



ENVIRONMENTAL PRODUCT DECLARATION

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

Weber Bolt zink

Version 1

Date of publication: 2025/05/23

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Valid until: 2030/05/22

Scope of the EPD®: Norway



THE INTERNATIONAL EPD® SYSTEM

The International EPD® System:

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Programme information

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CEN standard EN 15804:2012+A2:2019/AC:2021 as the Core Product Category Rules (PCR)

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

PCR review was conducted by: The Technical Committee of the International EPD® System

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

☐ EPD process certification ☒ EPD verification

Third party verifier: Marcel Gómez

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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 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

Product name: weber Bolt zink

Declared unit: 1kg

UN CPC CODE: 37510 Non-refractory mortars and concretes

GTIN Number(s): 7040023503921, 7040023503921

Company information

Manufacturer: Saint-Gobain Byggevarer as, PB 6211 Etterstad, 0603 Oslo, Norway.

Website: <https://www.weber-norge.no/>

Production plant(s): Weber Trondheim plant, Ormen Langes vei 9, 7041 Trondheim, Norway.

Management system - related certifications: ISO 9001 and ISO 14001 (Certificate No.: C638116)

LCA & EPD Information

Owner of the declaration: Saint-Gobain Byggevarer as

Contact person: Line Holaker (line.holaker@weber-norge.no)

EPD® prepared by: Quentin Lamache (Saint-Gobain Nordic & Baltic) and Line Holaker (Weber Norway)

Type of EPD: Cradle to gate with options, modules C1-C4, module D and optional modules A4-A5, B1-B7

Geographical scope of the EPD®: Norway

Year of data collection: 2023



Product description

Product description and description of use

This Environmental Product Declaration (EPD®) describes the environmental impacts of 1kg of weber Bolt zink.

weber Bolt zink is an expanding chloride free anchoring premix mortar. The mortar expands and eliminates shrinkage in the plastic phase. The product is designed for anchoring galvanized bolts and all other coated/non-coated bolts. It can also be used in areas demanding sulphate resistant mortar and can be used both indoors and outdoors.

All technical characteristics and properties for any product could be find on the website:
<https://www.weber-norge.no/produkter/weber-bolt-zink>

This EPD applies for one specific product produced in one single plant of Saint-Gobain Byggevarer as.

The product is delivered in 25kg and 700kg bags. All figures in this EPD refers to weber Bolt zink in 25kg.

Technical data/physical characteristics:

Technical data / physical characteristics		
Reaction to fire	Euroclass A1	NS-EN 1504-6
Compressive strength 1 day	~25 MPa	NS-EN 1504-6
Compressive strength 7 days	~45 MPa	NS-EN 1504-6
Compressive strength 28 days	~55 MPa	NS-EN 1504-6
Pull-out strength	<0,6 mm at 75 kN load	NS-EN 1504-6
Contents of chlorides	≤ 0,01 %	NS-EN 1504-6

Declaration of the main product components and/or materials

Description of the main components and/or materials:

Product components	Weight (%)	Post-consumer material weight (%)	Biogenic material weight-% and kg C/ DU
Binder	30 – 60 %	0%	0 % and 0 kg
Filler / Aggregates	30 – 60 %	0%	0 % and 0 kg
Additives	0,1 – 0,5 %	0%	0 % and 0 kg
Sum	100%	0%	0 % and 0 kg

Packaging materials	Weight (kg)	Weight-% (vs the product)	Biogenic material, weight- kg C/ DU
LDPE	0,001 kg	0,1 %	0 kg
Polypropylene	0,001 kg	0,1 %	0 kg
Sum	0,002 kg	0,2 %	0 kg

Hazardous substances

At the date of issue of this declaration, there is no “Substance of Very High Concern” (SVHC) and neither do their packaging, following the European REACH Candidate list (Registration, Evaluation, Authorization and Restriction of Chemicals).

As of today, the product does not contain any substances on the Norwegian Priority List.

Substance	CAS.no	Content range
Portland Cement	65997-15-1	30 - 60%

The verifier and the program operator do not make any claim nor have any responsibility of the legality of the product.

LCA calculation information

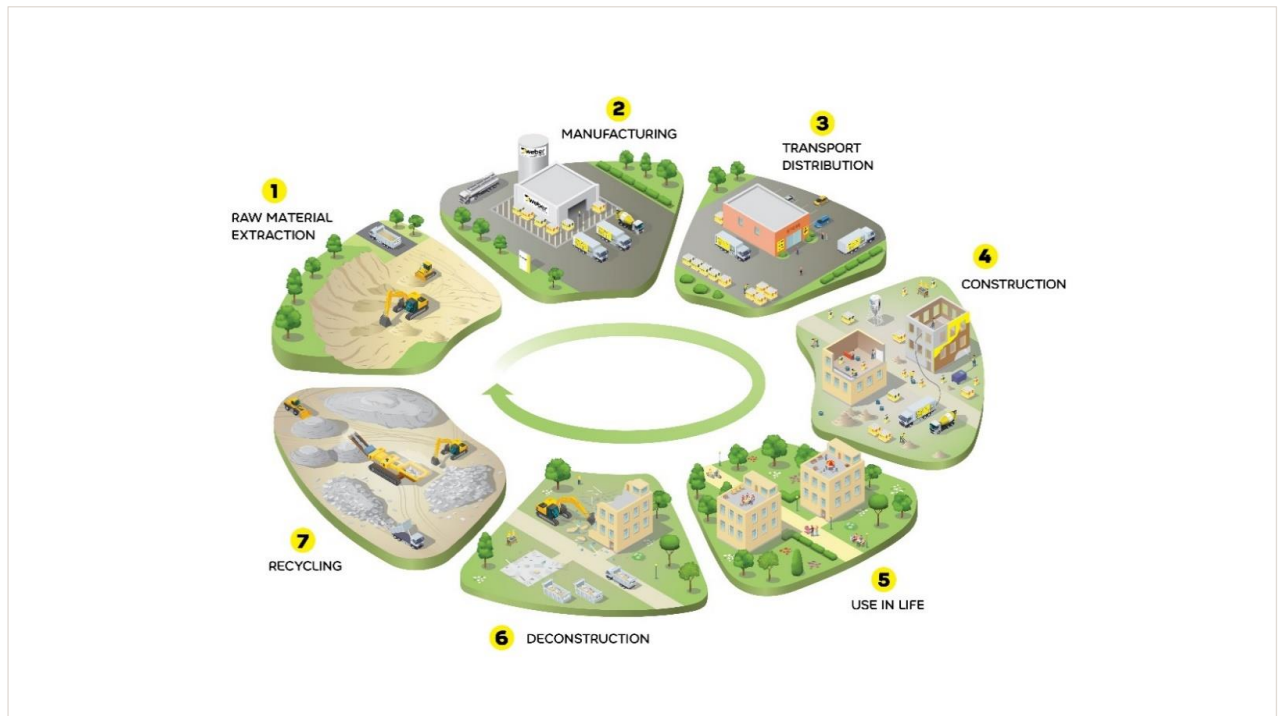
Parameter	Information
Type of epd	Cradle to gate with options, modules C1-C4, module D and optional modules A4-A5, B1-B7.
Declared unit	1 kg of product
System boundaries	Mandatory stages = A1-A3; C1-C4 and D; Optional stages = A4-A5; B1-B7
Reference service life (rsl)	The Reference Service Life (RSL) of the mortar 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	All data is available, no cut-off rules has been applied. 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. Research and developments activities. 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. Long term emissions are considered.
Geographical coverage And time period	Scope: Norway Data is collected from 1 production site Weber Trondheim plant located in Norway. 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. ND = not declared, GLO = global, NO = Norway)

	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	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Specific data used ¹	62% GWP- GHG																
Variation products	0 %																
Variation sites	0 %																

Life cycle stages



¹ For this study, specific data is considered as energy, water consumptions and wastes related to the manufacturing process, transportation as well as raw material with EPD. The percentage of specific data is assumed to be larger than 60%, but it cannot be proved since one or several EPDs that are used as data sources lack information of the percentage of specific data used.

A1-A3. Product stage

The product stage of mortar products is subdivided into 3 modules:

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 to the manufacturing site. The modelling includes road, boat and/or train transportations.

A3. Manufacturing

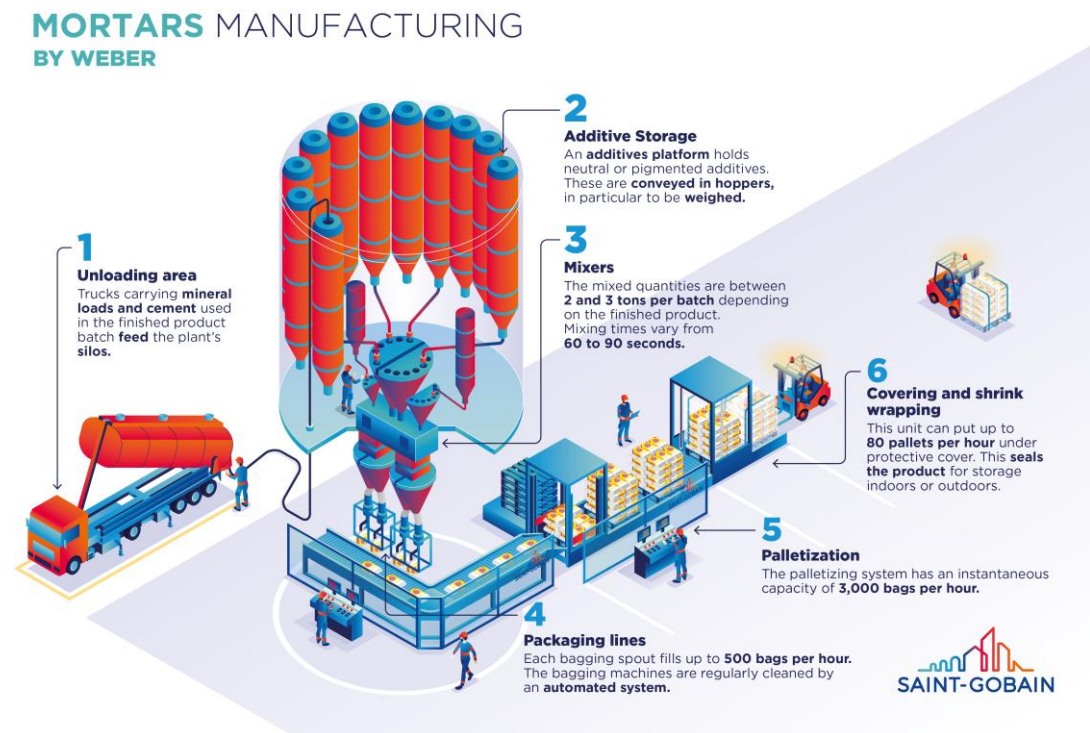
This module includes the manufacture of products and the manufacture of packaging. The production and transport of packaging material is considered at this stage. The processing of any waste arising from this stage is also included.

During the manufacturing process, electricity based on 100% renewable bought with Guarantee of Origin (GO) has been used. The amount of electricity purchases with GO's correspond to 100% of the electricity consumed at the manufacturing site, leaving 0% to be covered by the Norwegian national grid mix.

Manufacturing process flow diagram

System diagram:

Basic scheme of a Mortar Production line



Manufacturing in detail:

The manufacturing activities include grinding, drying, storing, mixing, packing and internal transportation. Packaging-related flows in the production process and all up-stream packaging are included in the manufacturing module, i.e., wooden pallets, bags, and LDPE film.

Electricity information

The factory based in Norway uses the following electricity description.

Parameter	Value / description
Location	Electricity purchased by Saint-Gobain Byggevare as
Share of electricity covered by Guarantee of Origin	100% of the electricity consumption is covered by the GO.
Geographical representativeness description	Split of electricity bought with Guarantee of Origin: Hydro 100 %
Reference year	For GO: 2023 <i>The GO will be prolonged to be valid at least to the validity of this EPD*.</i>
Type of dataset	Cradle to gate from Sphera and ecoinvent databases
Source	Guarantee of Origin: Sphera dataset (2023) and Entelios
CO ₂ emission (kg CO ₂ eq. / kWh) (Based on GWP-GHG Indicator)	Guarantee of Origin: 0,00614 kg of CO ₂ eq /kWh

*Revised yearly.

A4-A5. Construction process stage

The construction process is divided into 2 modules:

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 / Description
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 t and consumption of 0,38 liters diesel per km. Real 24 t payload
Distance	569 km by truck 94 km by boat
Capacity utilization (including empty returns)	62,2% of the capacity in weight 30% of empty returns
Bulk density of transported products	850 kg/m ³

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 / Description
Secondary materials for installation (specified by materials)	None
Water use	0,23 liters/kg of dry mortar
Other resource use	None

Quantitative description of energy type (regional mix) and consumption during the installation process	0,01125 MJ/kg of dry mortar (Electricity grid mix, RER)
	0,0425 MJ/kg of dry mortar (Thermal grid mix, RER)
Wastage of materials on the building site before waste processing, generated by the product's installation (specified by type)	Product: 0,05 kg Big bag: 0,002
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)	Product: 50% to landfill, 50% to recycling Big bags: 38% to landfill, 62% to incineration
Use of pallet	7 times before end of life
Distance to waste treatment facilities	50 km to landfill
	50 km to recycling
	50 km to incineration
Direct emissions to ambient air, soil, and water	None

B1-B7. Use 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

Once installation is complete, no actions or technical operations are required during the use stages until the end-of-life stage. The product does not require any energy, water or material input to keep it in working. The product covered by this EPD does not require any maintenance as it is aimed for gluing different types of tiles. In addition, due to the product durability, maintenance, repair, replacement, or restoration are irrelevant in the specified applications. Declared product performances therefore assume a working life that equals the building's lifetime. For this reason, no environmental loads are attributed to any of the modules between B1 and B7 excepting facade products for which carbonation is considered.

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.

C2. Transport to waste processing

Transport to waste processing

C3. Waste processing for reuse, recovery and/or recycling

Waste processing for reuse, recovery and/or recycling

C4. Disposal

Part of the product is landfilled at the end of life.

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

Parameter	Value / Description
Energy for de-construction / demolition	0,045 MJ/kg (diesel)
Collection process specified by type	1 kg of product collected with mixed construction waste, plus part of water mixed in at installation.
Recovery system specified by type	63 % of product to recycling, 0 % of incineration with/without energy recovery
Disposal specified by type	37 % of product to municipal landfill
Assumptions for scenario development (e.g., transportation)	The waste going to landfill will be transported by truck with 27 t payload, using diesel as a fuel consuming of 0,38 liters per km. Distance to landfill: 100 km Distance to recycling: 100 km

D. Reuse/recovery/recycling potential

In module D are declared the environmental benefits and loads from reusable products, recyclable materials and/or energy recovery.

- There is no inclusion of secondary materials in the product and packaging.
- Reuse, recycling, and/or incineration with energy recovery is considered for the product and its packaging.

Considering all the above, the benefits or loads are reported on stage D.

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 of EN15804 are 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 taken when using the results of these indicators for decision-making purposes.

Since this EPD includes module C, we strongly advise not to use the results of modules A1-A3 without considering the results of module C.

All figures refer to a declared unit of 1kg of product.

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				Benefits and loads beyond the life cycle
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 (total) [kg CO ₂ eq.]	4,21E-01	3,87E-02	3,56E-02	0	0	0	0	0	0	0	4,52E-03	7,70E-03	0	6,24E-03	-2,47E-04
	Climate Change (fossil) [kg CO ₂ eq.]	4,14E-01	3,83E-02	3,52E-02	0	0	0	0	0	0	0	4,52E-03	7,60E-03	0	6,20E-03	-2,34E-04
	Climate Change (biogenic) [kg CO ₂ eq.]	7,03E-03	9,92E-05	3,84E-04	0	0	0	0	0	0	0	3,92E-06	2,04E-05	0	1,74E-05	-6,58E-06
	Climate Change (land use change) [kg CO ₂ eq.]	1,25E-04	3,49E-04	3,18E-05	0	0	0	0	0	0	0	8,61E-08	7,14E-05	0	1,96E-05	-6,08E-06
	Ozone depletion [kg CFC-11 eq.]	1,86E-09	3,38E-15	3,31E-11	0	0	0	0	0	0	0	3,48E-16	8,03E-16	0	1,60E-14	-1,08E-11
	Acidification terrestrial and freshwater [Mole of H ⁺ eq.]	5,28E-04	8,37E-05	7,13E-05	0	0	0	0	0	0	0	7,12E-06	9,14E-06	0	4,46E-05	1,62E-05
	Eutrophication freshwater [kg P eq.]	4,91E-06	1,38E-07	1,86E-07	0	0	0	0	0	0	0	8,75E-10	2,82E-08	0	1,27E-08	-1,26E-07
	Eutrophication marine [kg N eq.]	1,44E-04	2,42E-05	2,24E-05	0	0	0	0	0	0	0	2,46E-06	3,16E-06	0	1,15E-05	9,8

Resources 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] ³	6,47E-01	3,63E-02	4,14E-02	0	0	0	0	0	0	0	2,66E-04	7,51E-03	0	1,37E-02	-1,96E-02
 Use of renewable primary energy resources used as raw materials (PERM) [MJ] ³	1,17E-01	0	5,45E-03	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of renewable primary energy resources (PERT) [MJ] ³	7,64E-01	3,63E-02	4,68E-02	0	0	0	0	0	0	0	2,66E-04	7,51E-03	0	1,37E-02	-1,96E-02
 Use of non-renewable primary energy (PENRE) [MJ] ³	1,93E+00	5,28E-01	2,51E-01	0	0	0	0	0	0	0	6,04E-02	1,05E-01	0	8,39E-02	-9,06E-03
 Non-renewable primary energy resources used as raw materials (PENRM) [MJ] ³	2,56E-02	0	-2,53E-02	0	0	0	0	0	0	0	0	0	0	0	0
 Total use of non-renewable primary energy resources (PENRT) [MJ] ³	1,96E+00	5,28E-01	2,25E-01	0	0	0	0	0	0	0	6,04E-02	1,05E-01	0	8,39E-02	-9,06E-03
 Input of secondary material (SM) [kg]	1,00E-01	0	4,85E-06	0	0	0	0	0	0	0	0	0	0	0	0
 Use of renewable secondary fuels (RSF) [MJ]	3,86E-02	0	5,43E-07	0	0	0	0	0	0	0	0	0	0	0	0
 Use of non-renewable secondary fuels (NRSF) [MJ]	4,48E-01	0													

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	B7 Operational water	C1 Deconstruction / demolition	C2 Transport	C3 Waste processing	C4 Disposal	D Reuse, recovery, recycling
	Hazardous waste disposed (HWD) [kg]	2,07E-04	1,95E-12	7,95E-06	0	0	0	0	0	0	0	1,74E-13	3,65E-13	0	1,83E-12	1,65E-07
	Non-hazardous waste disposed (NHWD) [kg]	3,18E-02	7,53E-05	5,88E-02	0	0	0	0	0	0	0	1,25E-05	1,55E-05	0	4,19E-01	-2,97E-02
	Radioactive waste disposed (RWD) [kg]	3,78E-06	6,81E-07	7,86E-06	0	0	0	0	0	0	0	6,97E-08	1,60E-07	0	9,56E-07	-1,53E-06
	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]	1,50E-03	0	2,51E-02	0	0	0	0	0	0	0	0	0	7,13E-01	0	0
	Material for Energy Recovery (MER) [kg]	8,44E-06	0	3,14E-07	0	0	0	0	0	0	0	0	0	0	0	0
	Exported electrical energy (EEE) [MJ]	1,61E-05	0	1,63E-08	0	0	0	0	0	0	0	0	0	0	0	0
	Exported thermal energy (EET) [MJ]	2,45E-04	0	2,70E-02	0	0	0	0	0	0	0	0	0	0	0	0

Additional indicators from EN 15804

		Product stage	Construction stage		Use stage							End of life stage				Benefits and loads beyond the life cycle
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 / GWP-IOBC [kg CO ₂ eq.] ⁴	4,13E-01	3,86E-02	3,52E-02	0	0	0	0	0	0	0	4,52E-03	7,68E-03	0	6,22E-03	-2,40E-04

Information on biogenic carbon content

		At factory gate
Biogenic Carbon Content in kg C		A1 / A2 / A3
	Biogenic carbon content in product [kg]	0
	Biogenic carbon content in packaging [kg]	0

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

⁴ 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.

Additional information:

Indoor Environment

The product has not been tested.

Transport to other countries

The transport to building site (A4) in the main result is based on Norway, with client's specific distance average.

Information related to EPD of multiple products.

This is a product specific EPD, therefore no information needed.

Information related to Sector EPD

This is a product specific EPD, therefore no information needed.

Differences with previous versions of the EPD

This is the first version of the EPD.

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 998-1:2016 Specification for mortar for masonry Rendering and plastering mortar
5. EN 15804:2012+A2:2019/AC:2021 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
6. EPD International (2021) General Programme Instructions for the International EPD® System. Version 4.0. www.environdec.com.
7. EN 15978 Sustainability of construction works - Assessment of environmental performance of buildings - Calculation method
8. The International EPD System PCR 2019:14 Construction products and Construction services. Version 1.3.2
9. European Chemical Agency, Candidate List of substances of very high concern for Authorization. <https://echa.europa.eu/candidate-list-table>
10. Statistics Norway. 09781: Treatment of waste from construction, rehabilitation and demolition of buildings, by material and treatment (tonnes) 2013-2022
11. Project report for the verification of the Declaration of weber products, Saint-Gobain Byggevarer as, May 2025, version 3.