



# ENVIRONMENTAL PRODUCT DECLARATION

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

## Gyproc PROTECT® F - Fire Board

**Version: 4**

**Date of revision: 2024/02/22**

**Validity: 5 years**

**Valid until: 2029/02/22**

**Date of issue: 2013/08/27**

**Scope of the EPD®: Nordic**

**EPD based on a representative product**



THE INTERNATIONAL EPD® SYSTEM

The International EPD®

Programme operator: EPD international AB

System Registration number:

S-P: 00389



Manufacturer address: Bålsta plant at Kalmarleden 50,  
746 24 Bålsta, Sweden

## General information

### Company & EPD information

**Manufacturer:** Saint-Gobain Sweden AB, Gyproc

**Production plant:** Bålsta plant at Kalmarleden 50, 746 24 Bålsta, Sweden

**Management system-related certification:** SS-EN ISO 9001, SS-EN ISO 14001, SS-EN ISO 50001, SS-ISO 45001

**Programme used:** The International EPD® System

**PCR identification:** EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declaration - core rules for the product category of construction product and The International EPD® System PCR 2019:14 version 1.3.2 for Construction products and Construction services

**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:** Gyproc PROTECT® F - Fire Board produced by Saint-Gobain Sweden AB, Gyproc.

**EPD® prepared by:** Eva Hellgren (Gyproc Nordic) and Saint-Gobain LCA central team

**Contact:** Eva Hellgren ([Eva.hellgren@saint-gobain.com](mailto:Eva.hellgren@saint-gobain.com)) and Sandra Perez Jimenez ([Sandra.Perez-Jimenez@saint-gobain.com](mailto:Sandra.Perez-Jimenez@saint-gobain.com))

**Geographical scope of the EPD®:** Nordic

**EPD® registration number:** S-P: 00389

**Declaration issued:** 2013/08/27, revision 2024/02/22, valid until: 2029/02/22

**Demonstration of verification:** an independent verification of the declaration was made, according to ISO 14025:2010. This verification was external and conducted by the third-party verifier mentioned below based on the PCR mentioned above.

### Programme information

**PROGRAMME:** The International EPD® System

**ADDRESS:** EPD International AB - Box 210 60 - SE-100 31 Stockholm - Sweden

**WEBSITE:** [www.environdec.com](http://www.environdec.com)

**E-MAIL:** [info@environdec.com](mailto:info@environdec.com)

CEN standard EN 15804:2012 + A2:2019 serves 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](http://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](http://www.environdec.com/contact) - Contact via [info@environdec.com](mailto:info@environdec.com)

**Signature**



**Independent third-party verification of the declaration and data, according to ISO 14025:2006:**

EPD process certification     EPD verification

**Third party verifier:** Martin Erlandsson

IVL Swedish Environmental Research Institute – [martin.erlandsson@IVL.se](mailto:martin.erlandsson@IVL.se)

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 programs may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same version number up to the first two digits) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical DU/FU); 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 characterization factors); have equivalent content declarations; and be valid at the time of Comparison. For further information about comparability, see EN 15804:2012+A2:2019/AC:2021 and ISO 14025:2006.

## Product information

### Product description and description of use

This Environmental Product Declaration (EPD®) describes the environmental impacts of 1 m<sup>2</sup> installed Gyproc PROTECT® F – FireBoard 15.4 mm and an expected average service life of 50 years.

Gyproc PROTECT® F - FireBoard is a 15.4 mm thick plasterboard primarily used in interior building applications where high levels of fire resistance is required. The board has a fiberglass-reinforced gypsum core with an addition of dimension-stabilizing minerals and a surface layer of paper liner.

Gyproc Protect® F is available in 900 mm (GFE 15) and 1200 mm width (GF 15).

This EPD is based on a representative product. Gyproc Protect® F 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 2022.

### Technical data

Parameter	Value / Description
EN Classification	A-12,5 (EN 520:2004+A1:2009)
Reaction to fire	A2-s1, d0 (EN 520:2004+A1:2009)
Water vapour resistance factor, $\mu$	< 0,10 (EN 10456:2007)
Thermal conductivity	0,21 W/mK (EN 10456:2007)

### 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	Weight (%)	Post-consumer material weight (%)	Biogenic material weight (%) and kg C/DU
Gypsum Natural	60 - 80%	0%	0%
Gypsum Recycled	20 – 30%	100%	0%
Additives	0,5 – 5%	0%	0,2% and 0,021 kg C/DU
Paperliner	2% - 5%	0%	1,2% and 0,158 kg C/DU
Sum	100%		
Packaging materials	Weight (%)	Post-consumer material weight (%)	Biogenic material weight (%) and kg C/DU
Gypsum culls	1-2%	20-30%	0%
LDPE Film	0-0,5%	15-20%	0%

During the life cycle of the product, no hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” has 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 of the legality of the product.

## LCA calculation information

<b>TYPE OF EPD</b>	Cradle to grave and module D
<b>DECLARED UNIT</b>	1 m <sup>2</sup> of installed board with a weight of 12,7 kg/m <sup>2</sup> and an expected average service life of 50 years. The conversion factor to mass, 1 kg board, is 0,079 kg/m <sup>2</sup> . Note that the declared product and therefor the declared unit do not include any upper surface material like paint or likewise and therefore not potentially add as part of maintenance (B2).
<b>SYSTEM BOUNDARIES</b>	Cradle to grave + Module D = A + B + C +D
<b>REFERENCE SERVICE LIFE (RSL)</b>	The Reference Service Life (RSL) of the Gypsum product is 50 years. This value of 50 years is the expected lifespan of the product without refurbishment and corresponds to the standard building design life.
<b>CUT-OFF RULES</b>	<p>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 5% of the whole mass and energy used, as well as of the emissions to environment.</p> <p>Flows related to human activities such as employee transport are excluded.</p> <p>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.</p>
<b>ALLOCATIONS</b>	<p>Allocation criteria are based on mass.</p> <p>The polluter pays principle as well as the modularity principle have been followed.</p>
<b>GEOGRAPHICAL COVERAGE AND TIME PERIOD</b>	<p>Scope: Nordic</p> <p>Data is representative of one production site Gyproc Bålsta located in Sweden</p> <p>Data is representative of the year 2022</p>
<b>BACKGROUND DATA SOURCE</b>	Databases GaBi 2022 and ecoinvent v.3.8
<b>SOFTWARE</b>	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	GLO	-	-	-	-	-	-	-	GLO	GLO	GLO	GLO	GLO	
Specific data used	>60% GWP- GHG																	
Variation products	0%, one site one product																	
Variation sites	0%, only one site is reported for this product																	

## Life cycle stages





## A1-A3, Product stage

**Description of the stage:** The product stage is subdivided into 3 modules A1, A2 and A3 respectively Raw material supply, Transport to the manufacturer and “Manufacturing”.

### A1, Raw materials supply

This module includes the extraction and transformation of raw materials and packaging.

### A2, Transport to the manufacturer

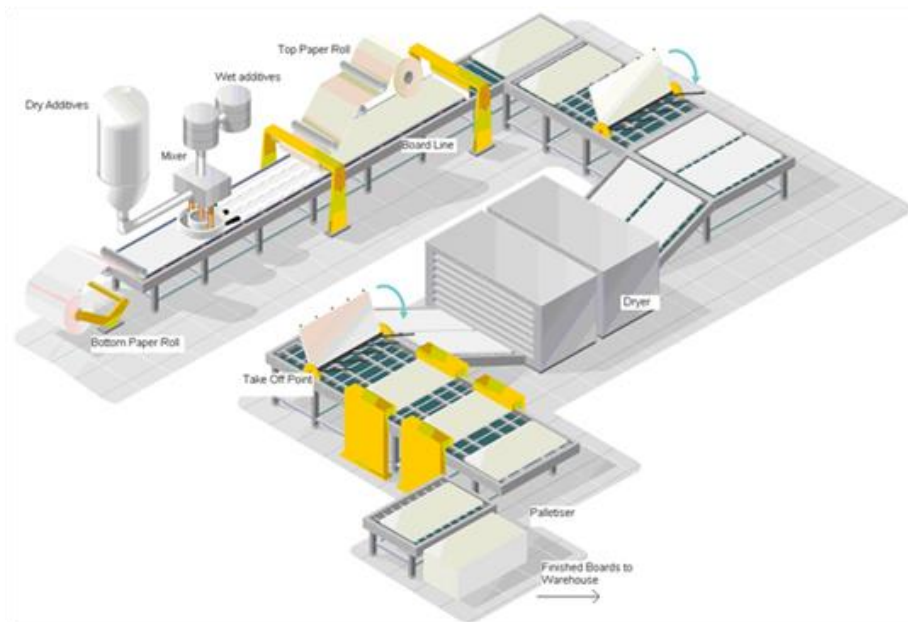
This module includes the transportation of raw materials and packaging to the manufacturing site. The modelling includes road, boat and/or train transportations.

### A3, Manufacturing

This module includes the manufacturing of products. The processing of any waste arising from this stage is also included.

## Manufacturing process flow diagram

**System diagram:**



### Manufacturing in detail:

The raw materials are homogeneously mixed to form a gypsum slurry that is spread via multiple hose outlets onto a paper liner on a moving conveyor belt. A second paper liner 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

**Description of the 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 the transport from the manufacturing site to the building site. Transport is calculated based on a scenario with the parameters described in the following table.

PARAMETER	VALUE
<b>Fuel type and consumption of vehicle or vehicle type used for transport e.g. long distance truck, boat, etc.</b>	Freight truck, maximum load weight of 27.9 t, real load of 24 t and consumption of 0.38 liters per km
<b>Distance</b>	300 km
<b>Capacity utilisation (including empty returns)</b>	68% (30% empty returns)
<b>Bulk density of transported products*</b>	825 kg/m <sup>3</sup>
<b>Volume capacity utilisation factor</b>	1

### A5, Installation in the building

This module includes the installation materials and the management and processing of waste generated during the installation. The parameters are presented in the following table.

PARAMETER	VALUE/DESCRIPTION
<b>Ancillary materials for installation (specified by materials)</b>	Jointing compound 0,33 kg/m <sup>2</sup> board, jointing tape 1,23 m/m <sup>2</sup> board, screws 8 units /m <sup>2</sup> board
<b>Water consumption</b>	0,158 liters/m <sup>2</sup> (on-site mixing for joint compound)
<b>Other resource use</b>	None
<b>Quantitative description of energy type (regional mix) and consumption during the installation process</b>	None
<b>Wastage of materials on the building site before waste processing, generated by the product's installation (specified by type)</b>	Plasterboard: 0,635 kg (5% scrap rate) Jointing Compound: 0,0165 kg (5% scrap rate) Jointing Tape: 0,0002 kg (5% scrap rate) Screws: 0,0005 kg (5% scrap rate) LDPE film: 0,0016 (100% scrap rate) Gypsum culls: 0,013 kg (100% scrap rate)
<b>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)</b>	Plasterboard: 0,254 kg (recycling), 0,381 kg (landfill) Jointing Compound: 0,0165 kg (landfill) Jointing Tape: 0,0002 kg (landfill) Screws: 0,0005 kg (landfill) LDPE film: 0,0002 kg (recycling), 0,0014 kg (incineration with energy recovery) 0,00005 kg (landfill) Gypsum culls: 0,013 kg (landfill)
<b>Direct emissions to ambient air, soil, and water</b>	None



## B1-B7, Use stage (excluding potential savings)

**Description of the stage:** 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

### Description of the scenarios and additional technical information:

The product has a reference service life of 50 years. It is assumed 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

**Description of the stage:** This stage includes the following modules:

- C1, Deconstruction, demolition: The de-construction and/or dismantling of the product take part of the demolition of the entire building. For the studied product, a small amount of energy is considered 0.05 MJ/m<sup>2</sup>.
- C2, Transport to waste processing
- C3, Waste processing for reuse, recovery and/or recycling
- C4, Disposal, including provision and all transport, provision of all materials, products and related energy and water use

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

PARAMETER	VALUE/DESCRIPTION
<b>Collection process specified by type</b>	Plasterboard and paperliner: 40% collected separately for recycling and 60% collected with mixed deconstruction and demolition waste to landfill. Other deconstruction waste is 100% collected with mixed deconstruction and demolition waste for landfill
<b>Recovery system specified by type</b>	5,08 kg for recycling
<b>Disposal specified by type</b>	7,97 kg to landfill
<b>Assumptions for scenario development (e.g. transportation)</b>	Gypsum waste is transported 50 km by truck from deconstruction/demolition sites to landfill

## 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 paper liner 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. Characterization 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.

All figures refer to a declared unit of 1m<sup>2</sup> of installed gypsum board 15,4 mm with a weight of 12,7 kg/m<sup>2</sup> and a useful life of 50 years.











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

## Environmental Impacts

Environmental indicators		PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				REUSE, RECOVERY RECYCLING
		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.]	2,57E+00	2,26E-01	5,70E-01	0	0	0	0	0	0	0	5,26E-02	3,93E-02	2,65E-01	3,95E-01	-4,43E-02
	Climate Change (fossil) [kg CO2 eq.]	3,21E+00	2,22E-01	2,88E-01	0	0	0	0	0	0	0	5,26E-02	3,86E-02	2,90E-02	4,74E-02	-4,88E-02
	Climate Change (biogenic) [kg CO2 eq.]	-6,52E-01	2,85E-03	2,83E-01	0	0	0	0	0	0	0	7,12E-05	4,97E-04	2,36E-01	3,48E-01	3,75E-03
	Climate Change (land use change) [kg CO2 eq.]	3,21E-03	1,25E-03	2,32E-04	0	0	0	0	0	0	0	5,55E-06	2,17E-04	4,04E-05	6,16E-05	7,33E-04
	Ozone depletion [kg CFC-11 eq.]	2,57E-08	1,34E-14	2,46E-09	0	0	0	0	0	0	0	1,12E-08	2,34E-15	5,72E-09	1,58E-08	9,36E-09
	Acidification terrestrial and freshwater [Mole of H+ eq.]	7,48E-03	2,70E-04	5,99E-04	0	0	0	0	0	0	0	5,46E-04	4,81E-05	1,84E-04	4,27E-04	4,44E-04
	Eutrophication freshwater [kg P eq.]	5,19E-05	6,69E-07	8,56E-06	0	0	0	0	0	0	0	1,63E-06	1,16E-07	3,22E-06	3,59E-06	1,07E-04
	Eutrophication marine [kg N eq.]	3,11E-03	9,61E-05	2,52E-04	0	0	0	0	0	0	0	2,42E-04	1,73E-05	6,79E-05	1,43E-04	1,88E-04
	Eutrophication terrestrial [Mole of N eq.]	3,17E-02	1,12E-03	2,31E-03	0	0	0	0	0	0	0	2,65E-03	2,02E-04	7,07E-04	1,57E-03	1,10E-03
	Photochemical ozone formation - human health [kg NMVOC eq.]	7,46E-03	2,37E-04	6,64E-04	0	0	0	0	0	0	0	7,29E-04	4,24E-05	2,10E-04	4,53E-04	3,72E-04
	Resource use, mineral and metals [kg Sb eq.] <sup>1</sup>	1,47E-06	1,87E-08	4,16E-07	0	0	0	0	0	0	0	2,70E-08	3,26E-09	1,87E-07	8,98E-08	6,57E-07
	Resource use, energy carriers [MJ] <sup>1</sup>	4,97E+01	2,99E+00	3,31E+00	0	0	0	0	0	0	0	7,18E-01	5,21E-01	4,71E-01	1,20E+00	-2,07E-01
	Water deprivation potential [m³ world equiv.] <sup>1</sup>	1,05E+00	2,01E-03	9,71E-02	0	0	0	0	0	0	0	1,77E-03	3,50E-04	1,17E-02	5,11E-02	8,11E-02









<sup>1</sup> 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

## Resources Use


Resources Use indicators	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
	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]	1,51E+01	1,70E-01	9,47E-01	0	0	0	0	0	0	0	4,06E-03	2,96E-02	7,11E-02	2,38E-02	8,46E-01
 Primary energy resources used as raw materials (PERM) [MJ] *	6,08E+00	0	2,30E-01	0	0	0	0	0	0	0	0	0	-2,20E+00	0	0
 Total use of renewable primary energy resources (PERT) [MJ]	2,12E+01	1,70E-01	1,18E+00	0	0	0	0	0	0	0	4,06E-03	2,96E-02	-2,13E+00	2,38E-02	8,46E-01
 Use of non-renewable primary energy (PENRE) [MJ]	4,92E+01	3,00E+00	3,28E+00	0	0	0	0	0	0	0	7,18E-01	5,23E-01	4,71E-01	1,20E+00	-2,08E-01
 Non-renewable primary energy resources used as raw materials (PENRM) [MJ] *	1,43E+00	0	-7,23E-01	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of non-renewable primary energy resources (PENRT) [MJ]	5,06E+01	3,00E+00	2,56E+00	0	0	0	0	0	0	0	7,18E-01	5,23E-01	4,80E-01	1,21E+00	-2,08E-01
 Input of secondary material (SM) [kg]	3,85E+00	0	1,95E-01	0	0	0	0	0	0	0	0	0	0	0	0
 Use of renewable secondary fuels (RSF) [MJ]	2,273E-24	0	1,153E-25	0	0	0	0	0	0	0	0	0	0	0	0
 Use of non-renewable secondary fuels (NRSF) [MJ]	2,67E-23	0	1,354E-24	0	0	0	0	0	0	0	0	0	0	0	0
 Use of net fresh water (FW) [m3]	2,81E-02	1,93E-04	2,51E-03	0	0	0	0	0	0	0	4,11E-05	3,35E-05	2,72E-04	1,20E-03	-1,27E-04

\* For this study, both the product and its packaging are reported in the indicators "Use of renewable primary energy resources used as raw materials" ("PERM") and "Use of non-renewable primary energy resources used as raw materials" ("PENRM"). PERM and PENRM are reported as negative values when materials are recycled or recovered, but not when landfilled.

## Waste Category & Output flows

Waste Category & Output Flows	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				D REUSE, RECOVERY, RECYCLING
	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]	9,46E-06	1,44E-11	6,32E-07	0	0	0	0	0	0	0	1,97E-06	2,50E-12	1,09E-06	1,65E-06	1,57E-06
 Non-hazardous waste disposed (NHWD) [kg]	1,65E-01	4,30E-04	5,23E-01	0	0	0	0	0	0	0	4,12E-03	7,49E-05	2,67E-02	7,97E+00	3,10E-02
 Radioactive waste disposed (RWD) [kg]	2,24E-04	3,70E-06	9,21E-06	0	0	0	0	0	0	0	4,98E-06	6,44E-07	3,42E-06	8,39E-06	-1,82E-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]	2,49E-02	0	2,57E-01	0	0	0	0	0	0	0	0	0	5,08E+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	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



# Additional mandatory impact category indicator

	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				REUSE, RECOVERY RECYCLING
		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
<b>Environmental indicators</b>															
 Climate Change (GWP-GHG) [kg CO2 eq.] <sup>2</sup>	3,22E+00	2,24E-01	6,06E-01	0	0	0	0	0	0	0	5,26E-02	3,90E-02	3,33E-02	4,75E-02	-4,43E-02

<sup>2</sup> 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

		PRODUCT STAGE
<b>Biogenic Carbon Content</b>		At factory gate A3
	Biogenic carbon content in product [kg C/DU]	1,79E-01
	Biogenic carbon content in packaging [kg C/DU]*	0,00E+00

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>.

\*Biogenic carbon content in packaging is direct balanced out and not accounted for in GWPbiogenic.

The product contains biogenic carbon due to the additives (mainly starch maize) and paper liner.

## Additional information

### Electricity information

The table below presents the information for the renewable electricity based on Guarantee of Origin certificates (GOs):

Type of information	Description
<b>Location</b>	Electricity purchased by Saint-Gobain Construction Products Sweden.
<b>Share of electricity covered by Guarantee of Origin</b>	100% of the energy consumption is covered by the GO
<b>Energy sources for electricity</b>	Share of energy sources: 100% Hydro power
<b>Type of dataset</b>	Cradle to gate from Gabi and ecoinvent databases
<b>Source</b>	Dataset Gabi EU-28: Electricity from hydro power
<b>CO<sub>2</sub> emission kg CO<sub>2</sub> eq. / kWh</b>	0,00621 kg of CO <sub>2</sub> eq/kWh - Climate Change - total indicator

## Transport to other countries

The results of stage A4 presented in the tables above refers to Sweden. As the product can be exported to other countries, conversion factors for each country have been provided. To get the impact for transport to these countries, the A4 figures shall be multiplied with the relevant factor.

Country	Transport and distance	Factor
Sweden	Truck (300 km)	1,0
Denmark	Truck (700 km)	2,3
Finland	Truck (300 km), Ship (400 km)	1,2
Norway	Truck (500 km)	1,7

## 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.

## Differences with previous versions of the EPD

This EPD was updated according to the data collected for the year 2022.

## References

1. ISO 14040:2006 Environmental Management-Life Cycle Assessment-Principles and framework.
2. ISO 14044:2006 Environmental Management-Life Cycle Assessment-Requirements and guidelines.
3. ISO 14025:2006 Environmental labels and Declarations-Type III Environmental Declarations-Principles and procedures.
4. EN 15804:2019+A2 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
5. EPD International. General Program Instructions (GPI) for the International EPD® System (version 4.0) [www.environdec.com](http://www.environdec.com).
6. The International EPD System PCR 2019:14 Construction products and Construction services. Version 1.3.2
7. European Chemical Agency, Candidate List of substances of very high concern for Authorization.  
[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.as](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.as)
8. Project report Environmental Product Declaration of Plasterboards, version 1 (February 2024)