



ENVIRONMENTAL PRODUCT DECLARATION

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

Fireline 15 Gypsum board

Version: 1

Date of publication: 2023/12/30

Validity: 5 years

Date of validity: 2028/12/30

Scope of the EPD®: Greece



THE INTERNATIONAL EPD® SYSTEM

The International EPD®

Programme operator: EPD international AB

System Registration number: S-P-11969



Manufacturer address: Ag. Paraskevi, 304 00
Etoliko, Greece

General information

Company information

Manufacturer: Saint-Gobain Hellas ABEE

Production plant: Etoliko plant, Ag. Paraskevi, 304 00 Etoliko, Greece

Management system-related certification: Gypsum products are manufactured in production plant with an integrated management system certified according to EN ISO 9001:2015 & EN ISO 14001:2015

Owner of the declaration: Saint-Gobain Hellas ABEE

Product name and manufacturer represented: Fireline 15 Gypsum Board produced by Saint-Gobain Hellas ABEE

EPD® prepared by: Patricia Jimenez Diaz (Saint-Gobain LCA central team) and Manos Giannakopoulos (Saint-Gobain Hellas ABEE)

Contact: Manos Giannakopoulos (manos.giannakopoulos@saint-gobain.com)

Geographical scope of the EPD®: Greece

EPD® registration number: S-P-11969

Declaration issued: 2023/12/30, valid until: 2028/12/30

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.

Programme information

PROGRAMME: The International EPD® System

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

WEBSITE: www.environdec.com

E-MAIL: info@environdec.com

CEN standard EN 15804:2012 + A2:2019 serves as the Core Product Category Rules (PCR)

Product category rules (PCR): 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 1.2.5 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

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 <http://renuables.co.uk>

Approved by: The International EPD® System

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

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

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Product description

Product description and description of use

This Environmental Product Declaration (EPD®) describes the environmental impacts of 1m² of installed gypsum board 15 mm with a weight of 12.65 kg/m² with a useful life of 50 years.

Fireline 15 is an improved fire-resistant plasterboard made up of a gypsum core (calcium sulfate hydrate) with additive, vermiculite, and paper liner (red colored paper liner in front face). The intended uses of the plasterboard, in accordance with the applicable harmonized technical specification, are Dry Lining applications (partitions, linings, shaft walls, false ceilings) with enhanced fire performance, as also for metallic beams fire protection

Technical data/physical characteristics:

Reaction to fire	A2-s1-d0 (B1) (EN 520: 2004, A1:2009)
Thermal conductivity	0,25 W/(m.K) (EN 520: 2004, A1:2009)

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 in %
Gypsum	94-96%	0%	0%
Paper liner	2-2.5%	100%	43%
Additives	2-2.5%	0%	2%
Sum	100%		
Packaging materials	Weight (%)	Weight (%) - versus the product	Biogenic material weight in %
Wooden pallet	90.13%	1.83%	41%
Polyethylene film	0.55%	0.01%	0%
Gypsum culls	9.1%	0.18%	0%
EPS white pieces	0.06%	0.0011%	0%
Polyester straps	0.16%	0.0032%	0%
Sum	100%	2.03%	

During the life cycle of the product any hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” 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 of the legality of the product.

LCA calculation information

TYPE OF EPD	Cradle to gate with options and module D
DECLARED UNIT	1 m ² of installed board with a weight of 12.65 kg/m ² and an expected average service life of 50 years
SYSTEM BOUNDARIES	Cradle to gate with options + Module D = A + B + C +D
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 criteria are based on mass. The polluter pays as well the modularity principles have been followed.
GEOGRAPHICAL COVERAGE AND TIME PERIOD	Scope: Greece Data is collected from one production site Etoliko plant located in Ag. Paraskevi, 304 00 Etoliko, Greece. Data collected for the year 2022.
BACKGROUND DATA SOURCE	The databases GaBi 2020 and ecoinvent v.3.6
SOFTWARE	GaBi 10

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)

	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	GR	GR	GR	GR	GR	-	-	-	-	-	-	-	GR	GR	GR	GR	GR
Specific data used	82 % GWP- GHG																
Variation products	One product																
Variation sites	One site																

Life cycle stages



A1-A3, Product stage

Description of the stage:

Description of the 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 includes the extraction and processing of all raw materials and energy which occur upstream from the manufacturing process.

A2, Transport to the manufacturer

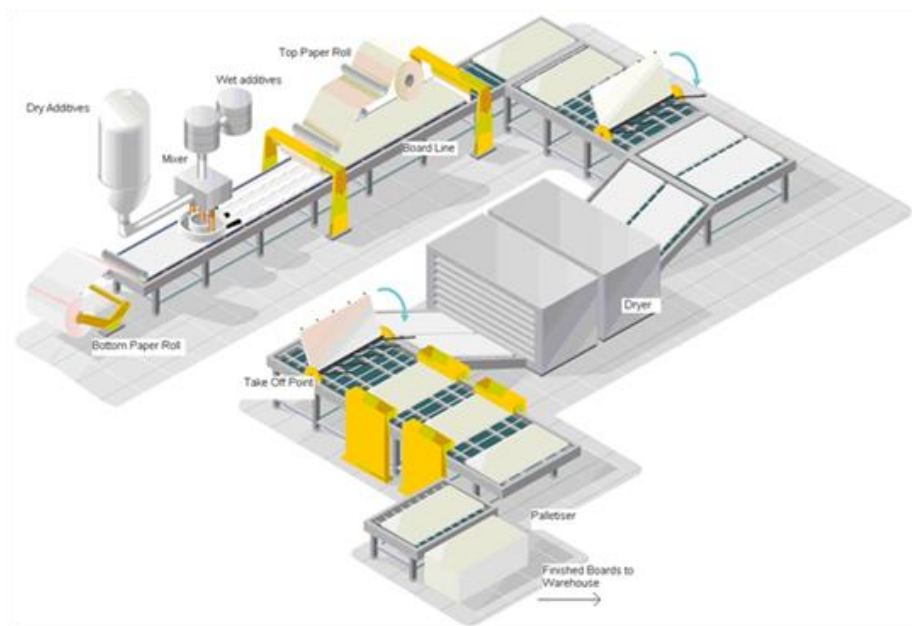
The raw materials are transported to the manufacturing site. The modelling includes road, boat and/or train transportations of each raw material.

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 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: 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 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 of 27.9 t, real load is 24 t and consumption of 0.38 liters per km. Container ship, average capacity 43000 dwt and consumption of 0.00023 kg of heavy fuel per km
Distance	287 km by truck 262 km by boat
Capacity utilisation (including empty returns)	72% (30% empty returns)
Bulk density of transported products*	844 kg/m ³
Volume capacity utilisation factor	1

A5, Installation in the building: this module includes:

The accompanying table quantifies the parameters for installing the product at the building site. All installation materials and their waste processing are included.

PARAMETER	VALUE/DESCRIPTION
Ancillary materials for installation (specified by materials)	Jointing compound 0.3 kg/m ² board, jointing tape 1.23 m/m ² board, screws 10 units /m ² board
Water consumption	0.167 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: 0.63 kg (5%) Jointing Compound: 0.015 kg Jointing Tape: 0.0002 kg Screws: 0.0007 kg Wooden pallet: 0.23 kg Polyethylene film: 0.0014 kg Gypsum culls: 0.23 kg EPS white pieces: 0.00014 kg Polyester straps: 0.00041 kg
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: 0.53 kg (5%) to landfill Jointing Compound: 0.015 kg to landfill Jointing Tape: 0.0002 kg to landfill Screws: 0.0007 kg to landfill Wooden pallet: 0.23 kg to recycling Polyethylene film: 0.0014 kg to landfill Gypsum culls: 0.23 kg to landfill EPS white pieces: 0.00014 kg to landfill Polyester straps: 0.00041 kg to landfill

Direct emissions to ambient air, soil, and water	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. 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

Description of the stage: this stage includes the next modules:

C1: Deconstruction, demolition: The deconstruction and/or dismantling of the product take part of the demolition of the entire building. In our case, a small amount of energy is considered 0.05 MJ/m².

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
Collection process specified by type	100% collected with mixed deconstruction and demolition waste sent to landfill (including board, screws and jointing tape/compound)
Recovery system specified by type	0 kg recycled
Disposal specified by type	13.1 kg to landfill
Assumptions for scenario development (e.g. transportation)	Gypsum waste is transported 50 km by truck from deconstruction/demolition sites to landfill

D, Reuse/recovery/recycling potential

100% of wastes are landfilled. There is no reuse nor recovery nor recycling of this product. Hence, no recycling benefits are reported on stage D.

LCA results

As specified in EN 15804:2012+A2:2019 and the Product-Category Rules, the environmental impacts are declared and reported using the baseline characterization factors from the ILCD. Specific data has been supplied by the plant, and generic data come from GaBi and Ecolnvent 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.

All figures refer to a declared unit of 1m² of installed gypsum board 15 mm with a weight of 12.65 kg/m² a useful life of 50 years.

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

Environmental Impacts

		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
	Climate Change [kg CO2 eq.]	2,10E+00	3,14E-01	5,98E-01	0	0	0	0	0	0	0	5,88E-02	3,19E-02	0	7,00E-01	0
	Climate Change (fossil) [kg CO2 eq.]	3,12E+00	3,13E-01	2,43E-01	0	0	0	0	0	0	0	5,87E-02	3,17E-02	0	1,99E-01	0
	Climate Change (biogenic) [kg CO2 eq.]	-1,03E+00	-3,96E-04	3,54E-01	0	0	0	0	0	0	0	7,74E-05	-5,33E-05	0	5,00E-01	0
	Climate Change (land use change) [kg CO2 eq.]	2,13E-03	2,17E-03	3,24E-04	0	0	0	0	0	0	0	1,29E-06	2,57E-04	0	5,73E-04	0
	Ozone depletion [kg CFC-11 eq.]	2,43E-08	3,66E-17	1,22E-09	0	0	0	0	0	0	0	6,24E-18	5,83E-18	0	7,39E-16	0
	Acidification terrestrial and freshwater [Mole of H+ eq.]	6,61E-03	3,34E-03	7,60E-04	0	0	0	0	0	0	0	1,73E-04	1,84E-04	0	1,43E-03	0
	Eutrophication freshwater [kg P eq.]	5,09E-05	8,24E-07	4,39E-06	0	0	0	0	0	0	0	1,30E-08	9,67E-08	0	3,42E-07	0
	Eutrophication marine [kg N eq.]	2,01E-03	1,21E-03	2,37E-04	0	0	0	0	0	0	0	3,21E-05	8,87E-05	0	3,68E-04	0
	Eutrophication terrestrial [Mole of N eq.]	2,16E-02	1,33E-02	2,51E-03	0	0	0	0	0	0	0	3,52E-04	9,82E-04	0	4,04E-03	0
	Photochemical ozone formation - human health [kg NMVOC eq.]	5,65E-03	2,69E-03	6,22E-04	0	0	0	0	0	0	0	1,01E-04	1,68E-04	0	1,11E-03	0
	Resource use, mineral and metals [kg Sb eq.] ¹	3,80E-06	2,04E-08	2,73E-06	0	0	0	0	0	0	0	1,53E-09	2,57E-09	0	1,79E-08	0
	Resource use, energy carriers [MJ] ¹	4,21E+01	4,13E+00	3,16E+00	0	0	0	0	0	0	0	7,17E-01	4,24E-01	0	2,61E+00	0
	Water deprivation potential [m³ world equiv.] ¹	8,11E-01	2,48E-03	7,37E-02	0	0	0	0	0	0	0	1,22E-04	3,10E-04	0	2,09E-02	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 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]	5,81E+00	2,02E-01	5,76E-01	0	0	0	0	0	0	0	2,50E-03	2,45E-02	0	3,42E-01	0
 Primary energy resources used as raw materials (PERM) [MJ]	9,43E+00	0	4,72E-01	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of renewable primary energy resources (PERT) [MJ]	1,52E+01	2,02E-01	1,05E+00	0	0	0	0	0	0	0	2,50E-03	2,45E-02	0	3,42E-01	0
 Use of non-renewable primary energy (PENRE) [MJ]	4,18E+01	4,13E+00	3,15E+00	0	0	0	0	0	0	0	7,18E-01	4,25E-01	0	2,62E+00	0
 Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	3,54E-01	0	1,77E-02	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of non-renewable primary energy resources (PENRT) [MJ]	4,21E+01	4,13E+00	3,16E+00	0	0	0	0	0	0	0	7,18E-01	4,25E-01	0	2,62E+00	0
 Input of secondary material (SM) [kg]	3,11E-01	0	1,70E-02	0	0	0	0	0	0	0	0	0	0	0	0
 Use of renewable secondary fuels (RSF) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
 Use of non-renewable secondary fuels (NRSF) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
 Use of net fresh water (FW) [m3]	1,80E-02	2,35E-04	1,77E-03	0	0	0	0	0	0	0	4,45E-06	2,85E-05	0	6,59E-04	0

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]	2,92E-07	1,66E-07	3,03E-08	0	0	0	0	0	0	0	7,27E-11	1,97E-08	0	3,99E-08	0
 Non-hazardous waste disposed (NHWD) [kg]	1,85E-02	6,04E-04	6,83E-01	0	0	0	0	0	0	0	1,78E-04	6,74E-05	0	1,31E+01	0
 Radioactive waste disposed (RWD) [kg]	1,03E-04	5,05E-06	2,14E-05	0	0	0	0	0	0	0	8,23E-07	7,84E-07	0	2,98E-05	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]	3,32E-01	0	2,71E-01	0	0	0	0	0	0	0	0	0	0	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 voluntary indicators from EN 15804 (according to ISO 21930:2017)

		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
	Climate Change [kg CO2 eq.] ²	3,12E+00	3,13E-01	2,43E-01	0	0	0	0	0	0	0	0	3,17E-02	0	1,99E-01	0

² 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 originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

		PRODUCT STAGE
Biogenic Carbon Content		A1 / A2 / A3
	Biogenic carbon content in product [kg]	1,42E-01
	Biogenic carbon content in packaging [kg]	9,61E-02

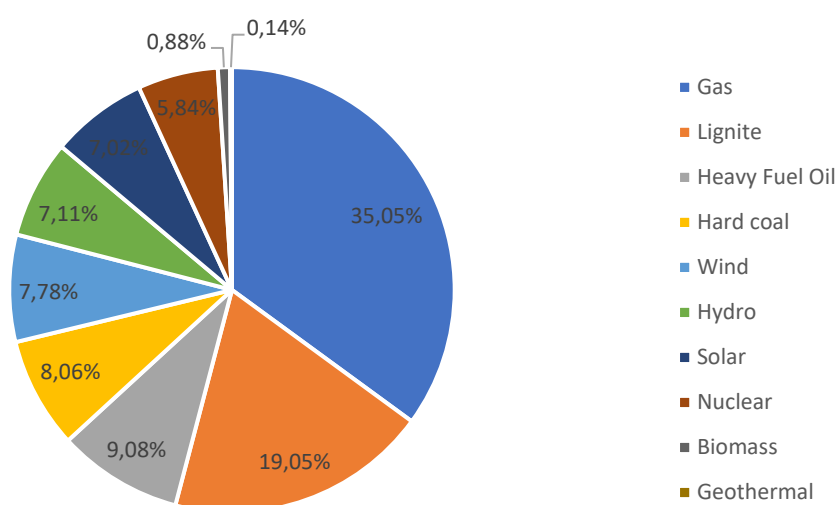
Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂.

The product contains biogenic carbon due to the additives and paper liner used. The packaging contains biogenic carbon due to the wooden pallets used.

Additional information:

Electricity information

TYPE OF INFORMATION	DESCRIPTION
Location	Representative of Electricity purchased by Saint-Gobain Hellas ABEE
Geographical representativeness description	Share of energy sources • Gas: 35.05 % • Lignite: 19.05 % • Heavy Fuel Oil: 9.08 % • Hard coal: 8.06 % • Wind: 7.78 % • Hydro: 7.11 % • Solar: 7.02 % • Nuclear: 5.84% • Biomass: 0.88% • Geothermal: 0.14%
Reference year	2019
Type of dataset	Cradle to gate from Gabi and EcolInvent databases
Source	AIB_2019_Residual_Mix_Results
CO₂ emission kg CO₂ eq. / kWh	0.528 kg of CO ₂ eq/kWh Based on 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 Hellas ABEE. After evaluating the inventory, according to the defined ranking in the LCA report, the assessment reflects good inventory data quality.

Environmental impacts according to EN 15804:2012 + A1

The following tables presents results of 1m² of installed gypsum board 15 mm with a weight of 12.65 kg/m² with a useful life of 50 years according to EN 15804:2012 +A1.

	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
Environmental impacts															
Global Warming Potential (GWP) [kg CO ₂ eq.]	3,07E+00	3,08E-01	2,39E-01	0	0	0	0	0	0	0	5,79E-02	3,12E-02	0	1,95E-01	0
Ozone depletion (ODP) [kg CFC 11eq.]	2,10E-08	4,87E-17	1,05E-09	0	0	0	0	0	0	0	8,32E-18	7,77E-18	0	9,85E-16	0
Acidification potential (AP) [kg SO ₂ eq.]	5,10E-03	2,49E-03	5,91E-04	0	0	0	0	0	0	0	1,44E-04	1,26E-04	0	1,15E-03	0
Eutrophication potential (EP) [kg (PO ₄) ₃ -eq.]	1,15E-03	4,20E-04	1,15E-04	0	0	0	0	0	0	0	1,14E-05	3,16E-05	0	1,29E-04	0
Photochemical ozone creation (POCP) - [kg Ethylene eq.]	5,51E-04	1,13E-04	5,55E-05	0	0	0	0	0	0	0	1,05E-05	4,43E-06	0	9,24E-05	0
Abiotic depletion potential for non-fossil resources (ADP-elements) [kg Sb eq.]	3,99E-04	2,29E-08	2,79E-05	0	0	0	0	0	0	0	1,61E-09	2,87E-09	0	6,90E-08	0
Abiotic depletion potential for fossil resources (ADP-fossil fuels) [MJ]	4,17E+01	4,12E+00	2,98E+00	0	0	0	0	0	0	0	7,16E-01	4,23E-01	0	2,54E+00	0

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 21930:2017 Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services.
4. ISO 14025:2006 Environmental labels and Declarations-Type III Environmental Declarations-Principles and procedures.
5. EN 15804:2019+A2 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
6. EPD International. General Program Instructions (GPI) for the International EPD® System (version 4.0) www.environdec.com.
7. The International EPD System PCR 2019:14 Construction products and Construction services. Version 1.2.5
8. 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
9. LCA report Information for the Environmental Product Declaration of Rigips Plasters and Plasterboards version August 2023 V1.0