ENVIRONMENTAL PRODUCT DECLARATION

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

RIGIPS PRO type A (GKB) 12,5

THE INTERNATIONAL EPD® SYSTEM

The International EPD®
Programme operator: EPD international AB
Registration number:
S-P: EPD-IES-0017478

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Valid until: 2029/12/17
Scope of the EPD®: GLOBAL

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

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 1.3.4

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: Bureau Veritas Polska

Joanna Zhuravlova - joanna.zhuravlova@bureauveritas.com

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 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 characterisation 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

Company information

Manufacturer: Saint-Gobain Construction Products Polska Sp. z o.o
Production plant(s): Rigips Plant, Szarbków 73, 28-400 Pińczów
Management system-related certification: The products have a declaration of performance in accordance with the requirements of the CPR and EN 520:2004 +A1:2009 Gypsum plasterboards - Definitions, requirements and test methods in System 3.
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 1.3.4 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 Construction Products Polska Sp. z o.o
Product name and manufacturer represented: RIGIPS PRO typ A (GKB) 12,5, Saint-Gobain Construction Products Polska Sp. z o.o
EPD® prepared by: Aneta Jarosz, aneta.jarosz@saint-gobain.com and Joffrey.martin@saint-gobain.com (Saint-Gobain LCA central team))
The intended use of this EPD is for B2B communication.
Geographical scope of the EPD®: POLAND
EPD® registration number: EPD-IES-0017478
Declaration issued: 2024/12/01 **valid until:** 2029/11/30
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.

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 gypsum board ,5 mm with a weight of 8,10 kg/m^2 with a useful life of 50 years.

RIGIPS PRO typ A (GKB) 12,5 is a **gypsum-based** plasterboard with a specially formulated denser core designed for use in Gyproc wall and partition systems where greater levels of sound insulation is required.

Despite differences in length, these products are made of the same material and are produced in one plant in Poland. They follow identical basic processes, which leads to an expected similarity in their environmental impact per unit of mass.

The difference lies in cutting the “mother” board to different lengths of 2000mm or 2500mm or 2600mm or 2700mm or 2750mm or 2800m or 3200mm The largest production volume was a 3200 mm long board.

Technical data

Parameter	Value / Description
EN Classification	520:2004+A1:2009
Reaction to fire	A2-s1,d0
Water vapour resistance factor, μ	10 μ
Thermal conductivity	0,25 W/(mK)

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, weight-% and kg C/kg product
Core	90-95%	0%	0%
Facing	5-10%	100 %	0.41%
Additives: starch, foaming agent, glass fibres, silicone	<1%	0%	0%
Sum	**100%**	**5-10%**	**<1%**
Packaging materials	**Weight (kg)**	**Weight versus the product (%)**	**Weight biogenic carbon, kg C/kg product**
Wood	0.2	4%	0.41
Others	0.02	<1%	0

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, module C1-C4, module D and optional modules
DECLARED UNIT	1 m² of installed board with a weight of 8,10kg/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: GLOBAL Data is collected from one production site Rigips Poland located in Szarbków 73, 28-400 Pińczów, Poland Data collected for the year 2023
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	PL	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	78% GWP-GHG																
Variation products	0%																
Variation sites	0%																

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”.

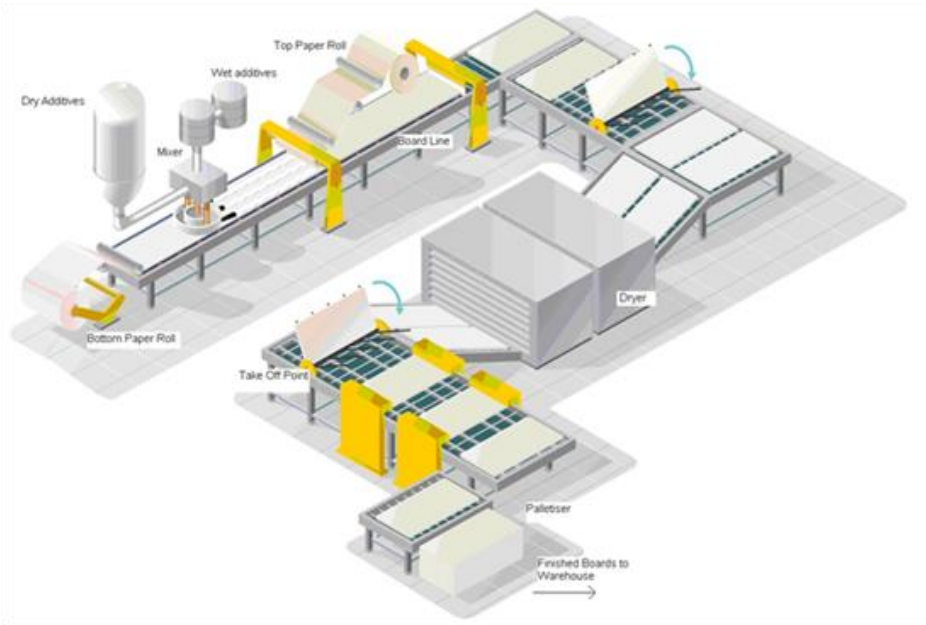
A1. Raw materials supply
This module includes the extraction and transformation of raw materials.

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 transportations.

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

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 24 t, real load is 21,4 t and consumption of 0.38 liters per km
Distance	390 km
Capacity utilisation (including empty returns)	81% (10% empty returns)
Bulk density of transported products*	N/A kg/m^3
Volume capacity utilisation factor	1

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: 0.330 kg/m2 board Jointing tape: 1.23 m/m2 board (0.004 kg/m2) Screws: 8 units/m2 board (0.010 kg/m2)
Water use	0,48 liters/m²
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: 0,405 kg / m² Jointing Compound: 0,016 kg / m² Jointing Tape: 0,0002 kg / m²
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: 0,45 kg / m² to landfill Jointing Compound: 0,016 kg / m² to landfill Jointing Tape: 0,0002 kg / m² to landfill Culls: 0,0178 kg / kg to landfill Polyethylene film: 0,0016 kg / kg to landfill
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 is 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
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	none
Disposal specified by type	100% landfilled
Assumptions for scenario development (e.g. transportation)	Waste is transported 50 km by truck from deconstruction/demolition sites to landfill

D. Reuse/recovery/recycling potential

Recyclable raw materials (paperliner) and packaging are used in the production process. 100% of wastes at the end of life are landfilled, but there is a potential of using the materials in another system. Module D reports the burden of not recycling at the end of life.

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 gypsum board 12,5 mm with a weight of 8,10 kg/m^2. The following results refer to a single product manufactured in a single plant: Rigips plasterboard Plant, Szarbków 73, 28-400 Pińczów

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 [kg CO2 eq.]	7,50E-01	2,31E-01	4,76E-01	0	0	0	0	0	0	0	3,77E-02	3,15E-02	0,00E+00	1,11E+00	-2,14E-02
Climate Change (fossil) [kg CO2 eq.]	1,64E+00	2,28E-01	1,40E-01	0	0	0	0	0	0	0	3,77E-02	3,12E-02	0,00E+00	5,90E-02	-2,75E-02
Climate Change (biogenic) [kg CO2 eq.]	-8,96E-01	5,94E-04	3,36E-01	0	0	0	0	0	0	0	4,76E-06	8,12E-05	0,00E+00	1,06E+00	4,89E-03
Climate Change (land use change) [kg CO2 eq.]	2,94E-03	2,11E-03	2,58E-04	0	0	0	0	0	0	0	4,24E-06	2,88E-04	0,00E+00	5,06E-05	1,16E-03
Ozone depletion [kg CFC-11 eq.]	1,51E-09	2,00E-14	1,86E-10	0	0	0	0	0	0	0	6,00E-10	2,72E-15	0,00E+00	1,51E-09	5,99E-09
Acidification terrestrial and freshwater [Mole of H+ eq.]	2,04E-03	2,50E-04	2,75E-04	0	0	0	0	0	0	0	3,50E-04	3,58E-05	0,00E+00	4,77E-04	1,07E-03
Eutrophication freshwater [kg P eq.]	2,18E-05	8,31E-07	4,72E-06	0	0	0	0	0	0	0	1,16E-06	1,13E-07	0,00E+00	5,91E-06	2,74E-04
Eutrophication marine [kg N eq.]	8,04E-04	8,41E-05	1,39E-04	0	0	0	0	0	0	0	1,62E-04	1,24E-05	0,00E+00	7,94E-04	4,18E-04
Eutrophication terrestrial [Mole of N eq.]	7,81E-03	9,97E-04	9,18E-04	0	0	0	0	0	0	0	1,76E-03	1,46E-04	0,00E+00	1,78E-03	2,92E-03
Photochemical ozone formation - human health [kg NMVOC eq.]	1,80E-03	2,16E-04	2,56E-04	0	0	0	0	0	0	0	5,22E-04	3,12E-05	0,00E+00	8,15E-04	1,04E-03
Resource use, mineral and metals [kg Sb eq.][1]	6,39E-07	1,48E-08	7,15E-07	0	0	0	0	0	0	0	1,32E-08	2,02E-09	0,00E+00	9,16E-08	7,12E-07
Resource use, energy carriers [MJ][1]	2,50E+01	3,10E+00	2,00E+00	0	0	0	0	0	0	0	4,92E-01	4,23E-01	0,00E+00	1,40E+00	-8,17E-02
Water deprivation potential [m³ world equiv.][1]	3,29E-01	2,63E-03	5,26E-02	0	0	0	0	0	0	0	1,67E-03	3,59E-04	0,00E+00	6,20E-02	1,08E-01

[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]	9,47E+00	2,19E-01	3,52E+00	0	0	0	0	0	0	0	2,81E-03	2,99E-02	0,00E+00	4,14E-02	1,86E+00
Primary energy resources used as raw materials (PERM) [MJ] [2]	8,51E+00	0,00E+00	-2,36E+00	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renewable primary energy resources (PERT) [MJ] [2]	1,79E+01	2,19E-01	1,16E+00	0	0	0	0	0	0	0	2,81E-03	2,99E-02	0,00E+00	4,14E-02	1,86E+00
Use of non-renewable primary energy (PENRE) [MJ] [2]	2,47E+01	3,11E+00	1,99E+00	0	0	0	0	0	0	0	4,92E-01	4,24E-01	0,00E+00	1,40E+00	-8,32E-02
Non-renewable primary energy resources used as raw materials (PENRM) [MJ] [2]	2,36E-01	0	2,60E-02	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of non-renewable primary energy resources (PENRT) [MJ] [2]	2,50E+01	3,106	2,02E+00	0	0	0	0	0	0	0	4,92E-01	4,24E-01	0,00E+00	1,40E+00	-8,04E-02
Input of secondary material (SM) [kg]	3,53E-01	0	1,77E-02	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels (RSF) [MJ]	1,43E-24	0	7,13E-26	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of non-renewable secondary fuels (NRSF) [MJ]	1,674E-23	0	8,369E-25	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water (FW) [m3]	1,08E-02	2,42E-04	1,44E-03	0	0	0	0	0	0	0	3,88E-05	3,30E-05	0,00E+00	1,45E-03	-5,87E-04

[2] From EPD International Construction Product PCR 1.3.4 (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]	8,95E-06	1,15E-11	8,66E-07	0	0	0	0	0	0	0	3,32E-06	1,57E-12	0,00E+00	6,79E-06	9,91E-06
Non-hazardous waste disposed (NHWD) [kg]	5,14E-02	4,48E-04	4,76E-01	0	0	0	0	0	0	0	3,04E-03	6,11E-05	0,00E+00	8,80E+00	9,78E-02
Radioactive waste disposed (RWD) [kg]	1,08E-04	4,02E-06	1,39E-05	0	0	0	0	0	0	0	5,41E-08	5,48E-07	0,00E+00	1,40E-06	-6,19E-05
Components for re-use (CRU) [kg]	0,00E+00	0,00E+00	1,86E-01	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for Recycling (MFR) [kg]	1,62E-01	0	8,10E-03	0	0	0	0	0	0	0	0	0	0,00E+00	0	0
Material for Energy Recovery (MER) [kg]	0,00E+00	0	0,00E+00	0	0	0	0	0	0	0	0	0	0,00E+00	0	0
Exported electrical energy (EEE) [MJ]	0,00E+00	0	0,00E+00	0	0	0	0	0	0	0	0	0	0,00E+00	0,00E+00	0
Exported thermal energy (EET) [MJ]	0,00E+00	0	0,00E+00	0	0	0	0	0	0	0	0	0	0,00E+00	0,00E+00	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]	1,65E+00	2,31E-01	1,80E-01	0	0	0	0	0	0	0	3,77E-02	3,15E-02	0,00E+00	6,15E-01	-2,14E-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. 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]	1,63E-01
Biogenic carbon content in packaging [kg]	8,50E-02

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

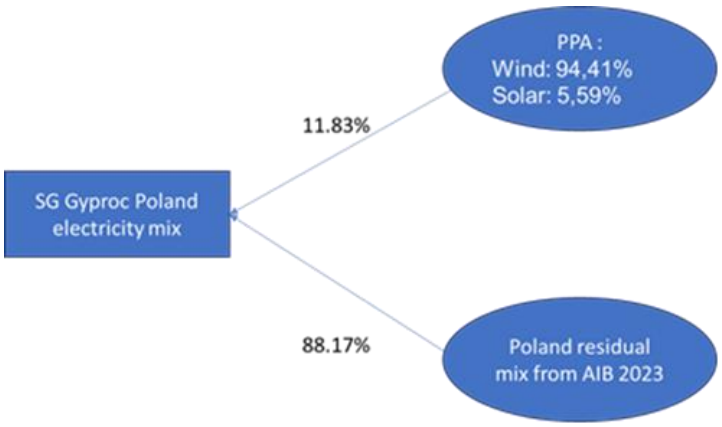
The product contains biogenic carbon due to the additives and paper liner used. Regarding packaging, biogenic carbon is quantified due to wooden pallets production.

Additional information:

Electricity information

The Rigips plasterboard factory based in Szarbków 73, 28-400 Pińczów uses the following electricity description.

Parameter	Information
Location	The share of electricity sources below are calculated based on residual mix for Poland in 2023 (reference to AIB, 2024).
Geographical & technical representativeness	Share of energy sources Biomass electricity: 1,76% Natural gas electricity: 11,91% Hardcoal electricity: 62,96% Hydro electricity: 0,44% Oil electricity: 0,06% Photovoltaic electricity: 6,40% Wind turbine electricity:16,09% Nuclear electricity: 0,38%
Reference year	2023
Type of dataset	Cradle to gate from Gabi and ecoinvent databases
Source	Gabi 2023 and ecoinvent 3.9.1 databases or International Energy Agency (IEA
CO2 emission kg CO2 eq. / kWh	0.564 kg of CO_2 eq/kWh Climate Change - fossil indicator



The Rigips plasterboard factory based in Szarbków 73, 28-400 Pińczów 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 12% of the electricity consumption on the manufacturing site.

Type of information	Description
Location	The share of electricity sources below are calculated based on electricity from GO. The electricity from GO is produced with wind and solar
Share of electricity covered by Guarantee of Origin	12% of the energy consumption is covered by the GO
Energy sources for electricity	Share of energy sources: Wind – 94%, Solar – 6%
Type of dataset	Cradle to gate from GaBi and ecoinvent databases
Source	Gabi 2023 and ecoinvent 3.9.1 databases or International Energy Agency (IEA Guarantee of Origin certificate: RGP_STXSERV_2023-10-11_2296, RGP_STXSERV_2024-03-07_6186
CO_2 emission kg CO_2 eq. / kWh	0,0159 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 Construction Products Polska sp. z o.o. 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 for 1m^2 of installed gypsum board PRO type A 12,5 mm with a weight of 8,10 kg/m².

	PRODUCT STAGE	CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE LIFE CYCLE
Environmental impacts	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
Global Warming Potential (GWP) [kg CO2eq.]	1,64282	0,228	0,1398	0	0	0	0	0	0	0	0,03771	0,03117	0	0,05902	1,64282
Ozone depletion (ODP) [kg CFC 11eq.]	-0,8956699	0,0005944	0,3363	0	0	0	0	0	0	0	0,000004758	0,00008116	0	1,055	-0,8956699
Acidification potential (AP) [kg SO2eq.]	0,00294174	0,00211	0,0002579	0	0	0	0	0	0	0	0,000004244	0,0002881	0	0,00005059	0,00294174
Eutrophication potential (EP) [kg (PO4)3-eq.]	1,51286E-09	1,995E-14	1,862E-10	0	0	0	0	0	0	0	5,997E-10	2,724E-15	0	1,513E-09	1,51286E-09
Photochemical ozone creation (POCP) - [kg Ethylene eq.]	0,0020362	0,0002502	0,0002746	0	0	0	0	0	0	0	0,0003495	0,00003582	0	0,0004766	0,0020362
Abiotic depletion potential for non-fossil resources (ADP-elements) [kg Sb eq.]	2,18332E-05	8,307E-07	0,000004722	0	0	0	0	0	0	0	0,000001158	1,134E-07	0	0,000005913	2,18332E-05
Abiotic depletion potential for fossil resources (ADP-fossil fuels) [MJ]	0,00080403	0,00008414	0,000139	0	0	0	0	0	0	0	0,0001621	0,00001235	0	0,0007938	0,00080403

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Differences with previous versions of the EPD

This is the 1st EPD for this product

References

1. EN 15804:2012+A1:2013 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
2. EN 15804:2012+A2:2019/AC:2021 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
3. EPD International. General Program Instructions (GPI) for the International EPD® System (version 4.0) www.environdec.com.
4. The International EPD System PCR 2019:14 Construction products and Construction services. Version 1.3.4
5. European Chemical Agency, Candidate List of substances of very high concern for Authorization. https://echa.europa.eu/candidate-list-table
6. 2024.1. [Gypsum] LCA report PRO type A (12,5) (PCR 1.3.4 EPD Int. System)