

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH
EN 15804+A2+AC,
ISO 14025,
ISO 21930

GEBERIT SIGMA01/10/20/30 ACTUATOR PLATES Geberit International AG

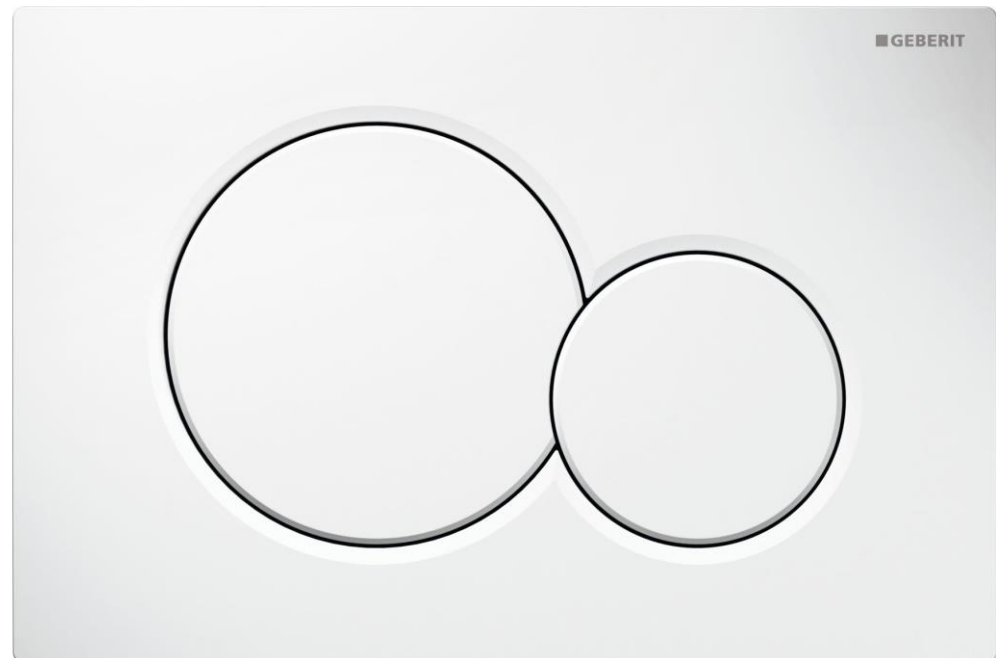
EPD HUB, HUB-0622

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GENERAL INFORMATION

MANUFACTURER

Manufacturer	Geberit International AG
Address	Schachenstrasse 77, CH-8645 Jona
Contact details	sustainability@geberit.com
Website	www.geberit.com

EPD STANDARDS, SCOPE AND VERIFICATION

Programme operator	EPD Hub, hub@epdhub.com
Reference standards	EN 15804+A2:2019+AC:2021 ISO 14025 ISO 21930
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Construction product
Category of EPD	Third-party-verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4 and D
EPD author	Georg Nauenburg
EPD verification	Independent verification of this EPD and data according to ISO 14025 ☐ Internal certification ☒ External verification
EPD verifier	Magaly González Vázquez, as an authorised verifier acting for EPD Hub Limited

The manufacturer retains the sole ownership of, 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 and if they are not compared in a building context.

PRODUCT

Product name	Geberit Sigma01/10/20/30 actuator plates
Additional labels	-
Product reference	115.770.11.5
Place of production	Jona, Switzerland
Period for data	2022
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	24 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 piece Geberit Sigma01 actuator plate
Declared unit mass	0.31 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	1.11
GWP-total, A1-A3 (kgCO ₂ e)	1.01
Secondary material, inputs (%)	37.4
Secondary material, outputs (%)	99.3
Total energy use, A1-A3 (kWh)	5.35
Total water use, A1-A3 (m ³ e)	0.04

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Geberit wants to play a leading role in the transition towards a sustainable sanitary industry. Sustainability has formed an integral component of the corporate strategy for more than 30 years. The Geberit Group has a group ISO certificate in accordance with ISO 9001 (quality), ISO 14001 (environment) and ISO 45001 (occupational health and safety). The company prepared life cycle assessments for key products from an early stage, and eco-design has been an integral part of the product development process since 2007. You can find comprehensive information on sustainability in the current annual report or at <https://www.geberit.com/company/sustainability>

PRODUCT DESCRIPTION

The Geberit Sigma actuator plate is used to trigger the toilet flush. It is used in combination with the Geberit Sigma concealed cistern, on which it is mounted with the aid of a mounting frame. The product is equipped with distance bolts and sound-insulating actuator rods.

The Geberit Sigma actuator plate features either one button for the stop-and-go flush or two buttons for the dual flush for water saving.

The assortment of Geberit Sigma actuator plates includes different functional and design variants. This EPD covers the Geberit Sigma01, Sigma10, Sigma20 and Sigma30 actuator plates made of plastic, white and black, and small components with partly chrome-plated surface finishes, as specified by the article numbers in the annex at the end of this EPD.

Further information is available in the local online catalogue.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	4	Europe
Minerals	0	-
Fossil materials	96	Europe
Bio-based materials	0	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.030

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 piece Geberit Sigma01 actuator plate
Mass per declared unit	0.31 kg
Functional unit	-
Reference service life	-

REACH – SUBSTANCES OF VERY HIGH CONCERN (SVHC)

The product does not contain any REACH SVHC substances in amounts greater than 0.1 % (1,000 ppm).

PRODUCT LIFE CYCLE

SYSTEM BOUNDARY

This EPD covers the life cycle modules listed in the following table.

Product stage			Construction stage		Use stage								End-of-life stage				Beyond system boundaries
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7		C1	C2	C3	C4	D
x	x	x	x	x	MND	MND	MND	MND	MND	MND	MND		x	x	x	x	x
Raw materials	Transport	Manufacturing	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use		Deconstr./demol.	Transport	Waste processing	Disposal	Reuse Recovery Recycling

MND = Modules not declared.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. The energy used by machines, and handling of waste formed in the production processes at the manufacturing facilities are also included in this stage. Furthermore, the study considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The product consists of a mounting frame, the actuator plate and fastening components. The mounting frame is made of post-consumer recycled acrylonitrile-butadiene-styrene (ABS). The actuator plate is made of injection-moulded acrylonitrile styrene acrylate (ASA). The share of secondary materials in the product is about 30 %. For the supply of raw materials, the total input of raw materials was mapped with corresponding European data. Further information on purchasing can be found in Geberit Annual Reports.

The transports from suppliers to Geberit are modelled based on material class-specific transport distances. The individual transport distances of each supplier are averaged according to the corresponding sales volumes. All A2 transports are carried out by lorry. Transport by rail, air and sea freight is not considered due to lack of relevance. On average, the transport distance from suppliers of raw and semifinished materials is about 310 km.

The production, assembly and packaging of the actuator plate takes place at the production site in Jona (CH). The Geberit plant is certified according to ISO 9001, ISO 14001 and ISO 45001. The current Group ISO certificate can be downloaded from <https://www.geberit.com>. Nearly all production waste from plastic components manufacturing is recycled internally. Material and production-related external waste of < 1 % is included. Production waste is transported to a waste disposal facility by lorry, which is estimated to be 50 km away. The manufacturing process is modelled with the specific electricity consumption measured in the plant. 100 % of electricity consumed in the Jona plant comes from a renewable source (hydroelectric power plants). The consumption of additives and water is negligible, i.e. it falls under the cut-off rules.

The production and provision of packaging material are also modelled in A3. The finished product is packaged with 60g of cardboard, 3g of small foils and 12g of installation instructions and labels.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts resulting from final products delivery to construction site (A4) cover direct fuel exhaust emissions and environmental impacts of fuel production, as well as related infrastructure emissions.

Transport from Geberit to customers within Europe is carried out by logistics partners via the modern, efficient Logistics Centre in Pfullendorf (DE) which is certified according to ISO 9001, ISO 14001 and ISO 45001. Distribution to countries outside Europe is not taken into account due to lack of relevance.

The following information has been considered:

- The majority of transports within Europe are carried out by lorry. Therefore, intercontinental transport by sea and air is not considered.
- The majority of vehicles in use are > 32 t Euro 6 class (> 85 %).
- The average transport distance in Europe from the production site to the Logistics Centre and to the consumer is approximately 580 km.

Further information on logistics can be found in the Geberit Annual Report.

In A5, there are no relevant environmental impacts during installation. The installation of a Geberit actuator plate is simple and requires no relevant energy or additional auxiliary materials or tools. Therefore, only the preparation of the waste treatment of packaging materials is taken into account in A5. Paper and cardboard are assumed to be fully recycled. Plastic foils are assumed to be disposed of in the municipal waste incineration plant.

PRODUCT USE AND MAINTENANCE (B1-B7)

The product use and maintenance phases are not considered. Air, soil and water impacts during the use phase have not been studied.

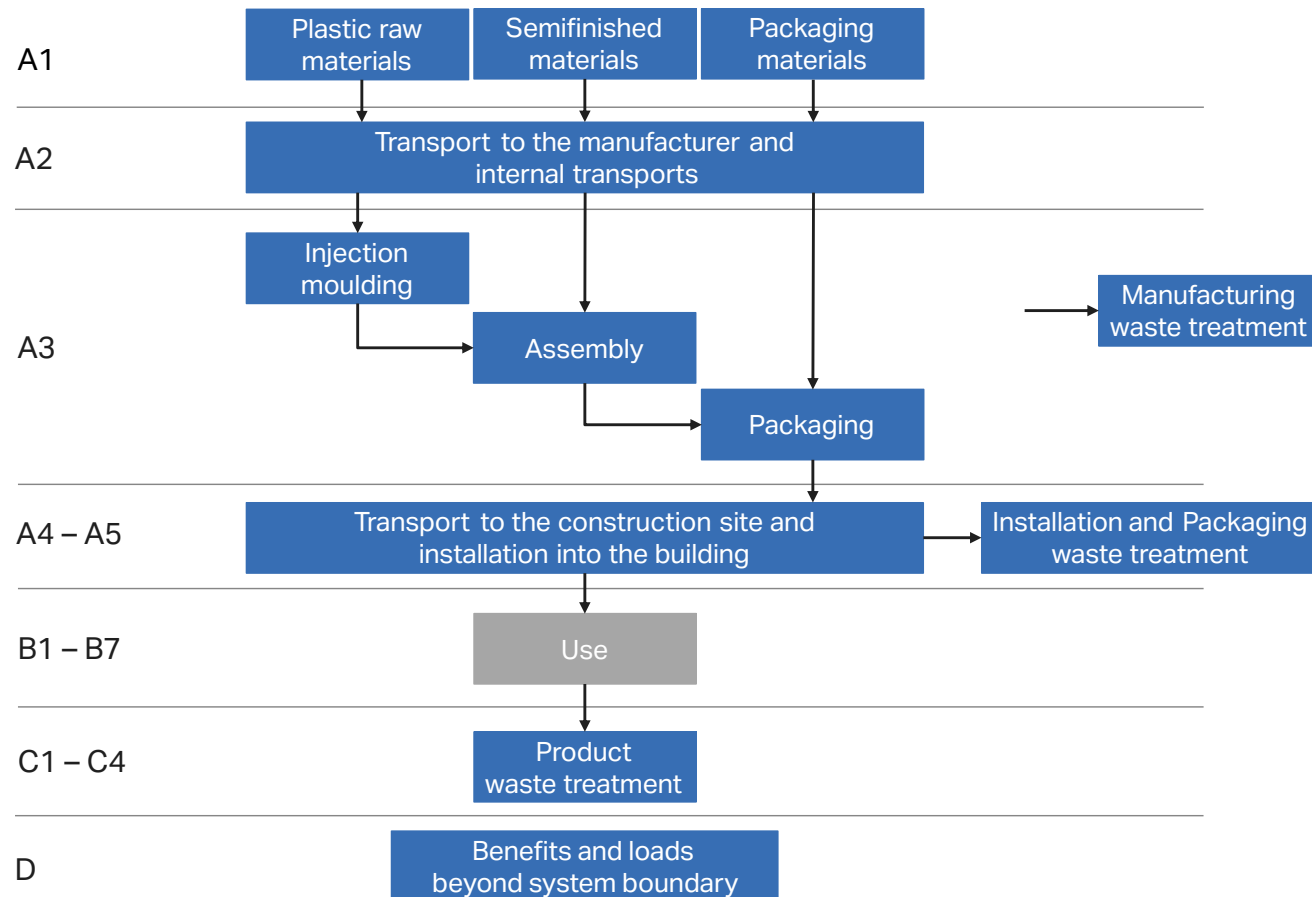
The product does not consume any electricity in use, all components work mechanically. Periodic maintenance is not necessary. The actuator plate makes it possible to choose between a large and a small flush volume. Thus, the product together with the connected flush valve and cistern can contribute to water saving. The actuator plate has been tested for 200 000 actuations. However, it might last even longer. The timeless design supports a long product use. The tool-free mounting allows for easy maintenance of the underlying cistern and valves. Actuator plates are backwards-compatible, thus a later replacement of the actuator plate to the existing frame is possible.

PRODUCT END-OF-LIFE (C1-C4, D)

As the consumption of energy and natural resources is negligible for disassembling the end-of-life product, the impacts of demolition are assumed to be zero (C1). The end-of-life product is assumed to be sent to the closest waste disposal facilities by lorry, which is estimated to be 50 km away (C2). It is generally assumed that all waste is collected and professionally separated after demolition on the construction site. The type of waste treatment is determined on the basis of the material class. Metals are assumed to be recycled. A recycling efficiency of 95 % is assumed, meaning that for every 1 kg of recycled material, 5 % loss going to landfill (C4) is considered. Plastics are disposed of in the municipal waste incineration plant. Although the plastic components of the product are basically suitable for recycling due to their material properties, they are conservatively modelled with thermal energy recovery. The product is not biodegradable.

In module D, materials that are recycled generate benefits. The secondary material content of the recycled material is considered in order to avoid overcounting benefits in module D. Plastics and elastomers are thermally recycled in a waste incineration plant, with energy and heat produced from their incineration (D). Waste of packaging and installation materials in A5 have benefits and loads that are also considered.

MANUFACTURING PROCESS



LIFE CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes that are stated as mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes for which data is available are included in the calculation. There is no neglected unit process with more than 1 % of total mass or energy flows. The module-specific total neglected input and output flows also do not exceed 5 % of energy use or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are made as per the reference standards and the applied PCR. In this study, allocations have been made in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging materials	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	24 %

Primary data refers to the manufacturing site in Jona (CH). The data of a Geberit Sigma01 actuator plate (art. no. 115.770.11.5) was chosen as a reference product. Products with an identical function and highly similar material composition are covered. The different articles are listed in Annex. The variability of the primary data or the emissions between the different articles did not amount to more than 50 % in GWP-fossil. Variation in GWP-fossil for modules A1-A3 for the article that is most different to the reference product is + 24 % (+ 0.27 kg CO₂e).

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using the One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards, ISO 14040 and ISO 14044. Ecoinvent 3.8 and One Click LCA databases were used as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP ¹⁾ -total	kg CO ₂ e	9,88E-1	1,35E-2	6,39E-3	1,01E0	1,93E-2	1,21E-1	MND	MND	MND	MND	MND	MND	MND	0E0	1,46E-3	7,41E-1	2,76E-6	-3,41E-1
GWP-fossil	kg CO ₂ e	9,82E-1	1,35E-2	1,14E-1	1,11E0	1,95E-2	1,24E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,45E-3	7,46E-1	2,76E-6	-3,41E-1
GWP-biogenic	kg CO ₂ e	5,47E-3	0E0	-1,09E-1	-1,03E-1	0E0	1,09E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-5,44E-3	0E0	0E0
GWP-luluc ²⁾	kg CO ₂ e	2,71E-4	5,06E-6	6,06E-4	8,82E-4	7,32E-6	1,78E-6	MND	MND	MND	MND	MND	MND	MND	0E0	5,37E-7	3,58E-5	6,2E-10	1,04E-4
Ozone depletion pot.	kg CFC-11e	6,92E-7	3,37E-9	9,82E-9	7,05E-7	4,87E-9	1,76E-10	MND	MND	MND	MND	MND	MND	MND	0E0	3,35E-10	2,59E-9	1,37E-12	-1,78E-8
Acidification potential	mol H ⁺ e	3,61E-3	4,3E-5	6E-4	4,25E-3	6,22E-5	1,08E-5	MND	MND	MND	MND	MND	MND	MND	0E0	6,16E-6	2,45E-4	2,71E-8	-2,69E-3
EP ³⁾ -freshwater	kg Pe	1,99E-5	9,64E-8	7,16E-6	2,72E-5	1,39E-7	6,73E-8	MND	MND	MND	MND	MND	MND	MND	0E0	1,19E-8	8,18E-7	1,76E-11	-1,97E-5
EP-marine	kg Ne	6,3E-4	9,49E-6	2,12E-4	8,52E-4	1,37E-5	3,33E-6	MND	MND	MND	MND	MND	MND	MND	0E0	1,83E-6	1,01E-4	1,02E-8	-3,12E-4
EP-terrestrial	mol Ne	6,21E-3	1,05E-4	1,52E-3	7,84E-3	1,52E-4	3,17E-5	MND	MND	MND	MND	MND	MND	MND	0E0	2,02E-5	1,04E-3	1,12E-7	-3,64E-3
POCP ⁴⁾ ('smog')	kg NMVOCe	2,63E-3	4,14E-5	3,84E-4	3,06E-3	6E-5	9,14E-6	MND	MND	MND	MND	MND	MND	MND	0E0	6,46E-6	2,69E-4	3,21E-8	-1E-3
ADP-minerals & metals	kg Sbe	4,84E-6	3,31E-8	6,34E-7	5,51E-6	4,78E-8	3,12E-8	MND	MND	MND	MND	MND	MND	MND	0E0	3,41E-9	3,49E-7	5,41E-12	3,22E-7
ADP ⁵⁾ -fossil resources	MJ	1,86E1	2,16E-1	1,81E0	2,07E1	3,12E-1	2,15E-2	MND	MND	MND	MND	MND	MND	MND	0E0	2,18E-2	2,81E-1	8,76E-5	-4,22E0
Water use	m ³ e depr.	5,01E-1	9,95E-4	1,35E0	1,85E0	1,44E-3	8,79E-4	MND	MND	MND	MND	MND	MND	MND	0E0	9,78E-5	3,32E-2	3,4E-7	-5,91E-2

1) GWP = Global warming potential; 2) luluc = land use and land use change; 3) EP = Eutrophication potential; 4) POCP = Photochemical ozone creation potential; 5) ADP = Abiotic depletion potential

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	4,75E-8	1,57E-9	7,93E-9	5,7E-8	2,27E-9	1,73E-10	MND	MND	MND	MND	MND	MND	MND	0E0	1,68E-10	3,19E-9	5,99E-13	-2,25E-8
Ionizing radiation	kBq U235e	3,47E-2	1,11E-3	1,55E-2	5,13E-2	1,61E-3	2,34E-4	MND	MND	MND	MND	MND	MND	MND	0E0	1,04E-4	2E-3	4,3E-7	-5,68E-2
Ecotoxicity, freshwater	CTUe	1,16E1	1,79E-1	2,72E0	1,45E1	2,59E-1	9,52E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,97E-2	1,74E0	5E-5	-7,07E0
Human toxicity, cancer	CTUh	2,07E-9	4,66E-12	7,69E-11	2,16E-9	6,74E-12	5,65E-12	MND	MND	MND	MND	MND	MND	MND	0E0	4,83E-13	1,24E-10	1,12E-15	3,69E-10
Human tox. non-cancer	CTUh	6,3E-9	1,82E-10	1,58E-9	8,07E-9	2,64E-10	8,51E-11	MND	MND	MND	MND	MND	MND	MND	0E0	1,95E-11	2,84E-9	2,37E-14	-3,11E-9
SQP ⁶⁾	-	1,18E0	2,51E-1	4,43E0	5,86E0	3,63E-1	1,95E-2	MND	MND	MND	MND	MND	MND	MND	0E0	2,52E-2	3,27E-1	1,99E-4	-4,97E0

6) SQP = Potential soil quality index

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER ⁷⁾ as energy	MJ	5,13E-1	2,79E-3	4,73E0	5,25E0	4,04E-3	1,93E-3	MND	MND	MND	MND	MND	MND	MND	0E0	2,46E-4	2,24E-2	1,82E-6	-8,02E-1
Renew. PER as material	MJ	0E0	0E0	1,09E0	1,09E0	0E0	-1,09E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	9,33E-3
Total use of renew. PER	MJ	5,13E-1	2,79E-3	5,83E0	6,34E0	4,04E-3	-1,09E0	MND	MND	MND	MND	MND	MND	MND	0E0	2,46E-4	2,24E-2	1,82E-6	-7,92E-1
Non-ren. PER as energy	MJ	1,22E1	2,16E-1	1,61E0	1,4E1	3,12E-1	2,15E-2	MND	MND	MND	MND	MND	MND	MND	0E0	2,19E-2	2,82E-1	8,76E-5	-4,22E0
Non-ren. PER as material	MJ	1,07E1	0E0	2,01E-1	1,09E1	0E0	-2,01E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-1,07E1	0E0	5,84E-3
Total use of non-ren. PER	MJ	2,29E1	2,16E-1	1,81E0	2,49E1	3,12E-1	-1,8E-1	MND	MND	MND	MND	MND	MND	MND	0E0	2,19E-2	-1,05E1	8,76E-5	-4,22E0
Secondary materials	kg	1,16E-1	6,08E-5	6,87E-2	1,85E-1	8,79E-5	5,42E-5	MND	MND	MND	MND	MND	MND	MND	0E0	6,07E-6	1,1E-3	1,8E-8	2,42E-2
Renew. secondary fuels	MJ	1,33E-4	5,36E-7	4,44E-3	4,58E-3	7,75E-7	3,41E-7	MND	MND	MND	MND	MND	MND	MND	0E0	6,12E-8	1,16E-5	5,66E-10	2,14E-6
Non-ren. secondary fuels	MJ	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Use of net fresh water	m ³	1,22E-2	2,86E-5	3,16E-2	4,38E-2	4,14E-5	2,74E-5	MND	MND	MND	MND	MND	MND	MND	0E0	2,83E-6	1,05E-3	1,08E-7	-3,25E-3

7) PER = Primary energy resources

END-OF-LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,47E-1	2,31E-4	8,51E-3	1,56E-1	3,34E-4	2,32E-4	MND	MND	MND	MND	MND	MND	MND	0E0	2,9E-5	3,22E-3	0E0	-5,57E-3
Non-hazardous waste	kg	4,69E-1	4,02E-3	2,03E-1	6,76E-1	5,82E-3	8,58E-3	MND	MND	MND	MND	MND	MND	MND	0E0	4,76E-4	3,43E-1	6,5E-4	-1,35E0
Radioactive waste	kg	1,42E-5	1,49E-6	5,32E-6	2,1E-5	2,15E-6	1,06E-7	MND	MND	MND	MND	MND	MND	MND	0E0	1,46E-7	7,43E-7	0E0	-2,02E-5

END-OF-LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for reuse	kg	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Materials for recycling	kg	0E0	0E0	0E0	0E0	0E0	7,25E-2	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	1,17E-2	0E0	0E0
Materials for energy rec.	kg	0E0	0E0	1,77E-3	1,77E-3	0E0	4E-3	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	2,97E-1	0E0	0E0
Exported energy	MJ	0E0	0E0	0E0	0E0	0E0	1,24E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	7,22E0	0E0	0E0

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global warming pot.	kg CO ₂ e	9,38E-1	1,34E-2	1,16E-1	1,07E0	1,93E-2	1,3E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,44E-3	7,44E-1	2,71E-6	-3,35E-1
Ozone depletion pot.	kg CFC-11e	4,67E-7	2,67E-9	8,41E-9	4,78E-7	3,86E-9	1,47E-10	MND	MND	MND	MND	MND	MND	MND	0E0	2,65E-10	2,28E-9	1,08E-12	-1,45E-8
Acidification	kg SO ₂ e	3,04E-3	3,49E-5	4,59E-4	3,53E-3	5,05E-5	8,42E-6	MND	MND	MND	MND	MND	MND	MND	0E0	4,79E-6	1,8E-4	2,01E-8	-2,3E-3
Eutrophication	kg PO ₄ ³ e	7,32E-4	7,39E-6	2,85E-4	1,02E-3	1,07E-5	1,14E-5	MND	MND	MND	MND	MND	MND	MND	0E0	1,09E-6	2,5E-4	4,45E-9	-6,87E-4
POCP ('smog')	kg C ₂ H ₄ e	1,72E-4	1,63E-6	2,99E-5	2,03E-4	2,35E-6	8,36E-7	MND	MND	MND	MND	MND	MND	MND	0E0	1,87E-7	7,56E-6	6,94E-10	-9,69E-5
ADP-elements	kg Sbe	4,69E-6	3,21E-8	5,55E-7	5,28E-6	4,65E-8	3,08E-8	MND	MND	MND	MND	MND	MND	MND	0E0	3,3E-9	3,35E-7	5,34E-12	3,17E-7
ADP-fossil	MJ	1,86E1	2,16E-1	1,8E0	2,06E1	3,12E-1	2,15E-2	MND	MND	MND	MND	MND	MND	MND	0E0	2,18E-2	2,81E-1	8,76E-5	-4,22E0

ANNEX: ARTICLES COVERED BY THIS EPD

	Article number	GWP-fossil, A1-A3 [kg CO ₂ e/item]
Sigma01	115.770.11.5	1.11
	115.770.DW.5	1.11
	115.773.11.5	1.11
	115.775.11.5	1.11
	115.790.11.5	1.11
Sigma10	115.758.KJ.5	1.38
	115.758.KM.5	1.38
Sigma20	115.882.KJ.1	1.25
	115.882.KM.1	1.25
Sigma30	115.883.KJ.1	1.23
	115.883.KM.1	1.23

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier. The process involved reviewing results, documents and compliance with the reference standards, ISO 14025, ISO 14040 and ISO 14044 following the process and checklists of the programme operator for:

- This Environmental Product Declaration
- The Life Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? [Read more online.](#)

This EPD has been generated by the One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

07.08.2023

