EPD®

THE INTERNATIONAL EPD® SYSTEM

ECO PLATFORM EPD VERIFIED

ENVIRONMENTAL PRODUCT DECLARATION

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

Rigidur® H - Gypsum Fibreboards

Date of issue: 2023-03-17
Validity: 5 years
Valid until: 2028-02-15
Version: 1
Scope of the EPD®: Europe

EPD VERIFIED

The environmental impacts of this product have been assessed over its whole life cycle. Its Environmental Product Declaration has been verified by an independent third party.

Registration number
The International EPD® System:
S-P-08298

Rigips SAINT-GOBAIN

General information

Manufacturer: Saint-Gobain Rigips GmbH , Schanzenstrasse 84 D-40549 Düsseldorf
Programme used: International EPD System http://www.environdec.com/
EPD registration number/declaration number: S-P-08298
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 Construction products, version 1.11.
Site of manufacture: Bodenwerder, Saint-Gobain Rigips GmbH
Owner of the declaration: Saint-Gobain Rigips GmbH
Product / product family name and manufacturer represented: Rigidur® H - Gypsum Fibreboards / Gypsum fibre board produced by Saint-Gobain Rigips GmbH in Bodenwerder plant
UN CPC code: 37530 Articles of plaster or of composition based on plaster
Declaration issued: 2023-03-17 **Valid until:** 2028-02-15
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.
EPD Prepared by: Kai Abersfelder (Saint-Gobain Rigips GmbH) and Patricia Jimenez (Saint-Gobain LCA Central Team)
Contact: Klaus Schmalbuch (Klaus.Schmalbuch@saint-gobain.com) and Patricia Jimenez (Patricia.JimenezDiaz@saint-gobain.com)

The Declared Unit is: 1 m² of installed Rigidur® board 12.5 mm with a weight of 15.58 kg/m² with a service life time of 50 years.

Declaration of Hazardous substances: (Candidate list of Substances of Very High Concern): none

Geographical scope of the EPD®: Europe (see other locations in additional information chapter)

The intended use of this EPD is for B2B communication.

Programme	The international EPD© System
Adress:	EPD© International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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CEN standard UNE-EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): PCR 2019:14 Construction Products, version 1.1
PCR review was conducted by: El Comité Técnico del Sistema Internacional EPD© President: Claudia A. Peña. 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 In case of recognized individual verifiers: Approved by: The International EPD© System
Procedure for follow-up of data during EPD validity involves third part verifier: ☒ Yes ☐ No

Product description

Product description and use:
This Environmental Product Declaration (EPD®) describes the environmental impacts of 1 m^2 of installed Rigidur® 12.5 mm with a weight of 15.58 kg/m^2 with a service life time of 50 years.

Rigidur® boards is made of gypsum, paper fibres and natural additives. They fulfil all requirements of state-of-the-art drywall construction materials and furthermore have a pleasantly smooth and hard surface.
This makes them suitable for universal use as construction, fire-proof and damp-proof boards, while guaranteeing professional sound insulation, high strength, and good processing properties. The Institute for Building Biology (Institut für Baubiologie - IBR) in Rosenheim recommends Rigidur® gypsum fibreboards in terms of building biology.

Technical data/physical characteristics:

Description	Value	Unit	Assessment method
Density	1200	kg/m^3	EN 15283-2
Bending strength	5.5	N/mm^2	EAD 070006-00-0504
Elastic Modulus	4500	N/mm^2	EAD 070006-00-0504
Shrinkage and swelling per 30% variation in rel. humidity	≤0.45	mm/m	EN 318
Thermal conductivity	0.202	W/(m*K)	EN 12664
Surface hardness			EN 15283-2
Reaction to fire	Euroclass A2-s1, d0	-	EN 13501-1
Water vapour resistance factor μ	19	-	EN ISO 12572
Water absorption of board surface	Type GF-W2	-	EN 15283-2
Hard body impact resistance	IR = 27	mm/mm	EN 1128
Structure and cohesion of the core at high temperature	Type F	-	EAD 070006-00-0504

Description 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 (%)	Renewable material weight (%)
Rigidur® product	100%	0%	0%
Gypsum (Natural)	80% – 90%	0%	0%
Cellulose fibres	10 % – 20 %	0%	100%
Additives	3 % – 8 %	0%	0%

Packaging materials	Weight (kg/m^2)
Pallet	0,17

Product	Weight (kg/m^2)
Total weight	15.58

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.

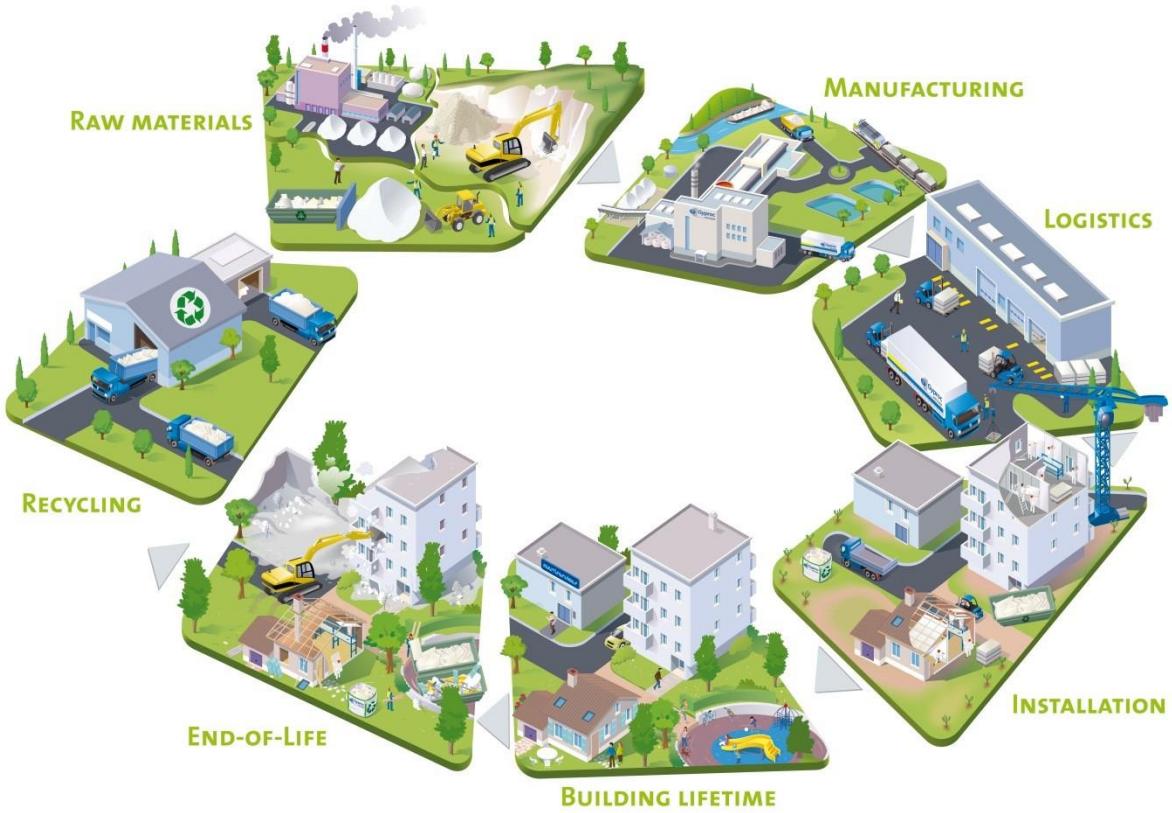
LCA calculation information

EPD TYPE DECLARED	Cradle to grave and module D Product-specific (one product, one manufacturing site)
FUNCTIONAL UNIT	1 m² of installed board with a weight of 15.58 kg/m² and an expected average service life of 50 years
SYSTEM BOUNDARIES	Cradle to grave + Module D = A + B + C +D
REFERENCE SERVICE LIFE (RSL)	The Reference Service Life (RSL) of the Gypsum product is considered to be 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 of not sufficient 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 higher than 5% of the whole mass and energy used respectively the emissions to environment. 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 principle and the modularity principle have been followed.
GEOGRAPHICAL COVERAGE AND TIME PERIOD	Scope includes: Europe Data is collected from one production site Bodenwerder in Germany, Saint-Gobain Rigips GmbH Data collected for the year 2022. Cradle to grave study. Background data: The databases GaBi 2020 or ecoinvent v.3.6
PRODUCT CPC CODE	37530 Articles of plaster or of composition based on plaster

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, EPDs might not be comparable if they are from different programmes.

Life cycle stages

Flow diagram of the Life Cycle



Product stage, A1-A3

Description of the stage: the product stage of this gypsum products is subdivided into 3 modules A1, A2 and A3 respectively “raw material supply”, “transport to manufacturer” and “manufacturing”.

A1, raw material supply.
This includes the extraction and processing of all raw materials and energy which occur upstream to 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 both the manufacturing of products and packaging. The production of packaging material is taken into account at this stage. The processing of any waste arising from this stage is also included.

Construction process stage, A4-A5

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 (expressed per functional unit)
Fuel type and consumption of vehicle or vehicle type used for transport e.g. long distance truck, boat, etc.	Long distance truck, maximum load weight of 27 t and consumption of 38L per 100km (Euro 0 - 6 mix)
Distance	100 km
Capacity utilisation (including empty returns)	85% (30% empty returns): default values in GaBi dataset
Bulk density of transported products	1200 kg/m^3
Volume capacity utilisation factor	127.5 m^2 of board / 22 kg of pallet

A5, installation into the building.
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 (expressed per functional unit)
Ancillary materials for installation (specified by materials)	Jointing compound 0.3 kg/m^2 board, jointing tape 0.8 m/m^2 board, screws 20 units/m^2 board
Water use	0.15 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: 0.78 (5%) Jointing Compound: 0.015 kg Jointing Tape: 0.0005 kg Pallet: 0.17 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: 0.78 kg (5%) to landfill Screws: 0.026 kg to landfill Jointing Compound: 0.015 kg to landfill Jointing Tape: 0.0005 kg to landfill Pallet: 0.17 kg/m^2 to landfill
Direct emissions to ambient air, soil and water	None

Use stage (excluding potential savings), B1-B7

Description of the stage: The use stage, includes:

B1, use or application of the installed product
B2, maintenance
B3, repair
B4, replacement
B5, refurbishment
B6, operational energy use
B7, operational water use

Description of 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.

End-of-life stage C1-C4

Description of the stage: This stage includes the modules

C1, de-construction, demolition
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 (expressed per functional unit)
Collection process specified by type	100% collected with mixed deconstruction and demolition waste to landfill (including board, screws, and jointing tape/compound) 16.1 kg (board weight + ancillary)
Recovery system specified by type	0 kg recycled
Disposal specified by type	16.1 kg to landfill
Assumptions for scenario development (e.g. transportation)	Gypsum fibre board waste is transported 50 km by truck from deconstruction/demolition sites to landfill

Reuse/recovery/recycling potential, D

100% of wastes are landfilled. There is neither 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 EC-JRC. Specific data has been supplied by the plant, and generic data come from GABI and Ecoinvent databases. All emissions to air, water, and soil, and all materials and energy used have been included.

All figures refer to a functional unit of 1 m² of installed board with a weight of 15.58 kg/m² and an expected average service life of 50 years.

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

system boundary (X = Included in LCA, MNA = Module Not Assessed)

	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	DE	DE	DE	DE	DE	-	-	-	-	-	-	-	DE	DE	DE	DE	-
Specific data used	>90% GWP- GHG					-	-	-	-	-	-	-	-	-	-	-	-
Variation products	One site one product					-	-	-	-	-	-	-	-	-	-	-	-
Variation sites	One site one product					-	-	-	-	-	-	-	-	-	-	-	-

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.]	-5.35E-02	8.51E-02	6.29E-01	0	0	0	0	0	0	0	7.18E-02	3.90E-02	0	3.52E+00	0
	Climate Change (fossil) [kg CO2 eq.]	3.54E+00	8.46E-02	2.93E-01	0	0	0	0	0	0	0	7.17E-02	3.87E-02	0	2.44E-01	0
	Climate Change (biogenic) [kg CO2 eq.]	-3.60E+00	-1.45E-04	3.35E-01	0	0	0	0	0	0	0	9.46E-05	-6.52E-05	0	3.28E+00	0
	Climate Change (land use change) [kg CO2 eq.]	1.64E-03	6.89E-04	2.50E-04	0	0	0	0	0	0	0	1.58E-06	3.14E-04	0	7.01E-04	0
	Ozone depletion [kg CFC-11 eq.]	1.15E-05	1.02E-17	5.75E-07	0	0	0	0	0	0	0	7.63E-18	7.13E-18	0	9.03E-16	0
	Acidification terrestrial and freshwater [Mole of H+ eq.]	1.02E-02	4.86E-04	9.03E-04	0	0	0	0	0	0	0	2.11E-04	2.25E-04	0	1.75E-03	0
	Eutrophication freshwater [kg P eq.]	2.47E-04	2.59E-07	1.41E-05	0	0	0	0	0	0	0	1.59E-08	1.18E-07	0	4.18E-07	0
	Eutrophication freshwater [kg (PO4)3 eq.]	7.58E-04	7.95E-07	4.33E-05	0	0	0	0	0	0	0	4.88E-08	3.62E-07	0	1.28E-06	0
	Eutrophication marine [kg N eq.]	2.32E-03	2.35E-04	2.25E-04	0	0	0	0	0	0	0	3.93E-05	1.08E-04	0	4.50E-04	0
	Eutrophication terrestrial [Mole of N eq.]	2.55E-02	2.60E-03	2.41E-03	0	0	0	0	0	0	0	4.30E-04	1.20E-03	0	4.94E-03	0
	Photochemical ozone formation - human health [kg NMVOC eq.]	6.87E-03	4.43E-04	6.44E-04	0	0	0	0	0	0	0	1.23E-04	2.05E-04	0	1.36E-03	0
	Resource use, mineral and metals [kg Sb eq.]*	7.05E-06	6.10E-09	5.07E-06	0	0	0	0	0	0	0	1.87E-09	3.14E-09	0	2.19E-08	0
	Resource use, energy carriers [MJ]*	5.56E+01	1.13E+00	4.08E+00	0	0	0	0	0	0	0	8.76E-01	5.18E-01	0	3.20E+00	0
	Water deprivation potential [m³ world equiv.]	9.66E-01	7.61E-04	8.12E-02	0	0	0	0	0	0	0	1.49E-04	3.79E-04	0	2.55E-02	0

* 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

		Product stage	Construction stage		Use stage							End of life stage				Reuse, recovery, recycling
	Resources Use indicators	A1 / A2 / A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	Use of renewable primary energy (PERE) [MJ]	6.14E+00	6.37E-02	6.06E-01	0	0	0	0	0	0	0	3.06E-03	2.99E-02	0	4.19E-01	0
	Primary energy resources used as raw materials (PERM) [MJ]	3.54E+01	0	1.77E+00	0	0	0	0	0	0	0	0	0	0	0	0
	Total use of renewable primary energy resources (PERT) [MJ]	4.15E+01	6.37E-02	2.37E+00	0	0	0	0	0	0	0	3.06E-03	2.99E-02	0	4.19E-01	0
	Use of non-renewable primary energy (PENRE) [MJ]	5.56E+01	1.13E+00	4.09E+00	0	0	0	0	0	0	0	8.77E-01	5.20E-01	0	3.20E+00	0
	Non-renewable primary energy resources used as raw materials (PENRM) [MJ]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total use of non-renewable primary energy resources (PENRT) [MJ]	5.56E+01	1.13E+00	4.09E+00	0	0	0	0	0	0	0	8.77E-01	5.20E-01	0	3.20E+00	0
	Input of secondary material (SM) [kg]	1.75E+00	0.00E+00	8.83E-02	0	0	0	0	0	0	0	0	0	0	0	0
	Use of renewable secondary fuels (RSF) [MJ]	5.27E-24	0	2.63E-25	0	0	0	0	0	0	0	0	0	0	0	0
	Use of non-renewable secondary fuels (NRSF) [MJ]	6.19E-23	0	3.09E-24	0	0	0	0	0	0	0	0	0	0	0	0
	Use of net fresh water (FW) [m^3]	2.14E-02	7.38E-05	1.99E-03	0	0	0	0	0	0	0	5.44E-06	3.49E-05	0	8.06E-04	0

Waste Category & Output flows

	Waste Category & Output Flows	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
	Hazardous waste disposed (HWD) [kg]	1.13E-07	5.28E-08	1.54E-08	0	0	0	0	0	0	0	8.89E-11	2.40E-08	0	4.87E-08	0
	Non-hazardous waste disposed (NHWD) [kg]	5.33E-02	1.74E-04	8.06E-01	0	0	0	0	0	0	0	2.17E-04	8.24E-05	0	1.61E+01	0
	Radioactive waste disposed (RWD) [kg]	2.14E-04	1.40E-06	3.69E-05	0	0	0	0	0	0	0	1.01E-06	9.58E-07	0	3.64E-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]	1.37E+00	0	2.41E-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				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
GWP-GHG (kg CO2 eq.)	3,54E+00	8,46E-02	2,93E-01	0	0	0	0	0	0	0	7,17E-02	3,87E-02	0	2,44E-01	0

Information on biogenic carbon content

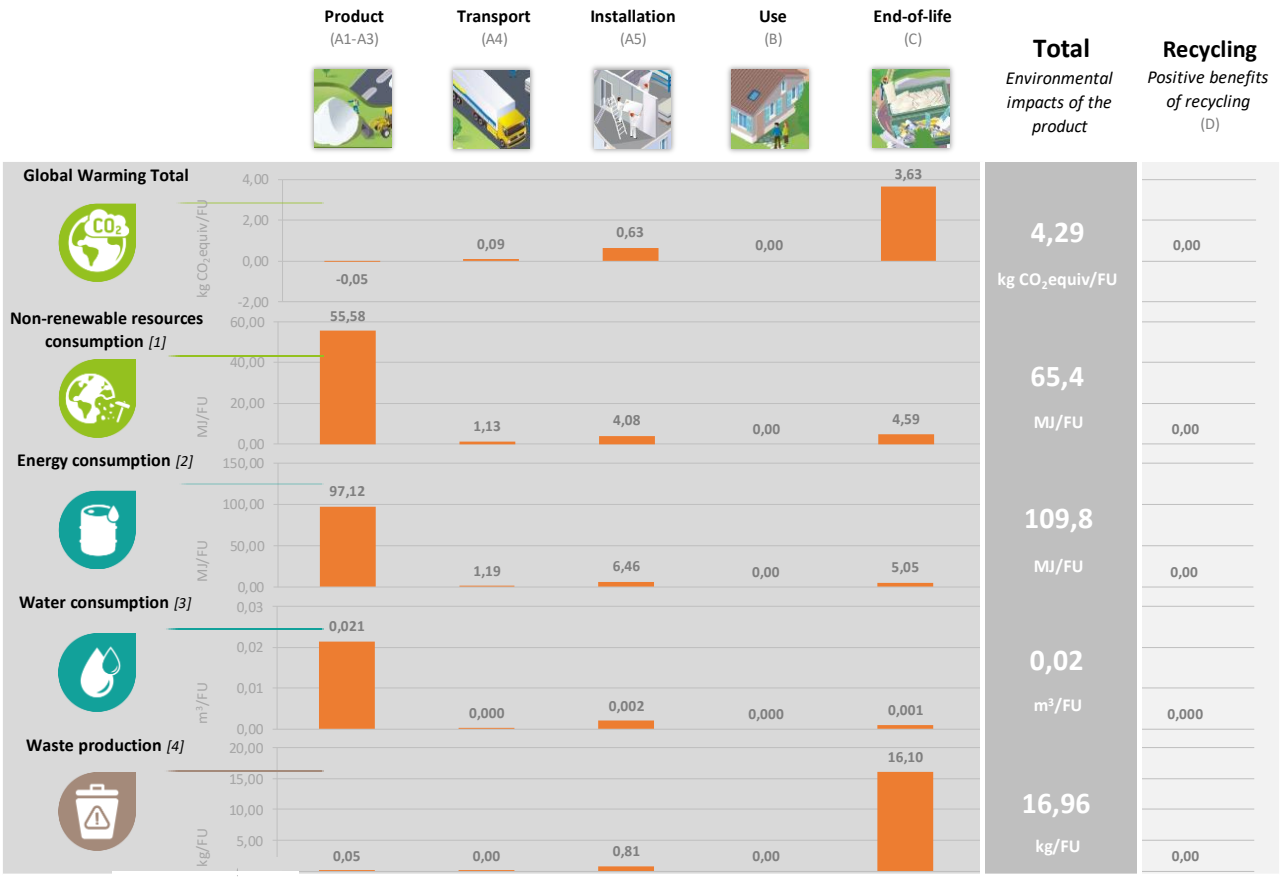
		Product stage
	Biogenic Carbon Content	A1 / A2 / A3
	Biogenic carbon content in product [kg]	9.54E-01
	Biogenic carbon content in packaging [kg]	1.01E-01

Note: 1 kg biogenic carbon is equivalent to 44/12 (approx. 3.67) kg CO_2.

The product contains quantity of biogenic carbon due to the cellulose fibre used. Regarding packaging, wooden pallets production is accounted for.

LCA results interpretation

The following figure refers to a functional unit of 1 m² of installed board with a weight of 15.58 kg/m² and an expected average service life of 50 years.



[1] This indicator corresponds to the abiotic depletion potential of fossil resources.
[2] This indicator corresponds to the total use of primary energy.
[3] This indicator corresponds to the use of net fresh water.
[4] This indicator corresponds to the sum of hazardous, non-hazardous and radioactive waste disposed.

Global Warming Potential total (Climate Change total) (GWP total)
The graph above shows the GWP Total results which are predominantly influenced by GWP Fossil and GWP Biogenic.
For GWP fossil, the major contribution to this environmental impact comes from the production modules (A1 – A3). This is primarily because the sources of greenhouse gas emissions are predominant in this part of the life cycle. CO_2 is generated upstream from the production of electricity and is also released on site by the combustion of diesel and natural gas. We can see that other sections of the life cycle also contribute to the GWP fossil. However, the production modules contribute to over 82% of the contribution. Emissions from C (transport and disposal at the end of life) and waste disposal in A5 (disposal after installation) generate the second highest percentage of greenhouse gas emissions.
However, for GWP biogenic, the main figure is included in A1-A3, due to the amount of natural resources used in the recipe of the board. The biogenic carbon is stored in the product and released at the end of the product life. This is the reason why the indicator GWP total A1-A3 presents low impact.

Non-renewable resources consumptions
The consumption of non – renewable resources is once more found to have the highest value in the production modules due to diesel and natural gas consumption within the factory. Further non – renewable fuels such as coal and oil are used to generate electricity which is used in the manufacturing. The contribution to this impact category originating from the other modules is very small and primarily due to the non – renewable resources consumed during installation.

Energy Consumptions
Modules A1 – A3 have the highest contribution to total energy consumption. Energy is consumed in the form of electricity. diesel. and natural gas during the manufacturing of the gypsum fibreboard.

Water Consumption
Water is used within the manufacturing facility. and therefore we see the highest contribution in the production phase. The second highest contribution occurs on the installation site due to the water used for the jointing components.

Waste Production
The largest contributor is the end-of-life module. This is because the 100% of the product is assumed to be sent to landfill once it reaches the end-of-life state.

Additional information

Influence of transportation to other countries

The result of stage A4 (transportation of product) in the table of this EPD refer to transportation of 100km. This product might also be delivered to the countries in the table below. To adapt the impact of transportation in the A4 column, the results expressed in this EPD must be multiplied by a corresponding multiplication factor below.

DESTINATION	AVERAGE DISTANCE (KM)	MULTIPLICATION FACTOR
Europe (EPD reference value)	**100**	**1**
Germany	350	3,50
Austria	816	8,16
Belgium	450	4,53
Czech Republic	484	4,84
Denmark	631	6,31
England	1013	10,13
Finland	1973	19,74
France	726	7,30
Hungary	1148	11,55
Ireland	1495	14,89
Italy	1654	16,54
Netherlands	360	3,62
Norway	1039	10,39
Poland	948	9,48
Romania	1484	14,84
Slovakia	854	8,53
Slovenia	1000	10,00
Spain	2031	20,31
Switzerland	688	6,92
Turkey	2803	28,03

Electricity description

TYPE OF INFORMATION	DESCRIPTION
Location	Representative of Electricity purchased by Saint-Gobain Rigips GmbH - Germany
Definition of the electricity	75% renewable energy 25% electricity grid mix of Germany
Geographical representativeness description	Split of energy sources of renewable electricity - Hydro 100% Split of energy sources of electricity grid mix in Germany - Nuclear: 21.41% - Hard coal: 47.27% - Natural gas: 24.08% - Wind: 0.09% - Photovoltaic: 0.46%
Reference year	2019 and 2022
Type of data set	Cradle to gate from Thinkstep database
Source	Guarantee of Origins certificate European Residual Mixes 2019 - Association of Issuing Bodies
CO_2 emissions	0.16 kg CO_2 eq. / kWh

Data quality

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

References

1. EPD International (2017) General Program Instructions for the International EPD® System. Version 4.0
2. The International EPD System PCR 2012:01 Construction products and Construction services. Version 1.11
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