

Environmental Product Declaration

in accordance with EN 15804



1 General information

1.1 Declaration holder

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Geberit is one of the pioneers when it comes to sustainability in the sanitary industry. Sustainability has formed part of the corporate strategy for more than 25 years. Most production sites are certified in accordance with ISO 9001 and 14001. In addition, all factories will be certified in accordance with OSHAS 18001 by 2018. Life cycle assessments were produced for key products from an early stage and Ecodesign has been an integral part of the product development process since 2008. As a member of the United Nations Global Compact, Geberit has shown its commitment to the ten principles of sustainable development. Current and comprehensive information regarding sustainability strategy and performance with respect to Geberit and Geberit products can be found in the current Annual Report. Furthermore, additional information can be found under www.geberit.com/sustainability.


1.2 Declared product

This declaration applies to Geberit washbasin tap models Piave and Brenta and covers both the shell of a building and the final installation.

1.3 Verification and validity

| | |
|---------------------|---|
| Programme holder: | Geberit International AG |
| Declaration number: | GEB_EPD_2480232331 |
| Validity: | 01/01/2017 to 01/01/2022 |
| Data calculated by: | Quantis www.quantis-intl.com |

Environmental declarations of construction products may not be comparable if they do not comply with the EN 15804.

| | |
|---|--|
| The European standard EN 15804 is used as the core product category rules (core PCR). | |
| Independent verification of the declaration and specifications in accordance with EN ISO 14025:2010 | |
| <input type="checkbox"/> Internal | <input checked="" type="checkbox"/> External |
|  | |
| Dr. Frank Werner | |

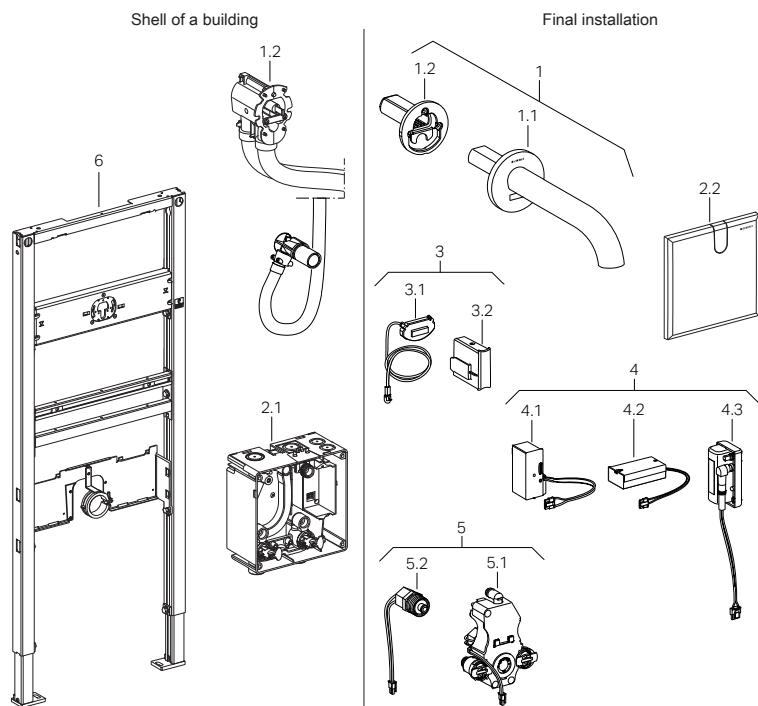
2 Product

2.1 Description and application

The modular Geberit tap system provides a system solution with electronic washbasin taps with maximum flexibility and safety in planning and installation. The system is subdivided into a shell of a building and a final installation. The articles for the shell of a building that are already preinstalled in the Duofix or GIS models are combined with the final installation for a wall-mounted or deck-mounted tap. The ready-to-fit set consists of a valve, control and power supply, with or without mixer. This is supplemented by a Piave or Brenta washbasin tap designed for the purpose, with a bright chrome-plated surface. Two outlet lengths are offered for the wall-mounted tap. The electronically controlled Piave and Brenta taps are easy to clean and service and have an attractive appearance. There are three models to choose from for the power supply: mains, battery or generator.

The product boasts the following key benefits:

- Attractive and streamlined designs
- Reliable planning
- Simple, secure installation
- Quick and easy maintenance



| | | | |
|-----|----------------------------|-----|--|
| 1 | Wall-mounted tap, complete | 4 | Power supply |
| 1.1 | Wall-mounted tap | 4.1 | Power supply unit |
| 1.2 | Wall fixing | 4.2 | Battery compartment |
| 2 | Below-washbasin box | 4.3 | Generator control unit |
| 2.1 | Housing, complete | 5 | Functional unit |
| 2.2 | Cover, complete | 5.1 | Functional unit (with/without mixer, with/without generator) |
| 3 | Electronics | 5.2 | Solenoid valve |
| 3.1 | Sensor technology | 6 | Installation element Duofix, complete |
| 3.2 | Control | | |

Further product components:

- Packaging
- Instructions

2 Product

The reference article used for the Geberit tap system is the wall-mounted Piave tap model with an outlet length of 220 mm, with mains operation (article number 116.282.21.1), with a Duofix installation element (article number 111.558.00.1) and cover plate (article number 116.425.11.1). The sales products listed below differ only insignificantly from the reference article and are therefore part of the range of validity of this environmental product declaration.

| | Type | Design | Country-specific designs | | | |
|---------------------|------------------|-----------------------------|--------------------------|--------------|--------------|--------------|
| Shell of a building | Duofix | Deck-mounted tap, concealed | 111.552.00.1 | 111.551.00.1 | 111.553.00.1 | 111.554.00.1 |
| | | | 111.557.00.1 | 111.556.00.1 | 111.563.00.1 | 111.566.00.1 |
| | | Wall-mounted tap, concealed | 111.559.00.1 | 111.558.00.1 | 111.560.00.1 | 111.567.00.1 |
| | | | 111.564.00.1 | 111.561.00.1 | 111.562.00.1 | 111.568.00.1 |
| | GIS | Deck-mounted tap, concealed | 461.145.00.1 | | | |
| | | Wall-mounted tap, concealed | 461.146.00.1 | | | |
| | Installation set | Deck-mounted tap, concealed | 116.130.00.1 | | | |

| | Type | Design | Mains | Battery | Generator | |
|--------------------|--------------|---|---------------------------|--------------|--------------|--------------|
| Final installation | Piave | Wall-mounted tap, concealed | 116.262.21.1 | 116.264.21.1 | 116.266.21.1 | |
| | | | 116.282.21.1 | 116.284.21.1 | 116.286.21.1 | |
| | | | 116.261.21.1 | 116.263.21.1 | 116.265.21.1 | |
| | | | 116.281.21.1 | 116.283.21.1 | 116.285.21.1 | |
| | | Deck-mounted tap, concealed | 116.182.21.1 | 116.184.21.1 | 116.186.21.1 | |
| | | | 116.181.21.1 | 116.183.21.1 | 116.185.21.1 | |
| | | | Deck-mounted tap, exposed | 116.162.21.1 | 116.164.21.1 | 116.166.21.1 |
| | 116.161.21.1 | 116.163.21.1 | | 116.165.21.1 | | |
| | Brenta | Wall-mounted tap, concealed | 116.272.21.1 | 116.274.21.1 | 116.276.21.1 | |
| | | | 116.292.21.1 | 116.294.21.1 | 116.296.21.1 | |
| | | | 116.271.21.1 | 116.273.21.1 | 116.275.21.1 | |
| | | | 116.291.21.1 | 116.293.21.1 | 116.295.21.1 | |
| | | Deck-mounted tap, concealed | 116.192.21.1 | 116.194.21.1 | 116.196.21.1 | |
| | | | 116.191.21.1 | 116.193.21.1 | 116.195.21.1 | |
| | | | Deck-mounted tap, exposed | 116.172.21.1 | 116.174.21.1 | 116.176.21.1 |
| | 116.171.21.1 | 116.173.21.1 | | 116.175.21.1 | | |
| | | Cover plate for washbasin tap with concealed functional unit | | 116.425.11.1 | | |
| | | Cover plate for washbasin tap with concealed functional unit and concealed trap | | 116.426.11.1 | | |

2.2 Characteristics

- System solution consisting of:
 - Articles for the shell of a building: Geberit Duofix, Geberit GIS or pure installation set
 - Articles for final installation: Mixer (with/without), power supply (mains, battery, self-sustaining thanks to generator), washbasin tap Piave or Brenta
- Wall-mounted taps with two outlet lengths (170 mm or 220 mm)
- Automatic flush actuation with infrared detection
- Self-adjusting infrared sensor
- Adjustable water saving mode
- Adjustable energy saving mode
- Volume flow control via tap aerator
- High-quality, track-proven solenoid valve
- Functions can be set and queried with the Geberit Service Handy

2.3 Technical data

| | Mains | Battery | Generator |
|---|-------------|---------|-----------|
| Flow rate at 3 bar | 5 l/min | 5 l/min | 5 l/min |
| Power consumption of power supply unit | 0.1 W | – | – |
| Energy consumption | 0.876 kWh/a | – | – |
| Battery / rechargeable battery service life when used 250 times per day | – | 1 year | 10 years |

To further restrict the flow rate, it is also possible to use tap aerators with a flow rate of 3.8 l/min (article number 243.636.00.1) or 1.9 l/min (article number 243.637.00.1) or 1.3 litres per minute (article number 243.638.00.1).

2.4 Consumption data

Annual water consumption is between 3,833 and 38,325 litres, depending on intensity of use. The corresponding energy consumption (without hot water supply) is less than 1 kWh per year.

| Consumption scenario | Intensity of use | | Water consumption | Energy consumption |
|--|------------------|----------|-------------------|--------------------|
| | per day | per year | litres per year | kWh per year |
| High use (airport/train station), 0.42 l per use | 250 | 91,250 | 38,325 | 0.876 |
| Medium use (office/restaurant), 0.42 l per use | 100 | 36,500 | 15,330 | 0.876 |
| Low use (office/restaurant), 0.42 l per use | 25 | 9,125 | 3,833 | 0.876 |

2.5 Conformity and label

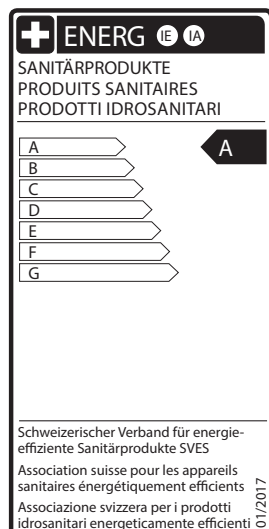
The product complies with the following standards and legal requirements, among others:

| | | |
|----------------------|------|--|
| DIN EN 248 | 2003 | Sanitary tapware – General specification for electrodeposited coatings of Ni-Cr |
| DIN 50930-6 | 2013 | Corrosion of metals – Corrosion of metallic materials under corrosion load by water inside of pipes, tanks and apparatus – Part 6: Evaluation process and requirements regarding the hygienic suitability in contact with drinking water |
| DIN EN ISO 3822 | 2009 | Acoustics – Laboratory tests on noise emission from appliances and equipment used in water supply installations |
| DIN EN 60730-1 | 2012 | Automatic electrical controls for household and similar use – Part 1: General requirements |
| DIN EN 15091 | 2014 | Sanitary tapware - Electronic opening and closing sanitary tapware |
| DIN EN 61000-6-3 | 2012 | Electromagnetic compatibility (EMC) – Part 6-3: Generic standards; Emission standard for residential, commercial and light-industrial environments |
| DIN EN 61000-6-1 | 2007 | Electromagnetic compatibility (EMC) – Part 6-1: Generic standards; Immunity standard for residential, commercial and light-industrial environments |
| 2011/65/EU | 2011 | Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) |
| 2012/19/EU (WEEE-II) | 2012 | Directive on Waste Electrical and Electronic Equipment (WEEE) |
| 1907/2006/EC | 2006 | Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) |

Relevant declarations of conformity can be downloaded from the websites of the local sales companies.

The product has the following labels and awards:

- Energy label (Switzerland): awarded the highest efficiency rating – Class A
- iF Product Design Award 2017 (DE)



2.6 Raw material

The wall-mounted tap Piave with an outlet length of 220 mm with the Duofix installation element consists of the following materials:

| Raw material | Unit | Mains | Battery | Generator |
|------------------------------------|-----------|-------------|-------------|-------------|
| Brass | g | 1,216 | 1,216 | 1,216 |
| Electronics | g | 198 | 165 | 168 |
| Copper | g | 1 | 1 | 1 |
| Plastic | g | 932 | 945 | 999 |
| Steel | g | 11,166 | 11,167 | 11,168 |
| Zinc | g | 168 | 168 | 168 |
| Ferrite | g | 2 | 2 | 5 |
| Total | kg | 13.7 | 13.7 | 13.7 |
| Recycling content of raw materials | % | 47.8 | 47.9 | 47.7 |

The product is delivered in a cardboard box (800 g) with the installation and operating instructions (664 g of paper). The total weight of the mains version is therefore 15.3 kg. The only difference between the Geberit wall-mounted taps Piave and Brenta is that the Brenta wall-mounted tap is slightly heavier (+20 g).

2.7 Manufacturing

Installation takes place at the Geberit sites in Jona (CH), Lichtenstein (DE) and Pfullendorf (DE). Several plastic and metal components are produced in Jona and Pfullendorf. The other components are purchased parts. All suppliers sign the Geberit code of conduct for suppliers and undergo a detailed selection and inspection procedure.

2.8 Distribution

The products are transported from Geberit to the end user within Europe by lorry via the modern and efficient central warehouse in Pfullendorf (DE). They are distributed via logistics partners with a modern lorry fleet.

2.9 Installation

Installation is simple and does not entail any relevant energy consumption or use of materials. The packaging waste produced (cardboard, paper) can be fully reused while the PE foil is converted into energy.

2.10 Use

Although use is not part of system scope of this environmental product declaration, some useful information is provided on this subject.

Touchless washbasin taps ensure low water consumption thanks to efficient control electronics. The actual amount of water and energy that is consumed during use partly depends on user behaviour. Consumption of this nature has therefore not been included in this environmental product declaration. Relevant technical operating data is nevertheless available in the "Technical data" chapter. For a useful life of ten years, maintenance work is only required for the battery-operated Geberit washbasin tap, resulting in charges to replace the battery.

2.11 End-of-life

Electronic and metal parts are fully recyclable when disposed of appropriately. It is assumed that plastic parts are converted into energy.

The tap can be uninstalled easily without requiring modifications to the domestic installation.

3 Life cycle assessment – calculation basis

3.1 System boundaries

This environmental product declaration is a cradle to gate with options declaration and includes the construction process and end-of-life. The use and demolition stages are not included, as the former depends on the user and the latter is not relevant. The study covers the European market situation.

| Product | | | Construction process | | Use | End-of-life | | | |
|--------------|-------------------------------|---------------|----------------------|----------------------------------|-------|-------------|-------------------------------|----------------------------|----------|
| Raw material | Transport to the manufacturer | Manufacturing | Distribution | Installation within the building | | Demolition | Transport to waste processing | Reuse, recovery, recycling | Disposal |
| A1 | A2 | A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 |
| x | x | x | x | x | – | – | x | x | x |

– not considered / not relevant

3.2 Technical scenario information and assumptions

(A1) For the raw material supply, the entire raw and recycled material input was modelled using corresponding data, including the losses of 1-6 % relating to material and production. Secondary raw materials comprise those environmental influences that arise from the collection of waste and from recycling. The following recycled content was recorded: 25 % for aluminium, 55 % for copper and steel, 33 % for brass and 100 % for cardboard.

(A2) For transportation from the suppliers in Europe and Asia to Geberit, standard transport distances were assumed for each country and the capacity contained in the background data was used. Class Euro-4 diesel lorries are used as the means of transport within Europe. Intercontinental transportation consists of freighters and subsequent local distribution by lorry.

(A3) The manufacturing of plastic and metal parts in Switzerland and Germany was approximated with European data records. The electricity consumption during mounting was mapped out with the Swiss electricity mix. The consumption of additional substances and water is negligible. Reliable background data was used for purchased components.

(A4) The distribution to the end users is based on the planned sales figures, three years after the market launch date. Transport primarily takes place with diesel lorries and is modelled using the average vehicle load fromecoinvent and the current Geberit fleet mix with predominantly Euro-5 vehicles.

(A5) Apart from packaging waste (paper, cardboard and PE foil), no additional material flows are generated during installation. 100 % of cardboard and paper is recycled. The PE foil is transported via 40 t lorry to the refuse incineration plant 10 km away and incinerated. The assumed energy content is 16 MJ, while the assumed energy efficiency is 42 % for heat and 14 % for electricity.

(C1-C4) Waste that is reused is removed from the product system without causing any environmental impact from the first life cycle. No credits are accounted for cases where production of such waste was avoided. With respect to disposal, it has been assumed that all waste is collected once it has been taken from the building site and is sorted appropriately. 100 % of all metal and electronics parts are recycled accordingly. Plastic parts (apart from the exceptions already described) are converted into energy. A transport distance of 10 km was assumed.

3.3 Data basis

This environmental product declaration is based on a comprehensive life cycle assessment according to ISO 14044:2006. A detailed background report, which meets the requirements of EN 15804, is used for verification. The stock data is based predominantly on the data that was provided by Geberit AG in 2016. For all further data, ecoinvent data (version 3.1, year 2014; www.ecoinvent.org) and the system model “cut-off by classification” were used. The quality of the data can therefore be considered to be good. Modelling and all calculations were carried out with the aid of an Excel spreadsheet.

The following results in the “Life cycle assessment – results” chapter relate to the reference article 116.282.21.1, Geberit tap system wall-mounted tap Piave with an outlet length of 220 mm, with mains operation, with a Duofix installation element (article no. 111.558.00.1) and cover plate (article no. 116.425.11.1). The wall-mounted tap with the Brenta design has a slightly higher weight, but is otherwise identical in construction. The weight difference does not lead to any significant changes to the results compared with the reference article. This means that the results are a maximum of 0.5 % higher for the wall-mounted tap with the Brenta design.

4 Life cycle assessment – results

4.1 Environmental impacts

| | Unit | Type | A1 | A2 | A3 | A4 | A5 | C2 | C3 | C4 |
|---|--------------------------------------|------|----------|----------|----------|----------|----------|----------|----------|----|
| Global warming (GWP) | kg CO ₂ -eq | S | 2.20E+01 | 8.72E-01 | 8.45E+00 | 5.06E-01 | 4.30E-01 | 2.28E-02 | 2.20E+00 | 0 |
| | | F | 2.53E+01 | | | | | | | |
| Ozone depletion (ODP) | kg CFC-11-eq | S | 1.37E-06 | 1.61E-07 | 7.87E-07 | 9.59E-08 | 2.73E-09 | 4.18E-09 | 1.54E-08 | 0 |
| | | F | 2.03E-06 | | | | | | | |
| Photochemical ozone creation (POCP) | kg C ₂ H ₄ | S | 1.46E-02 | 2.35E-04 | 2.92E-03 | 8.81E-05 | 3.26E-06 | 3.92E-06 | 2.03E-05 | 0 |
| | | F | 2.05E-02 | | | | | | | |
| Acidification (AP) | kg SO ₂ -eq | S | 1.87E-01 | 5.96E-03 | 3.92E-02 | 1.82E-03 | 9.13E-05 | 9.26E-05 | 5.62E-04 | 0 |
| | | F | 4.22E-01 | | | | | | | |
| Eutrophication (EP) | kg PO ₄ ³⁻ -eq | S | 1.20E-01 | 8.70E-04 | 1.65E-02 | 3.79E-04 | 9.23E-05 | 2.01E-05 | 4.94E-04 | 0 |
| | | F | 4.09E-01 | | | | | | | |
| Abiotic resource depletion (ADP), fossil | MJ | S | 2.73E+02 | 1.41E+01 | 1.22E+02 | 8.39E+00 | 8.74E-02 | 3.65E-01 | 6.09E-01 | 0 |
| | | F | 3.04E+02 | | | | | | | |
| Abiotic resource depletion (ADP), materials | kg Sb-eq | S | 1.48E-03 | 1.62E-06 | 1.17E-05 | 1.13E-06 | 2.55E-08 | 7.42E-08 | 1.48E-07 | 0 |
| | | F | 1.19E-02 | | | | | | | |

S Shell of a building

F Final installation

A1 Raw material

A2 Transport to the manufacturer

A3 Manufacturing

A4 Distribution

A5 Installation

C2 Transport to waste processing

C3 Reuse, recovery, recycling

C4 Disposal

4.2 Resource use

| | Unit | Type | A1 | A2 | A3 | A4 | A5 | C2 | C3 | C4 |
|--|----------------|------|----------|----------|----------|----------|-----------|----------|----------|-----|
| Use of primary energy, renewable, w/o raw material use | MJ | S | 2.23E+01 | 2.15E-01 | 7.07E+00 | 1.19E-01 | 2.34E+01 | 4.34E-03 | 4.95E-02 | 0 |
| | | F | 3.21E+01 | | | | | | | |
| Use of primary energy, renewable, raw material use | MJ | S | 0 | 0 | 2.34E+1 | 0 | -2.34E+01 | 0 | 0 | 0 |
| | | F | 0 | | | | | | | |
| Use of primary energy, renewable, total | MJ | S | 2.23E+01 | 2.15E-01 | 3.05E+01 | 1.19E-01 | 6.54E-3 | 4.34E-03 | 4.95E-2 | 0 |
| | | F | 3.21E+01 | | | | | | | |
| Use of primary energy, non-renewable, w/o raw material use | MJ | S | 2.80E+02 | 1.45E+01 | 1.44E+02 | 8.54E+00 | 2.81E+00 | 3.71E-01 | 1.52E+01 | 0 |
| | | F | 3.42E+02 | | | | | | | |
| Use of primary energy, non-renewable, raw material use | MJ | S | 1.05E+01 | 0 | 2.90E+00 | 0 | -2.90E+00 | 0 | -1.59E+1 | 0 |
| | | F | 5.38E+00 | | | | | | | |
| Use of primary energy, non-renewable, total | MJ | S | 2.90E+02 | 1.45E+01 | 1.47E+02 | 8.54E+00 | 9.86E-02 | 3.71E-01 | 6.98E-01 | 0 |
| | | F | 3.48E+02 | | | | | | | |
| Use of secondary materials | kg | S | 6.16E+00 | 0 | 1.46E+00 | 0 | 0 | 0 | 0 | 0 |
| | | F | 3.83E-01 | | | | | | | |
| Use of renewable secondary fuels | MJ | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | F | 0 | | | | | | | |
| Use of non-renewable secondary fuels | MJ | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | F | 0 | | | | | | | |
| Use of net fresh water | m ³ | S | IND | IND | IND | IND | IND | IND | IND | IND |
| | | F | IND | | | | | | | |

IND Indicator not declarable, as the background data from ecoinvent does not allow the calculation

4.3 Output flows and waste

| | Unit | Type | A1 | A2 | A3 | A4 | A5 | C2 | C3 | C4 |
|-------------------------------|------|------|----------|----------|----------|----------|----------|----------|----------|----|
| Hazardous waste | kg | S | 1.17E-03 | 7.63E-06 | 4.93E-04 | 4.58E-06 | 4.01E-07 | 2.07E-07 | 2.28E-06 | 0 |
| | | F | 1.27E-03 | | | | | | | |
| Radioactive waste | kg | S | 5.73E-04 | 9.19E-05 | 5.36E-04 | 5.46E-05 | 3.41E-07 | 2.37E-06 | 2.49E-06 | 0 |
| | | F | 1.07E-03 | | | | | | | |
| Non-hazardous waste | kg | S | 8.73E+00 | 1.04E+00 | 1.61E+00 | 7.37E-01 | 7.38E-03 | 1.62E-02 | 3.94E-02 | 0 |
| | | F | 3.34E+00 | | | | | | | |
| Components for reuse | kg | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | F | 0 | | | | | | | |
| Materials for recycling | kg | S | 0 | 0 | 5.45E-01 | 0 | 1.46E+00 | 0 | 1.28E+01 | 0 |
| | | F | 0 | | | | | | | |
| Materials for energy recovery | kg | S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | F | 0 | | | | | | | |
| Exported energy – electricity | MJ | S | 0 | 0 | 3.31E-01 | 0 | 4.05E-01 | 0 | 2.08E+00 | 0 |
| | | F | 0 | | | | | | | |
| Exported energy – heat | MJ | S | 0 | 0 | 9.93E-01 | 0 | 1.22E+00 | 0 | 6.25E+00 | 0 |
| | | F | 0 | | | | | | | |

5 Green building information

5.1 Green building

Geberit provides system solutions in the area of sustainable building and is an active member of the following associations:

- MINERGIE (CH)
- German Sustainable Building Council – DGNB (DE)
- Greenbuild, sustainable building (AU)
- US Green Building Council - USGBC (USA)

Certain information in this environmental product declaration can be used the assessment and verification of the various certification systems for sustainable building. The reference to the chapters of this environmental product declaration is contained in the following chapter.

5.2 DGNB

Relevant criteria for the German Sustainable Building Council (DGNB), scheme for new residential buildings, version 2015 on designing and assessing sustainable buildings:

| Topic | Criterion | Indicator | Chapter |
|--------------------|--|-----------|-----------|
| Ecological quality | Life cycle assessment – emissions-related environmental effects | ENV 1.1 | 4.1 |
| | Risks for the local environment | ENV 1.2 | 2.5, 2.6 |
| | Life cycle assessment – resource consumption | ENV 2.1 | 4.2 |
| | Potable water demand and waste water production | ENV 2.2 | 2.5, 2.10 |
| Economic quality | Building-related costs in the life cycle | ECO 1.1 | 2.10 |
| Technical quality | Cleaning and maintenance compatibility of the building structure | TEC 1.5 | 2.10 |
| | Ease of demolition / dismantling | TEC 1.6 | 2.11 |

The topics and criteria that have not been listed for this product are not directly relevant. With respect to process quality requirements, Geberit makes detailed information available in planning manuals and competence brochures as well as in technical data sheets on the homepage of the respective sales companies.

5.3 MINERGIE-ECO

The quality label MINERGIE-ECO of the Minergie organisation assesses new constructions and modernisation projects according to a requirements specification in the current valid version 1.3.

The product does not contain any constituents which violate the exclusion criteria of a MINERGIE-ECO certification (NA1.010, NA9.020 and MA1.010, MA9.030). The specification for the water saving concept for outlet taps (NG5.010, MG5.010) is met.

The additional requirements concerning the building concept, sound insulation and indoor climate areas are either not relevant or the product completely complies with them.

5.4 LEED v4

Relevant topics and criteria of the US Green Building Council for the design, construction, operation and maintenance of sustainable buildings in accordance with the Rating System for New Construction and Major Renovations, 2013:

| Topic | Criterion | Chapter |
|------------------------------|---|------------|
| Water Efficiency (WE) | Reduction of internal water consumption | 2.4 |
| | | 2.5 |
| | | 2.10 |
| Energy and Atmosphere (EA) | Optimized energy performance | 2.3 2.4 |
| Materials and Resources (MR) | Environmental product declaration | 1.3 |
| | Procurement of raw material | 1.1 |
| | Material ingredients | 2.6 |
| | | 4 |
| Innovation / Design (ID) | Innovation in design | 2.5 |

(WE) If the tap system has tap aerators with flow rates of 1.9 l/min or 1.3 l/min, the LEED requirement regarding water efficiency for public washbasin taps (0.5 gallons per minute at 60 psi or 1.9 l/min at 415 kPa in accordance with the Water efficiency Prerequisite) is undercut. The achievement of the credit being strived for is always dependent on all other installed sanitary appliances.

(EA) The product can be operated by a self-sustaining generator unit.

The topics and criteria that have not been listed for this product are not directly relevant.

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