

EU GPP Criteria for Sanitary Tapware

Green Public Procurement (GPP) is a voluntary instrument. This document provides the EU GPP criteria developed for the sanitary tapware product group. The accompanying Technical Background Report provides full details on the reasons for selecting these criteria and references for further information.

For each product/service group two sets of criteria are presented:

- The core criteria are those suitable for use by any contracting authority across the Member States and address the key environmental impacts. They are designed to be used with minimum additional verification effort or cost increases.
- The comprehensive criteria are for those who wish to purchase the best products available on the market. These may require additional verification effort or a slight increase in cost compared to other products with the same functionality.

1. Definition and Scope

This document covers procurement actions for sanitary tapware. For the purposes of these criteria, sanitary tapware is defined as covering three groups of products:

- 1) kitchen taps,
- 2) basin taps,
- 3) showerheads.

The definition of these product groups are as follows:

Tap - a small diameter directly or indirectly manually operated valve from which water is drawn.

Showerhead - either a fixed overhead or side shower outlet (or body jet or similar device), which may be adjustable, and which directs water onto the user or a moveable hand held shower outlet which is connected to the sanitary tapware via a shower hose and can be hung directly on the tapware or on the wall with the aid of an appropriate support (also known as a shower handset).

Included in the product group is sanitary tapware used typically in public utility buildings like schools, office buildings, hospitals, swimming pools, sport centres, and other for both kind of functionalities: non-domestic and domestic-like ones.

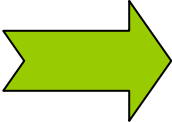
The GPP criteria do not cover the following product kinds:

- Bathtub taps,
- External taps,
- Special purpose taps and showerheads which need unrestricted water flow to fulfil the intended function (e.g. laboratory safety taps and showers).

Taps covered under the GPP criteria set for gardening products and services are excluded.

2. Key Environmental Impacts

The key environmental impacts from sanitary tapware are associated with their use phase, i.e. consumption of water and energy for heating the water. Other environmental impacts, which are however much smaller, are e.g. emissions from manufacturing and generation of hazardous and non-hazardous waste. Setting water efficiency requirements for sanitary tapware will contribute to a reduction in consumption of water and related energy for water heating; thus leading to reduction of environmental impacts connected with water supply, distribution and waste water treatment, as well as with energy production and the cooling water need for this process.

Key Environmental Impacts	GPP Approach
<ul style="list-style-type: none">• Water consumption, particularly in use phase• Energy consumption, in particular for water heating• Emissions to air and water, mainly due to energy generation and production processes	 <ul style="list-style-type: none">• Equip new and refurbished buildings with water and energy efficient sanitary tapware

The order of impacts does not necessarily reflect their importance.

Detailed information about the sanitary tapware product group, including the information about related legislation and other sources, can be found in the Technical Background Report.

3. EU GPP Criteria for Sanitary Tapware

Based on data and information in the Technical Background Report the following sets of EU GPP criteria are proposed:

- a) Criteria for purchasing of water efficient sanitary tapware (3.1),
- b) Criteria for installation works in new or renovated premises (3.2), which could be used in addition to the criteria for purchasing of water efficient sanitary tapware.

3.1 EU GPP criteria for sanitary tapware																				
Core criteria	Comprehensive criteria																			
SUBJECT MATTER	SUBJECT MATTER																			
Purchase of water-efficient sanitary tapware for new or refurbished buildings	Purchase of water-efficient sanitary tapware for new or refurbished building																			
TECHNICAL SPECIFICATIONS	TECHNICAL SPECIFICATIONS																			
<p>1A. Maximum water flow rate The maximum water flow rates to the basin/sink shall, independent of the water pressure, not exceed values presented in Table 1.</p> <p>Table 1 Maximum water flow rates for sanitary tapware</p> <table border="1"> <thead> <tr> <th>Product sub-group</th> <th>Water flow rate [l/min]</th> </tr> </thead> <tbody> <tr> <td>Kitchen taps</td> <td>10.0</td> </tr> <tr> <td>Basin taps</td> <td>8.0</td> </tr> <tr> <td>Showerheads^[1]</td> <td>12.0</td> </tr> </tbody> </table> <p>Note [1]: Showerheads with more than one spray pattern shall fulfil the requirement for the setting with the highest water flow.</p> <p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements</p>	Product sub-group	Water flow rate [l/min]	Kitchen taps	10.0	Basin taps	8.0	Showerheads ^[1]	12.0	<p>1A. Maximum water flow rate The maximum water flow rates to the basin/sink shall, independent on the water pressure, not exceed values presented in Table 1.</p> <p>Table 1 Maximum water flow rates for sanitary tapware</p> <table border="1"> <thead> <tr> <th>Product sub-group</th> <th>Water flow rate [l/min]</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Kitchen taps^[1]</td> <td>without a flow limiting device</td> <td>8.0</td> </tr> <tr> <td>with a flow limiting device^[2]</td> <td>6.0</td> </tr> <tr> <td>Basin taps</td> <td>6.0</td> </tr> <tr> <td>Showerheads^[3]</td> <td>9.0</td> </tr> </tbody> </table> <p>Note [1]: Kitchen taps can be supplied either with or without a flow limiting device. The maximum water flow rate is dependant on the presence or absence of such a device.</p>	Product sub-group	Water flow rate [l/min]	Kitchen taps ^[1]	without a flow limiting device	8.0	with a flow limiting device ^[2]	6.0	Basin taps	6.0	Showerheads ^[3]	9.0
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will be deemed to comply.
 Otherwise, results of sanitary tapware testing according to the test procedure contained in the relevant EN standard or an equivalent standard (see the list in Table 2 below) shall be submitted together with the tender to the contracting authority. The testing shall be conducted at pressure of 3.0 ± 0.2 bar. A mean value of three measurements shall not exceed the maximum water flow rate value indicated in Table 1. The testing shall be performed by laboratories that meet the general requirements of EN ISO 17025 or equivalent.
 A technical dossier from the manufacturer demonstrating that these requirements have been met will also be accepted.

Table 2 EN standards for sanitary tapware

Number	Title
EN 200:2008	Sanitary tapware. Single taps and combination of taps for water supply systems of type 1 and type 2 – General technical specification
EN 816:1997	Sanitary tapware. Automatic shut-off valves (PN10)
EN 817:2008	Sanitary tapware. Mechanical mixing valves (PN10) – General technical specifications
EN 1111:1998	Sanitary tapware. Thermostatic mixing valves (PN10) – General technical specification
EN 1112:2008	Sanitary tapware. Shower outlets for sanitary tapware for water supply systems type 1 and type 2 – General technical specification
EN 1286:1999	Sanitary tapware. Low pressure mechanical mixing valves. General technical specification
EN 1287:1999	Sanitary tapware. Low pressure thermostatic mixing valves. General technical specifications
EN 15091:2006	Sanitary tapware. Electronic opening and closing sanitary tapware

Note [2]: The device must allow for setting the default water flow rate at the value of max of 6 l/min. Active user intervention shall be required to activate higher water flow for a short period of time. At the end of such period the kitchen taps shall revert back to the default water flow rate of max 6 l/min.
 Note [3]: Showerheads with more than one spray pattern shall fulfil the requirement for the setting with the highest water flow.

Verification:

Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply.
 Otherwise, result of sanitary tapware testing according to the test procedure contained in the relevant EN standard or an equivalent standard (see the list in Table 2 below) shall be submitted together with the tender to the contracting authority for verification. The testing shall be conducted at pressure of 3.0 ± 0.2 bar. A mean value of three measurements shall not exceed the maximum water flow rate value indicated in Table 1. The testing shall be performed by laboratories that meet the general requirements of EN ISO 17025 or equivalent.
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<p>2. Temperature management Products shall be equipped with a device/technical solution which allows temperature/hot water management. The product shall be equipped with one or more of the following features: a hot water barrier, cold water supply in middle position, and/or thermostat valve.</p> <p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply. Other appropriate means of proof will also be accepted, e.g. manufacturer/supplier statement specifying the type of solution used and its technical parameters as appropriate shall be submitted.</p>	<p>2. Temperature management Products shall be equipped with a device/technical solution which allows temperature/hot water management. The product shall be equipped with one or more of the following features: a hot water barrier, cold water supply in middle position, and/or thermostat valve.</p> <p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply. Other appropriate means of proof will also be accepted, e.g. manufacturer/supplier statement specifying the type of solution used and its technical parameters as appropriate shall be submitted.</p>
<p>3. Time/Volume control for sanitary tapware for multiple user and high frequency use Basin taps and showerheads installed in non-domestic premises for multiple users and high frequency use (e.g. in schools, hospitals, swimming-pools, etc., but not e.g. in bathrooms of housing or dormitories) shall allow for limiting time of a single water use (i.e. water volume consumed). This can be done by equipping the products with devices which stop water flow after certain time if they are not used (e.g. sensors stop water flow when a user leaves the sensor range) and/or after a set time of use (e.g. time limiters, which stop water flow when the maximum flow time is exceeded).</p> <p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply. Other appropriate means of proof will also be accepted, e.g. manufacturer/supplier statement specifying the type of solution used and its technical parameters as appropriate (e.g. water flow time for time limiters) shall be submitted.</p>	<p>3. Time/Volume control for sanitary tapware for multiple user and high frequency use Basin taps and showerheads installed in non-domestic premises for multiple users and high frequency use (e.g. in schools, hospitals, swimming-pools, etc., but not e.g. in bathrooms of housing or dormitories) shall allow for limiting time of a single water use (i.e. water volume consumed). This can be done by equipping the products with devices which stop water flow after certain time if they are not used (e.g. sensors stop water flow when a user leaves the sensor range) and/or after a set time of use (e.g. time limiters, which stop water flow when the maximum flow time is exceeded).</p> <p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply. Other appropriate means of proof will also be accepted, e.g. manufacturer/supplier statement specifying the type of solution used and its technical parameters as appropriate (e.g. water flow time for time limiters) shall be submitted.</p>

4. Materials – Quality of coating

Sanitary products which have a metallic Ni-Cr coating (whatever the nature of the substrate material is) must comply with the standard EN 248:2003 "Sanitary tapware or an equivalent standard. General specification for electrodeposited coatings of Ni-Cr".

Verification:

Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply.
Otherwise, results of sanitary tapware testing according to the test procedure contained in the EN 248 standard or equivalent shall be submitted together with the tender to the contracting authority. The testing shall be performed by laboratories that meet the general requirements of EN ISO 17025 or equivalent. A technical dossier from the manufacturer demonstrating that these requirements have been met will also be accepted.

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A technical dossier from the manufacturer demonstrating that these requirements have been met will also be accepted.

4.2 Chemical and hygienic behaviour of materials

Substances and materials used in products in contact with drinking water shall comply with the requirements of Art. 10 of the Drinking Water Directive¹. These substances or materials or impurities associated with them should not release to water intended for human consumption compounds in concentrations higher than necessary for the purpose of their use (in concentrations higher than unavoidable according to the generally acknowledged technical standards) and do not, which could either directly or indirectly, reduce the protection of human health. The materials shall not pose any risk for human health till water temperature of 90°C. Further, they shall not cause any change of water quality with regard to its organoleptic parameters (taste, odour or turbidity).

¹ Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption, available online at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1998:330:0032:0054:EN:PDF>.

	<p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply. Other appropriate means of proof will be also accepted such as written evidence from the manufacturer that the above clause is met with a certificate confirming meeting hygienic requirements of materials/product in contact with drinking water, if applicable.</p>
<p>5. Product quality and lifetime extension</p> <p>5.1 Reparability and availability of spare parts Products shall be designed so that their exchangeable components can be replaced easily by the end-user. The tenderer shall guarantee that spare parts are available for at least ten years from the date of purchase.</p> <p>5.2 Warranty Guarantee of repair or replacement for minimum period of five years shall be given.</p> <p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply. Other appropriate means of proof will also be accepted such as written evidence from the manufacturer that the above clause is met.</p>	<p>5. Product quality and lifetime extension</p> <p>5.1 Reparability and availability of spare parts Product shall be designed so that their exchangeable components can be replaced easily by the end-user. The tenderer shall guarantee that spare parts are available for at least ten years from the date of purchase.</p> <p>5.2 Warranty Guarantee of repair or replacement for a minimum period of five years shall be given.</p> <p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply. Other appropriate means of proof will also be accepted such as written evidence from the manufacturer that the above clause is met.</p>
<p>6. User information The product shall be supplied with relevant user information, which provides advice on the product's proper and environmentally friendly use as well as its maintenance. The following information must be included on the packaging and/or in documentation accompanying the product:</p> <ul style="list-style-type: none"> (a) Information on proper product use to minimise water consumption and related energy consumption for water heating, (b) Information on maximum flow rate in l/min (tested as indicated in the verification of criterion 1). (c) Recommendations on proper use and maintenance (including cleaning and 	<p>6. User information The product shall be supplied with relevant user information, which provides advice on the product's proper and environmentally friendly use as well as its maintenance. The following information must be included on the packaging and/or in documentation accompanying the product:</p> <ul style="list-style-type: none"> (a) Information on proper product use to minimise water consumption and related energy consumption for water heating, (b) Information on maximum flow rate in l/min (tested as indicated in the verification of criterion 1). (c) Recommendations on proper use and maintenance (including cleaning and

<p>decalcification) of the product and information regarding repair or replacement of its components. This information shall highlight all relevant instructions, particularly:</p> <ul style="list-style-type: none"> - information on which spare parts can be replaced and how, including instructions concerning replacement of washers if taps drip water; - advice on cleaning taps and showerheads with appropriate materials in order to prevent damaging their surface. <p>(d) Installation instructions, including information on recommended minimum and maximum pressure the product is intended for.</p> <p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply. Other appropriate means of proof will also be accepted such as written evidence from the manufacturer that the above clause is met.</p>	<p>decalcification) of the product and information regarding repair or replacement of its components. This information shall highlight all relevant instructions, particularly:</p> <ul style="list-style-type: none"> - information on which spare parts can be replaced and how, including instructions concerning replacement of washers if taps drip water; - advice on cleaning taps and showerheads with appropriate materials in order to prevent damaging their surface. <p>(d) Installation instructions, including information on recommended minimum and maximum pressure the product is intended for.</p> <p>Verification: Products holding a relevant Type 1 Eco-label fulfilling the listed requirements will be deemed to comply. Other appropriate means of proof will also be accepted such as written evidence from the manufacturer that the above clause is met.</p>
<p align="center">AWARD CRITERIA</p>	
<p align="center">Additional points will be awarded [to be discussed during the meeting]</p>	
	<p>1. If the surface treatment is made following good environmental practices, as indicated in the most recent version of the Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics (BREF)². 'Good environmental practices' will be evaluated with reference, in particular, to aspects such as reuse of Chromium VI or use of Chromium III; zinc processing without cyanide; water recirculation systems; and substitution of chlorinated solvents with a less toxic alternatives when available.</p> <p>Verification: Products holding a Type I Eco-label shall be deemed to comply, provided that this Eco-label fulfils the requirements listed above. Other appropriate means of proof will also be accepted, e.g. a manufacturer/supplier statement specifying the type of technology used and its relationship to the technologies described in the abovementioned BREF document and/or declaration(s) and documentation from relevant supplier(s), if appropriate.</p>

² Integrated Pollution Prevention and Control Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics, European Commission, August 2006, available online at: http://www.ineris.fr/ippc/sites/default/files/files/stm_bref_0806.pdf.

3.2 EU GPP criteria for installation of sanitary tapware

These criteria shall be applied in addition to the criteria contained in section 3.1, if installation works are procured.

Core criteria	Comprehensive criteria
SUBJECT MATTER	SUBJECT MATTER
Installation of new water efficient sanitary tapware products or their replacement	Installation of new water efficient sanitary tapware products or their replacement
SELECTION CRITERION	SELECTION CRITERION
<p>1. Where sanitary tapware is being installed, the contractor shall demonstrate that suitably qualified and experienced personnel will undertake the installation or replacement of the sanitary tapware.</p> <p>Verification: The contractor shall supply a list of the persons responsible for the project, indicating educational and professional qualifications and relevant experience. This should include persons employed by subcontractors where the work is to be sub-contracted. The contractor shall also supply a list of sanitary tapware installation works the contractor has carried out over the last two years.</p>	<p>1. Where sanitary tapware is being installed, the contractor shall demonstrate that suitably qualified and experienced personnel will undertake the installation or replacement of the sanitary tapware.</p> <p>Verification: The contractor shall supply a list of the persons responsible for the project, indicating educational and professional qualifications and relevant experience. This should include persons employed by subcontractors where the work is to be sub-contracted. The contractor shall also supply a list of sanitary tapware installation works the contractor has carried out over the last two years.</p>
TECHNICAL SPECIFICATIONS	TECHNICAL SPECIFICATIONS
<p>2. The contractor shall ensure that, where the tapware includes sensors or time limiters</p> <ul style="list-style-type: none"> • For sensors, sensitivity and time delay shall be set, in agreement with the contracting authority, to appropriate levels to meet occupant needs without excessive water and energy consumption • Sensors shall be checked to ensure that they are working properly and are sensitive enough to detect typical occupant movements • Time limiters shall be set, in agreement with the contracting authority, to appropriate times to meet occupant needs without excessive increase in water and related energy consumption <p>Verification: Statement by the contractor that the relevant adjustments and calibrations will be carried out.</p>	<p>2. The contractor shall ensure that, where the tapware includes sensors or time limiters</p> <ul style="list-style-type: none"> • For sensors, sensitivity and time delay shall be set, in agreement with the contracting authority, to appropriate levels to meet occupant needs without excessive water and energy consumption • Sensors shall be checked to ensure that they are working properly and are sensitive enough to detect typical occupant movements • Time limiters shall be set, in agreement with the contracting authority, to appropriate times to meet occupant needs without excessive increase in water and related energy consumption <p>Verification: Statement by the contractor that the relevant adjustments and calibrations will be carried out.</p>

Explanatory notes

In procuring sanitary tapware, contracting authorities may let separate contracts (covering, for example, design, equipment supply, and installation) to different contractors. In such cases, different contractors may therefore be responsible for ensuring that different criteria are met.

Award Criteria: Contracting authorities will have to indicate in the contract notice and tender documents how many additional points will be awarded for each award criterion. Environmental award criteria should, altogether, account for at least xx% of the total points available.

[To be discussed during the meeting]

Maintenance

Sanitary tapware requires proper maintenance to ensure the proper functioning of the system. Over time, certain elements of sanitary tapware may lose their required properties, e.g. seals will not ensure proper protection against leaks and their replacement might be necessary. Thus, control of the state of sanitary tapware and replacement of used elements should be conducted on a scheduled programme.

Cost Considerations

Life cycle costing

The contracting authority may optionally wish to carry out a life cycle cost assessment, or to require the bidder to carry out such an assessment. Such an assessment should include the initial cost of the installation, its estimated lifetime, replacement costs of sanitary tapware and their estimated life, and water and energy cost of the sanitary tapware over its lifetime. The contracting authority will need to define its water (including hot water supply) price and the rate at which this increases, and its interest rate on investments. Life cycle costs may be considered as part of the award criteria where the “most economically advantageous tender” (MEAT) criterion is applied.