94E-01	3,93E-01
Climate Change (fossil) [kg CO_2 eq.]	3,00E-01	2,91E-01	3,88E-01
Climate Change (biogenic) [kg CO_2 eq.]	1,02E-01	6,53E-04	1,01E-03
Climate Change (land use change) [kg CO_2 eq.]	2,59E-04	2,15E-03	3,59E-03
Ozone depletion [kg CFC-11 eq.]	3,47E-06	2,43E-14	3,39E-14
Acidification terrestrial and freshwater [Mole of H+ eq.]	8,72E-04	2,31E-03	4,38E-04
Eutrophication freshwater [kg P eq.]	2,48E-05	8,61E-07	1,41E-06
Eutrophication marine [kg N eq.]	2,77E-04	5,71E-04	1,50E-04
Eutrophication terrestrial [Mole of N eq.]	2,61E-03	6,33E-03	1,77E-03
Photochemical ozone formation - human health [kg NMVOC eq.]	7,89E-04	1,60E-03	3,80E-04
Resource use, mineral and metals [kg Sb eq.]	1,31E-06	1,56E-08	2,52E-08
Resource use, energy carriers [MJ]	4,90E+00	3,87E+00	5,27E+00
Water deprivation potential [m^3 world equiv.]	1,12E-01	2,78E-03	4,47E-03
Resource Use Indicators			
Use of renewable primary energy (PERE) [MJ]	5,22E-01	2,27E-01	3,73E-01
Primary energy resources used as raw materials (PERM) [MJ]	0	0	0
Total use of renewable primary energy resources (PERT) [MJ]	5,22E-01	2,27E-01	3,73E-01
Use of non-renewable primary energy (PENRE) [MJ]	7,39E+00	3,88E+00	5,28E+00
Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	0	0	0
Total use of non-renewable primary energy resources (PENRT) [MJ]	7,39E+00	3,88E+00	5,28E+00
Input of secondary material (SM) [kg]	0	0	0
Use of renewable secondary fuels (RSF) [MJ]	0	0	0
Use of non-renewable secondary fuels (NRSF) [MJ]	0	0	0
Use of net fresh water (FW) [m3]	5,75E-04	2,51E-04	4,11E-04
Waste category & Output flows			
Hazardous waste disposed (HWD) [kg]	2,74E-11	1,40E-11	1,95E-11
Non-hazardous waste disposed (NHWD) [kg]	1,07E-03	5,22E-04	7,61E-04
Radioactive waste disposed (RWD) [kg]	9,56E-06	4,94E-06	6,83E-06
Components for re-use (CRU) [kg]	0	0	0
Materials for Recycling (MFR) [kg]	0	0	0
Material for Energy Recovery (MER) [kg]	0	0	0
Exported electrical energy (EEE) [MJ]	0	0	0
Exported thermal energy (EET) [MJ]	0	0	0
Additional Indicator			
GWP-GHG / GWP-IOBC [kg CO_2 eq.]	5,50E-01	2,94E-01	3,93E-01

Differences with previous versions of the EPD

This EPD was updated according standard EN 15804:2012+A2:2019 and the data collected is for the year 2024.

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
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3. The International EPD System PCR 2019:14 Construction products and Construction
4. European Chemical Agency, Candidate List of substances of very high concern for Authorization. https://echa.europa.eu/candidate-list-table
5. LCA Report Gyproc SE (PCR 1.3.2 EPD Int. System) v1