ENVIRONMENTAL PRODUCT DECLARATION

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

GEBERIT AQUACLEAN MERA CLASSIC

Geberit International AG

EPD HUB, HUB-2419
Published: 08.12.2024
Last updated: 08.12.2024
Valid until: 08.12.2029

Created with One Click LCA

KNOW HOW INSTALLED

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Geberit International AG
Address	Schachenstrasse 77, 8645 Jona, Switzerland
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 1.1, 5 Dec 2023
Sector	Electrical product
Category of EPD	Third-party-verified EPD
Scope of the EPD	Cradle to gate with options, A4-B7, 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 AquaClean Mera Classic
Additional labels	-
Product reference	146.200.11.1
Place of production	Jona, Switzerland
Period for data	2023
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	7 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 piece Geberit AquaClean Mera Classic shower toilet
Declared unit mass	34.6 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	178
GWP-total, A1-A3 ($kgCO_2e$)	171
Secondary material, inputs (%)	12.9
Secondary material, outputs (%)	23.4
Total energy use, A1-A3 (kWh)	777
Total water use, A1-A3 (m^3e)	2.75

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 AquaClean device is a WC with an integrated shower function. The device also fulfils all the functions of a conventional WC. Additional functions are subject to the specific models.

Hygiene functions:

- TurboFlush technology
- Odour extraction in the WC ceramic appliance
- WhirlSpray shower technology with multiple spray arm positions
- Oscillating spray arm
- Extendible Lady shower nozzle integrated in the spray arm
- Automatic spray arm cleaning before and after each shower procedure
- Dryer arm
- Descaling programme

Comfort functions:

- Spray intensity can be selected
- Dryer air intensity can be selected
- WC seat ring and WC lid with SoftClosing
- Remote control with e-ink display
- All functions can be operated using the remote control
- Three individual user profiles can be saved
- Shower toilet functions can be operated via an ergonomic lateral control panel

Further information is available in the local online product catalogue.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	23	Europe, Asia
Minerals	52	Europe
Fossil materials	25	Europe, Asia
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	1.8

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 piece Geberit AquaClean Mera Classic
Mass per declared unit	34.6 kg
Functional unit	Four small and one large flush with water for removal of human urine and faeces, anal showering and other hygiene functions daily for four persons over 15 years.
Reference service life	15 years

REACH – SUBSTANCES OF VERY HIGH CONCERN (SVHC)

The product contains the REACH SVHC substances listed below. The amount can be greater than 0.1 % (1,000 ppm) in individual components. In relation to the total product weight, they make up <0.1 %.

Substances of very high concern	EC Number	CAS Number
Lead	231-100-4	7439-92-1
1, 2-dimethoxyethane	203-794-9	110-71-4

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	x	MND	MND	MND	x	x	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. MNR = Modules not relevant.

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 sanitary ceramic WC pan, a WC seat ring and lid, as well as metal, electronic and plastic components. The share of external secondary materials in the product is < 1 %. The product does not contain any volatile organic compounds (VOC). The product is delivered with a cleaning set and a descaling agent. For the supply of raw materials, the total input of raw materials was mapped with corresponding European data. Further information on supply chain sustainability and material purchasing can be found in the Geberit Annual Report.

Transport from suppliers to Geberit is 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 or sea freight.

The ceramic pan is manufactured in Wesel (DE). For details regarding ceramic production, please see the EPD *Geberit Sanitary Ceramic*. The metal structure is made in Matrei a. Br. (AT) and powder-coated externally. Plastic components are produced by injection-moulding in several plants: Ruše (SI), Jona (CH), Pfullendorf (DE). All components are transported to Jona (CH) for final assembly and packaging. All Geberit plants involved are certified according to ISO 9001, ISO 14001 and ISO 45001. The current Group ISO certificate can be downloaded from https://www.geberit.com. A high share of production waste from plastic injection-moulding is recycled internally. The sources of electricity consumed in the Jona, Matrei a. Br. and Ruše plants for the manufacturing process are modelled with 100 % renewable sources. The Pfullendorf plant uses electricity, > 90 % of which is from renewable sources. The remaining electricity is modelled on the German average.

The production and provision of packaging material are modelled in A3. The finished product is normally packaged with plastic bags, cardboard and the user manual. Other packaging materials fall under the cut-off rules.

The manufacturing waste is assumed to be sent to the closest waste disposal facilities by lorry, which is estimated to be 50 km away.

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 transport 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 590 km.

Further information on logistics and how we consider ecological aspects of transport can be found in the Geberit Annual Report.
In A5, there is no relevant environmental impact during installation. The installation should be carried out by a professional plumber. Detailed installation information (e.g. a video) is available. Therefore, it is only the preparation of the waste treatment of packaging materials that is taken into account in A5. Cardboard and paper are assumed to be fully recycled. Plastics are assumed to be disposed of in the municipal waste incineration plant.

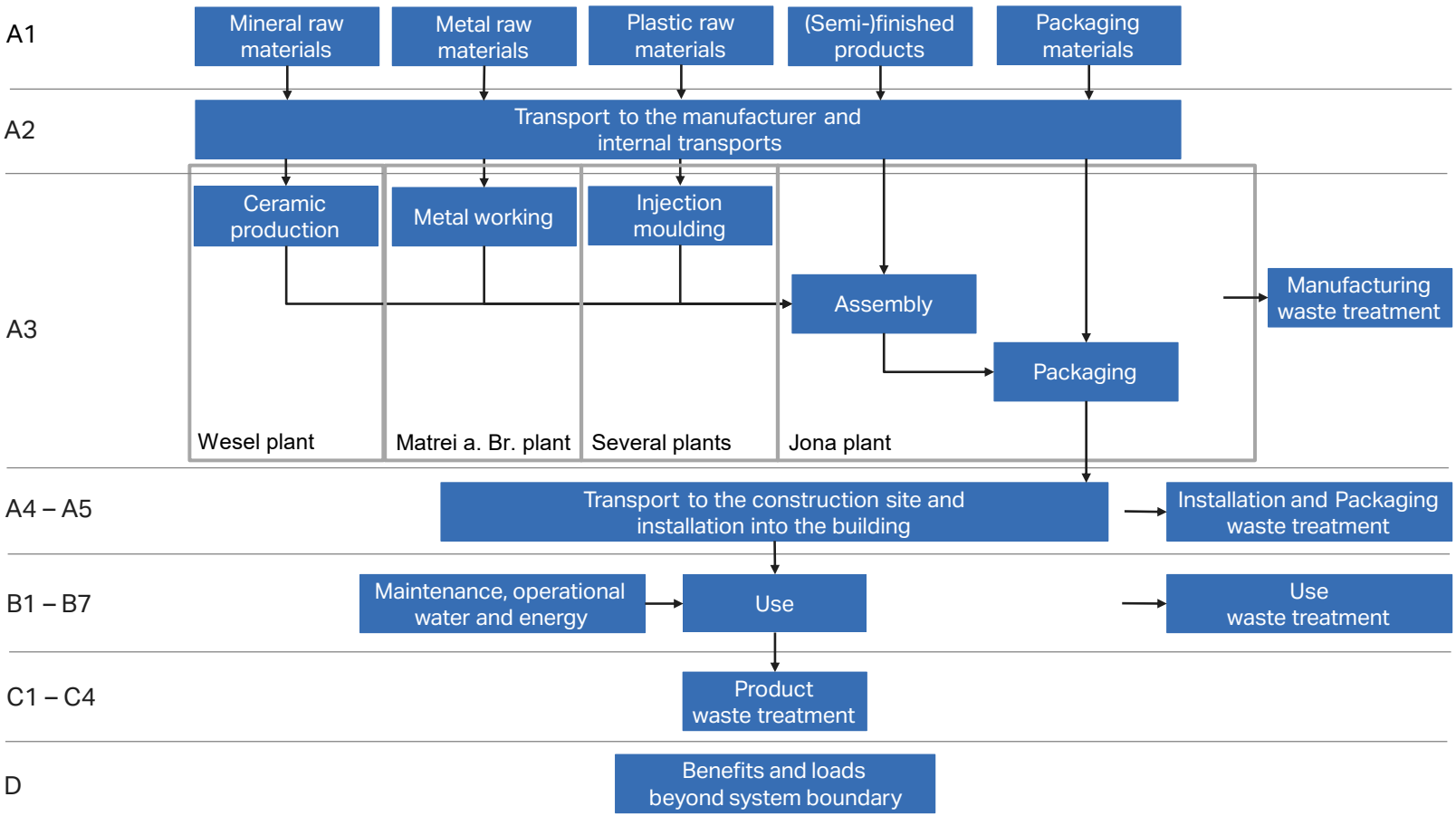
PRODUCT USE AND MAINTENANCE (B1-B7)

For the use of the product (B1), due to its functions, no toilet paper is necessary compared to a regular WC.
Periodic maintenance (B2) includes regular cleaning and half-yearly descaling. The outer cleaning of a shower toilet does not differ from that of a conventional toilet. The honeycomb filter for the odour extraction should be replaced annually and the batteries of the remote control should be replaced every three years.
Geberit AquaClean Mera Classic has a service life of at least 15 years. Under normal conditions, no repair, replacement or refurbishment is needed in this time and has thus not been modelled. Most of the main components can be replaced, thus extending the service life of the product. Spare parts are available. Customer service offers support in the event of any technical problems.
The product consumes about 81 kWh electricity per year (B6) with average settings and the use scenario. The main contribution to energy consumption is the heating of the water for the anal shower. The electricity consumption can thus be increased or reduced by changing the shower duration and temperature. Additional comfort functions like WC seat heating and dryer play a central role for electricity demand.
Water consumption (B7) for the shower function is about 779 litres per year. The water to flush the toilet is considered with six litres for large flush and three litres for small flush. However, the TurboFlush technology of the ceramic and most flush valves allow even lower flush volumes to be set. Furthermore, the use of greywater or rainwater is also possible for the toilet flush.
The reference scenario includes the following assumptions: a four-person household, one major and four minor bathroom visits each day, factory setting.

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 impact of demolition is assumed to be zero (C1). It is generally assumed that all waste is collected and professionally separated after demolition on the construction site. As the product contains electronic components, regulations for the disposal of waste electrical and electronic equipment (WEEE) apply. The product must be disposed of separately and not with other non-recyclable waste.
The end-of-life product is assumed to be sent to the closest waste disposal facilities by lorry, which are estimated to be 50 km away (C2). The type of waste treatment is determined on the basis of the material class. Plastics are disposed of in the municipal waste incineration plant. Although the plastic components of the product are very well suited for recycling due to their material properties, they are conservatively modelled with thermal energy recovery (C3). Metals are assumed to be 95 % recycled and 5 % going to landfill (C4). The mineral material of the product is assumed to be disposed of in the inert material landfill. The product is not biodegradable.
In module D, the thermal treatment of plastic generates benefits. This covers energy and heat produced from the incineration in a waste incineration plant. Packaging material waste in A5 has 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	Representative product
Variation in GWP-fossil for A1-A3	7 %

The data of a Geberit AquaClean Mera Classic (article number 460.200.11.1) was chosen as a reference product. Products with an identical function and highly similar material composition are covered. The different articles are listed in the 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 from the reference product is + 7 %.

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_2e	1,48E+02	2,63E+00	2,09E+01	1,71E+02	2,00E+00	7,39E+00	MND	1,41E+01	MND	MND	MND	4,81E+02	3,29E+02	0,00E+00	1,59E-01	2,33E+01	2,12E-01	-2,02E+01
GWP–fossil	kg CO_2e	1,48E+02	2,63E+00	2,79E+01	1,78E+02	2,00E+00	3,63E-01	MND	1,41E+01	MND	MND	MND	4,80E+02	3,28E+02	0,00E+00	1,59E-01	2,33E+01	2,12E-01	-2,01E+01
GWP–biogenic	kg CO_2e	0,00E+00	0,00E+00	-7,03E+00	-7,03E+00	0,00E+00	7,03E+00	MND	-4,25E-18	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP–luluc[2]	kg CO_2e	2,18E-01	1,04E-03	4,99E-02	2,69E-01	7,51E-04	8,75E-05	MND	3,16E-02	MND	MND	MND	1,12E+00	4,92E-01	0,00E+00	5,88E-05	1,11E-03	9,47E-05	-3,03E-02
Ozone depletion pot.	kg $CFC_{-11}e$	1,82E-05	6,13E-07	3,95E-06	2,28E-05	4,99E-07	8,71E-09	MND	8,43E-06	MND	MND	MND	2,44E-05	2,39E-05	0,00E+00	3,67E-08	1,59E-07	3,92E-08	-1,09E-06
Acidification potential	mol H^+e	2,45E+00	1,20E-02	1,19E-01	2,58E+00	6,38E-03	5,43E-04	MND	1,37E-01	MND	MND	MND	2,74E+00	3,01E+00	0,00E+00	6,75E-04	1,09E-02	9,28E-04	-2,82E-01
EP[3]-freshwater	kg Pe	9,22E-03	2,14E-05	7,92E-04	1,00E-02	1,43E-05	3,61E-06	MND	6,64E-04	MND	MND	MND	5,09E-02	3,90E-01	0,00E+00	1,30E-06	2,57E-05	1,10E-06	-5,37E-03
EP-marine	kg Ne	1,66E-01	2,98E-03	2,52E-02	1,94E-01	1,41E-03	1,60E-04	MND	2,46E-02	MND	MND	MND	3,64E-01	8,62E+00	0,00E+00	2,01E-04	4,52E-03	3,21E-04	-4,78E-02
EP-terrestrial	mol Ne	1,85E+00	3,30E-02	2,17E-01	2,10E+00	1,56E-02	1,49E-03	MND	2,63E-01	MND	MND	MND	4,14E+00	7,83E+00	0,00E+00	2,21E-03	4,79E-02	3,53E-03	-6,90E-01
POCP[4] ('smog')	kg NMVOCe	7,11E-01	1,10E-02	6,33E-02	7,85E-01	6,15E-03	4,39E-04	MND	6,76E-02	MND	MND	MND	1,13E+00	1,38E+00	0,00E+00	7,08E-04	1,27E-02	1,02E-03	-1,58E-01
ADP-minerals & metals	kg Sbe	3,11E-02	6,24E-06	1,57E-04	3,13E-02	4,90E-06	1,67E-06	MND	5,19E-04	MND	MND	MND	4,48E-03	3,65E-03	0,00E+00	3,74E-07	1,00E-05	2,63E-07	-3,33E-03
ADP[5]-fossil resources	MJ	2,17E+03	4,05E+01	4,44E+02	2,65E+03	3,20E+01	1,12E+00	MND	2,06E+02	MND	MND	MND	1,02E+04	4,56E+03	0,00E+00	2,39E+00	1,35E+01	2,66E+00	-2,39E+02
Water use	m^3e depr.	3,11E+03	1,79E-01	2,57E+03	5,68E+03	1,48E-01	3,51E-02	MND	1,41E+01	MND	MND	MND	2,79E+02	1,92E+03	0,00E+00	1,07E-02	9,76E-01	1,22E-02	-7,48E+00

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	1,04E-05	2,93E-07	1,21E-06	1,19E-05	2,32E-07	8,74E-09	MND	6,62E-07	MND	MND	MND	9,01E-06	4,38E-05	0,00E+00	1,84E-08	1,91E-07	1,85E-08	-2,06E-06
Ionizing radiation	kBq U235e	1,24E+01	1,94E-01	2,44E+00	1,50E+01	1,65E-01	1,27E-02	MND	1,55E+00	MND	MND	MND	2,77E+02	7,46E+01	0,00E+00	1,14E-02	8,86E-02	1,22E-02	-2,58E+00
Ecotoxicity, freshwater	CTUe	1,13E+04	3,57E+01	3,39E+02	1,16E+04	2,66E+01	4,70E+00	MND	3,47E+02	MND	MND	MND	6,95E+03	1,66E+05	0,00E+00	2,15E+00	6,05E+01	1,95E+00	-8,40E+03
Human toxicity, cancer	CTUh	5,57E-07	9,14E-10	9,99E-09	5,68E-07	6,91E-10	2,71E-10	MND	1,36E-08	MND	MND	MND	2,28E-07	2,11E-06	0,00E+00	5,29E-11	5,69E-09	5,19E-11	2,47E-08
Human tox. non-cancer	CTUh	1,56E-05	3,45E-08	2,17E-07	1,58E-05	2,71E-08	3,59E-09	MND	5,36E-07	MND	MND	MND	7,48E-06	4,84E-05	0,00E+00	2,13E-09	2,21E-07	1,26E-09	-1,21E-06
SQP[6]	-	9,30E+02	4,54E+01	4,22E+02	1,40E+03	3,73E+01	9,62E-01	MND	1,59E+02	MND	MND	MND	1,85E+03	3,44E+03	0,00E+00	2,76E+00	1,02E+01	5,67E+00	-3,45E+02

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	2,26E+02	4,54E-01	1,49E+02	3,75E+02	4,14E-01	1,03E-01	MND	1,54E+01	MND	MND	MND	2,08E+03	5,68E+02	0,00E+00	2,70E-02	7,83E-01	2,57E-02	-5,99E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,26E+02	4,54E-01	1,49E+02	3,75E+02	4,14E-01	1,03E-01	MND	1,54E+01	MND	MND	MND	2,08E+03	5,68E+02	0,00E+00	2,70E-02	7,83E-01	2,57E-02	-5,99E+01
Non-ren. PER as energy	MJ	1,95E+03	4,05E+01	4,34E+02	2,42E+03	3,20E+01	1,12E+00	MND	1,74E+02	MND	MND	MND	1,02E+04	4,55E+03	0,00E+00	2,39E+00	1,35E+01	2,67E+00	-2,39E+02
Non-ren. PER as material	MJ	2,19E+02	0,00E+00	1,20E+00	2,21E+02	0,00E+00	-2,75E+00	MND	0,00E+00	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,18E+02	0,00E+00	0,00E+00
Total use of non-ren. PER	MJ	2,17E+03	4,05E+01	4,35E+02	2,64E+03	3,20E+01	-1,63E+00	MND	1,74E+02	MND	MND	MND	1,02E+04	4,55E+03	0,00E+00	2,39E+00	-2,04E+02	2,67E+00	-2,39E+02
Secondary materials	kg	4,48E+00	1,14E-02	4,91E+00	9,40E+00	9,01E-03	2,67E-03	MND	5,17E-01	MND	MND	MND	1,05E+00	1,62E+01	0,00E+00	6,65E-04	3,25E-02	6,83E-04	4,28E+00
Renew. secondary fuels	MJ	4,55E-01	1,11E-04	5,90E-01	1,05E+00	7,95E-05	1,43E-05	MND	1,30E-02	MND	MND	MND	8,53E-03	2,26E-02	0,00E+00	6,71E-06	3,38E-04	1,59E-05	-3,17E-03
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	2,12E+00	5,16E-03	6,21E-01	2,75E+00	4,24E-03	1,03E-03	MND	3,35E-01	MND	MND	MND	8,79E+00	4,52E+01	0,00E+00	3,10E-04	3,23E-02	3,04E-03	-2,66E-01

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	2,31E+01	5,29E-02	9,48E-01	2,41E+01	3,43E-02	1,22E-02	MND	1,65E+00	MND	MND	MND	3,67E+01	4,47E+01	0,00E+00	3,17E-03	2,12E-01	3,71E-04	-3,28E+00
Non-hazardous waste	kg	5,97E+02	8,58E-01	5,85E+01	6,57E+02	5,96E-01	3,40E-01	MND	2,29E+01	MND	MND	MND	2,32E+03	8,18E+02	0,00E+00	5,21E-02	9,86E+00	1,83E+01	-7,73E+01
Radioactive waste	kg	4,73E-03	2,73E-04	1,03E-03	6,03E-03	2,21E-04	5,71E-06	MND	6,99E-04	MND	MND	MND	7,44E-02	2,34E-02	0,00E+00	1,60E-05	6,04E-05	7,80E-08	-9,59E-04

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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	9,84E+01	0,00E+00	8,27E+01	1,81E+02	0,00E+00	4,30E+00	MND	2,80E-01	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,22E-01
Materials for energy rec.	kg	5,32E-01	4,65E-03	8,43E-03	5,45E-01	0,00E+00	9,10E-02	MND	0,00E+00	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,10E+00	3,50E-02	0,00E+00
Exported energy	MJ	2,04E-01	0,00E+00	1,71E-01	3,75E-01	0,00E+00	2,83E+00	MND	2,81E+01	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,71E+02	0,00E+00	0,00E+00

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_2e	1,44E+02	2,61E+00	2,77E+01	1,74E+02	1,98E+00	3,97E-01	MND	1,39E+01	MND	MND	MND	4,75E+02	3,26E+02	0,00E+00	1,58E-01	2,33E+01	2,10E-01	-1,96E+01
Ozone depletion pot.	kg CFC_{-11}e	1,46E-05	4,86E-07	3,31E-06	1,84E-05	3,95E-07	7,25E-09	MND	5,97E-06	MND	MND	MND	2,11E-05	2,18E-05	0,00E+00	2,90E-08	1,33E-07	3,10E-08	-9,41E-07
Acidification	kg SO_2e	2,15E+00	9,58E-03	9,74E-02	2,26E+00	5,17E-03	4,25E-04	MND	1,13E-01	MND	MND	MND	2,33E+00	2,27E+00	0,00E+00	5,24E-04	7,92E-03	7,01E-04	-2,21E-01
Eutrophication	kg PO_4^3e	4,44E-01	1,86E-03	3,36E-02	4,80E-01	1,10E-03	5,57E-04	MND	4,32E-02	MND	MND	MND	1,79E+00	5,91E+00	0,00E+00	1,19E-04	7,75E-03	1,75E-04	-3,16E-01
POCP ('smog')	kg C_2H_4e	1,33E-01	3,75E-04	5,16E-03	1,38E-01	2,41E-04	4,60E-05	MND	4,57E-03	MND	MND	MND	9,52E-02	1,00E-01	0,00E+00	2,05E-05	2,84E-04	2,95E-05	-9,46E-03
ADP-elements	kg Sbe	3,10E-02	6,06E-06	9,11E-05	3,11E-02	4,77E-06	1,66E-06	MND	5,10E-04	MND	MND	MND	4,47E-03	3,22E-03	0,00E+00	3,62E-07	9,58E-06	2,57E-07	-3,32E-03
ADP-fossil	MJ	2,17E+03	4,05E+01	4,43E+02	2,65E+03	3,20E+01	1,12E+00	MND	2,06E+02	MND	MND	MND	1,02E+04	4,55E+03	0,00E+00	2,39E+00	1,35E+01	2,66E+00	-2,39E+02

ENVIRONMENTAL IMPACTS – FRENCH NATIONAL COMPLEMENTS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-elements	kg Sbe	3,09E-02	6,06E-06	4,02E-05	3,09E-02	4,77E-06	1,66E-06	MND	5,10E-04	MND	MND	MND	4,47E-03	3,22E-03	0,00E+00	3,62E-07	9,58E-06	2,57E-07	-3,32E-03
Hazardous waste disposed	kg	2,25E+01	5,29E-02	4,26E-01	2,30E+01	3,43E-02	1,22E-02	MND	1,65E+00	MND	MND	MND	3,67E+01	4,47E+01	0,00E+00	3,17E-03	2,12E-01	3,71E-04	-3,28E+00
Non-haz. waste disposed	kg	5,59E+02	8,58E-01	2,61E+01	5,86E+02	5,96E-01	3,40E-01	MND	2,29E+01	MND	MND	MND	2,32E+03	8,18E+02	0,00E+00	5,21E-02	9,86E+00	1,83E+01	-7,73E+01
Air pollution	m^3	7,48E+04	4,70E+02	1,77E+03	7,70E+04	3,32E+02	3,45E+01	MND	6,84E+03	MND	MND	MND	1,43E+05	1,08E+05	0,00E+00	2,86E+01	3,20E+02	2,20E+01	-1,67E+04
Water pollution	m^3	2,85E+03	2,84E+00	4,25E+01	2,89E+03	2,46E+00	1,37E+00	MND	2,05E+02	MND	MND	MND	9,44E+03	5,03E+03	0,00E+00	1,69E-01	3,53E+01	2,69E-01	-3,28E+03

ANNEX: ARTICLES COVERED BY THIS EPD

Article number	Product description	GWP-fossil, A1-A3 [kg CO_2e/item]
146.200.11.1	AqC Mera Classic w-a DE EN FR IT NL	178
146.200.21.1	AqC Mera Classic br-chr DE EN FR IT NL	191
146.208.11.1	AqC Maïra Classic white-alpine FR	178
146.208.21.1	AqC Maïra Classic bright chr FR	191

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 authorised verifier acting for EPD Hub Limited

08.12.2024

VERIFIED ISO 14025