



EUROPEAN COMMISSION
DIRECTORATE-GENERAL JRC
JOINT RESEARCH CENTRE
Institute for Prospective Technological Studies (Seville)
Sustainable Production and Consumption

2nd Meeting of the AHWG for the Development of the Commission Decision establishing the Ecological Criteria for the Award of the Community Ecolabel for Taps and Showerheads

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RESEARCH EXECUTIVE AGENCY
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Draft Agenda

1.	Opening and welcome Brief introduction on the project background and political objectives of the Ecolabel and Green Public Procurement
2.	Criteria areas for taps and showerheads – general overview
3.	Criteria related to water efficiency: - Maximum water flow rate
4.	Criteria related to water efficiency: - Minimum water flow rate - Time limit/Volume limit (for non-domestic products) - Temperature management
5.	Manufacturing processes – surface treatment
6.	Materials: - Chemical and hygienic characteristics of materials - Exposed surface condition and quality of Ni-Cr coating
7.	Product quality and lifetime extension: - General requirements - Reparability and availability of spare parts - Warranty
8.	Generic criteria: - Packaging - User information - Information appearing on the EU Ecolabel
9.	Conclusions and close of the workshop

Joint Research Centre (JRC)

Development of the EU Ecolabel criteria for Water-using-Products – taps and showerheads General overview



IPTS - Institute for Prospective Technological Studies

Seville - Spain

<http://ipts.jrc.ec.europa.eu/>

<http://www.jrc.ec.europa.eu/>

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Proposed Ecolabel criteria – general overview

1. Criteria related to water and energy efficiency
2. Criteria related to manufacturing and materials
3. Criteria related to product quality and longevity
4. Generic criteria



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Proposed Ecolabel criteria – general overview

1. **Criteria related to water efficiency**
2. Criteria related to manufacturing and materials
3. Criteria related to product quality and longevity
4. Generic criteria



Criteria related to water efficiency

- **Criterion 1 – Maximum water flow rate**
- **Criterion 2 – Minimum water flow rate**
- **Criterion 3 – Temperature management**
- **Criterion 4 – Time limit/Volume limit for non-domestic basin taps and showerheads**

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Proposed Ecolabel criteria – general overview

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Criteria related to manufacturing and materials

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- **Criterion 6 – Materials**
 - **Criterion 6a – Chemical and hygienic characteristics of materials**
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Proposed Ecolabel criteria – general overview

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Criteria related to product quality and longevity

- **Criterion 7 – Product quality and lifetime extension**
 - **Criterion 7a – General requirements**
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Proposed Ecolabel criteria – general overview

1. Criteria related to water efficiency
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4. **Generic criteria**



Generic criteria

- **Criterion 8 – Packaging**
- **Criterion 9 – User information**
- **Criterion 10 – Information appearing on the EU Ecolabel**

Definitions:

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).

Points for discussion:

- Substitution of “manually” with “mechanically or automatically” in the definition of a tap
- Inclusion of showerhead system into the definition
- Electric showers

Thank you for the attention

Development of the EU Ecolabel criteria for Water-using-Products – taps and showerheads

Water efficiency criteria

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Criteria related to water and energy efficiency

1. Criterion 1 – Maximum water flow rate
2. Criterion 2 – Minimum water flow rate
3. Criterion 3 – Temperature management
4. Criterion 4 – Time limit/Volume limit for non-domestic basin taps and showerheads



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Criteria related to water and energy efficiency

- 1. Criterion 1 – Maximum water flow rate**
2. Criterion 2 – Minimum water flow rate
3. Criterion 3 – Temperature management
4. Criterion 4 – Time limit/Volume limit for non-domestic basin taps and showerheads



Proposed criterion

Due to the variability of use purposes and related different water flow needs products covered by the scope of group of "Sanitary Tapware" have been divided into three sub-groups: a) kitchen taps, b) basin taps and c) showerheads (including shower handsets). The maximum water flow rates to the basin, independently on water pressure, shall not exceed the values presented in Table 1.

Table 1 Maximum water flow rates for sanitary tapware

Product sub-group		Water flow rate [l/min]
Kitchen taps	without flow limiting device	6.0
	with flow limiting device*	8.0
Basin taps		6.0
Showerheads**		9.0

*The device shall allow for setting the default water flow rate (i.e. water-saving mode) 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.

**Showerheads with more than one spray pattern shall fulfil this requirement for a setting with the highest water flow.

Assessment and verification

The applicant shall declare the product's compliance with the requirement and specify the maximum water flow rate (in l/min) of the product submitted for labelling procedure together with results of tests conducted in accordance with testing procedure indicated in respective EN standards for the given kind of product (see Table 2). The testing shall be conducted at pressure of 3.0 ± 0.2 bar. A mean value of three measurements shall not exceed the respective maximum flow rate values indicated in Table 1. The testing shall be performed by laboratories that meet the general requirements of EN ISO 17025 or equivalent.

Additionally, for kitchen taps with an option of water-saving mode, a description of the solution/device applied (i.e. its main technical parameters and setting and/or use instructions) shall be submitted.

For showerheads with more than one spray pattern maximum flow rate shall be specified at least for the mode with the highest water flow.

Assessment and verification

Table 2 EN standards regarding product group of 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

Questions and points for discussion:

- Are the presented maximum water flow rate values appropriate?
- Shall the maximum flow rates be the same for kitchen and basin taps?
 - (issue of distinguishing between them, definition)
- Shall the same water flow rate values be proposed to some non-domestic products?
 - (issue of distinguishing between them, definition)
- Proposals of maximum water flow rates for low pressure systems
- Do you agree with the verification and assessment procedure proposed?
 - Very differentiated feedback received: third party/testing results from an accredited laboratory vs. self declaration

Content

Criteria related to water and energy efficiency

1. Criterion 1 – Maximum water flow rate
- 2. Criterion 2 – Minimum water flow rate**
3. Criterion 3 – Temperature management
4. Criterion 4 – Time limit/Volume limit for non-domestic and showerheads



Criterion 2 – Minimum water flow rate

Proposed criterion

The minimum water flow rates to the basin/sink, independent on the water pressure, shall not be lower than the values given in Table 3:

Table 3 Minimum water flow rates for sanitary tapware

Product sub-group	Water flow rate [l/min]
Kitchen taps	4.0
Basin taps	4.0
Showerheads	6.0

Assessment and verification

The applicant shall declare the product's compliance with the requirement and specify the minimum flow rate of the product submitted for labelling procedure together with results of tests conducted in accordance with testing procedure indicated in respective EN standards for the given kind of product (as given in Table 2). The testing shall be conducted at pressure of 3.0 ± 0.2 bar. A mean value of three measurements shall not be lower than the minimum flow rate values given in Table 3. The testing shall be performed by laboratories that meet the general requirements of EN ISO 17025 or equivalent.

Questions and points for discussion:

- **Are minimum flow rates necessary?**
- **Do you consider the presented minimum water flow rate values appropriate?**
- **Special cartridges – lower flow rates?**
- **Do you agree with the verification and assessment procedure proposed?**

Content

Criteria related to water and energy efficiency

1. Criterion 1 – Maximum water flow rate
2. Criterion 2 – Minimum water flow rate
- 3. Criterion 3 – Temperature management**
4. Criterion 4 – Time limit/Volume limit for non-domestic and showerheads



Proposed criterion

Products shall be equipped with a device/technical solution which allows temperature/hot water management, e.g. through limiting water temperature/hot water supply.

Some possible solutions are for example hot water barrier, cold water supply in middle position, thermostat valves.

Assessment and verification

The applicant shall declare compliance with the requirement and provide a documentation describing the technology/device applied in the product to the awarding competent body as part of the application.

Questions and points for discussion:

- Do you agree with the proposed criterion?

Content**Criteria related to water and energy efficiency**

1. Criterion 1 – Maximum water flow rate
2. Criterion 2 – Minimum water flow rate
3. Criterion 3 – Temperature management
4. **Criterion 4 – Time limit/Volume limit for non-domestic basin taps and showerheads**

Proposed criterion

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 hotel rooms 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) or after set time of use (e.g. time limiters, which stop water flow when the maximum flow time is exceeded).

Assessment and verification

The applicant shall declare the product's compliance with the requirement and specify the type of solution used and its technical parameters, as appropriate (e.g. setting maximum water flow time for time limiters), to the awarding competent body as part of the application.

Questions and points for discussion:

- **Shall this proposed EU Ecolabel criterion include indications for:**
 - maximum flow times,
 - maximum sensor response/delay time.

- **If yes, what values are considered appropriate?**

- **Or is the requirement of applying the device (leaving the freedom to end-user/owner to define the values – adjusting them best to the intended use purpose) sufficient?**

- **Definition of domestic vs. non-domestic products**

Thank you for the attention

Development of the EU Ecolabel criteria for Water-using-Products – taps and showerheads

Manufacturing and materials criteria

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Criteria related to manufacturing and materials

1. Criterion 5 – Manufacturing processes – surface treatment
2. Criterion 6 – Materials
 - a) Criterion 6a – Chemical and hygienic characteristics of materials
 - b) Criterion 6b – Exposed surface condition and quality of Ni-Cr coating



Content

Criteria related to manufacturing and materials

- 1. Criterion 5 – Manufacturing processes – surface treatment**
2. Criterion 6 – Materials
 - a) Criterion 6a – Chemical and hygienic characteristics of materials
 - b) Criterion 6b – Exposed surface condition and quality of Ni-Cr coating



Proposed criterion

Manufacturing processes, independently of their location, shall be conducted complying with the current respective EU legislation. The applicant shall specify which manufacturing plants make the surface treatment and also shall demonstrate that the treatment is made following good environmental practices, as indicated in the last available version of the Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics (BREF) .

To evaluate good environmental practices the competent body can check particularly aspects like reuse of the Chromium VI or use of Chromium III, zinc processing without cyanide, water recirculation systems, not using chlorinated solvents when alternative less toxic is available, etc.

Assessment and verification

The applicant shall declare compliance with the requirement and provide a documentation describing the production technologies used and their reference to the technologies described in the abovementioned BREF document and/or, when appropriate, attach respective declaration(s) and documentation from their supplier(s).

Questions and points for discussion:

- The Catalan Ecolabel adds additionally in their verification procedure that "Manufacturers (and/or their suppliers, if applicable) being certified/registered under EMAS or certified under ISO 14001 are considered to comply with the requirements of this criterion".
Shall a similar verification and assessment proposal be accepted under the EU Ecolabel scheme?
- Shall the criterion be extended by a requirement on submitting a waste management concept by the respective manufacturer/supplier(s)?
- Is the formulation of the criterion specific enough?
- Mentioned by the stakeholders in their feedback as difficult to be fulfilled
- How can the competent body verify fulfilling of this criterion?

Content**Criteria related to manufacturing and materials**

1. Criterion 5 – Manufacturing processes – surface treatment
2. **Criterion 6 – Materials**
 - a) **Criterion 6a – Chemical and hygienic characteristics of materials**
 - b) Criterion 6b – Exposed surface condition and quality of Ni-Cr coating

Proposed criterion 6a – Chemical and hygienic characteristics of materials

Substances and materials used in products in contact with drinking water shall comply with the requirements of the Article 10 of the Drinking Water Directive. These substances or materials or impurities associated with them shall not release to water intended for human consumption compounds in concentrations higher than necessary for the purpose of their use and do not, either directly or indirectly, reduce the protection of human health.

All materials in contact with water intended for human consumption shall present no health risk up to the temperature of 90°C. They shall not cause any deterioration in water intended for human consumption with regard to its quality, appearance, odour or taste. Within the recommended limits for correct operation (i.e. conditions of use as given in respective EN standards) the materials shall not undergo any change which would impair the performance of the product. Materials without adequate resistance to corrosion shall be protected.

Assessment and verification

Option 1 – The applicant shall declare the product's compliance with the respective legal requirements in those countries where it is put on the market to the awarding competent body as part of the application.

Option 2 – The applicant shall declare the product's compliance with the requirement and provide a copy of certificate stating that the product is suited for contact with drinking water (with regard to hygienic requirements) from one respective national accredited laboratory issuing such certificates (e.g. DVGW, KIWA) to the awarding competent body as part of the application.

Option 3 – It could be considered to postpone inclusion of this criterion to the next revision process, when the harmonised testing methods shall already be available.

Questions and points for discussion:

- Shall a national testing and verification scheme be proposed until the common EU test methods are available?
- Shall this criterion be recommended for the revision process of the EU Ecolabel for sanitary tapware (option 3) due to the lack of EU wide standardised test methods?

Content**Criteria related to manufacturing and materials**

1. Criterion 5 – Manufacturing processes – surface treatment
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 - a) Criterion 6a – Chemical and hygienic characteristics of materials
 - b) Criterion 6b – Exposed surface condition and quality of Ni-Cr coating**

Proposed criterion**Criterion 6b – Exposed surface condition and quality of Ni-Cr coating**

Sanitary product which has a metallic Ni-Cr coating (whatever the nature of the substrate material is) has to comply with the requirements of the standard EN 248 “Sanitary tapware. General specification for electrodeposited coatings of Ni-Cr”.

Assessment and verification

The applicant shall declare the product's compliance with the requirement and provide results of test conducted in accordance with testing procedure indicated in respective EN standard. The testing shall be performed by laboratories that meet the general requirements of EN ISO 17025 or equivalent.

Thank you for the attention

Development of the EU Ecolabel criteria for Water-using-Products – taps and showerheads

Product quality and lifetime extension

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Criteria related to product quality and lifetime extension

Criterion 7 – Product quality and lifetime extension

- Criterion 7a – General requirements
- Criterion 7b – Reparability and availability of spare parts
- Criterion 7c – Warranty



Proposed criterion 7a – General requirements

Product shall comply with the general requirements of the respective EN standards (listed in Table 2).

Where applicable, cleaning of the product elements, which might be necessary under normal use conditions, shall be possible with use of simple tools/agents.

Table 2 EN standards regarding product group of 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

Proposed criterion 7b – Reparability and availability of spare parts

Product shall be designed in the way that its exchangeable components can be replaced easily by the end-user and information which elements can be replaced should be clearly indicated in the information sheet attached to the product. The applicant shall provide also clear instructions to the end-user to enable basic repairs to be undertaken.

The applicant shall further ensure that spare parts are available for at least ten years from the end of production.

Proposed criterion 7c – Warranty

The applicant shall ensure warranty for repair or replacement of minimum five years.

Assessment and verification

The applicant shall declare the product's compliance with these requirements and provide samples of the product information sheet and warranty terms to the awarding competent body as part of the application. With regard to criterion a) the applicant shall provide additionally test results conducted according the respective EN standards to the awarding competent body as part of the application. The testing should be performed by laboratories that meet the general requirements of EN ISO 17025 or equivalent.

Questions and points for discussion:

- **Length of the period of:**
 - **availability of spare parts,**
 - **warranty.**
- **What shall be covered by warranty terms?**
- **Which key replaceable components are in sanitary tapware and shall be available after the production stops?**
- **How to verify the availability of spare parts?**

Thank you for the attention



**Development of the EU Ecolabel
criteria for Water-using-Products
– taps and showerheads**

Generic criteria

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V Generic criteria



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Generic criteria

- 1. Criterion 8 – Packaging
- 2. Criterion 9 – User information
- 3. Criterion 10 – Information appearing on the EU Ecolabel



Content

Generic criteria

1. **Criterion 8 – Packaging**
2. Criterion 9 – User information
3. Criterion 10 – Information appearing on the EU Ecolabel



Criterion 8 – Packaging

Proposed criterion

Packaging shall meet the following requirements:

- (a) all packaging components shall be easily separable by hand into individual materials to facilitate recycling,
- (b) where used, cardboard packaging shall consist of at least 80 % recycled material,
- (c) be made out of one of the following:
 - easily recyclable materials,
 - materials from renewable resources.

Assessment and verification

The applicant shall declare the product's compliance with the requirement and provide a sample(s) of the packaging to the awarding competent body as part of the application.

Questions and points for discussion:

- Shall this criterion be included?
- Is blister packaging excluded through this criterion?

Content**Generic criteria**

1. Criterion 8 – Packaging
- 2. Criterion 9 – User information**
3. Criterion 10 – Information appearing on the EU Ecolabel

Proposed criterion

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. It shall bear the following information on the packaging and/or on documentation accompanying the product:

- (a) Information that the main environmental impacts are related to the use phase of the product, i.e. to consumption of water and energy for water heating,
- (b) Information that the product has been awarded the EU Ecolabel, together with a brief yet specific explanation as to what this means in addition to the general information provided at the EU Ecolabel logo,
- (c) Information on proper product's use to minimise water consumption and related energy consumption for water heating,

Proposed criterion

(d) Information on maximum flow rate in l/min (tested as indicated in criterion 1).

(e) Recommendations on the proper use and maintenance (including cleaning and decalcification) of the product.

This information shall highlight all relevant instructions, particularly referring to the maintenance and use of products, e.g. information which spare part can be replaced, instruction concerning replacement of washers if taps drip water, advice on cleaning taps and showerheads with appropriate materials in order to prevent damaging its surface, etc.

(f) Installation instruction, including information on recommended, minimum and maximum pressure the product is intended for.

Assessment and verification

The applicant shall declare the product's compliance with the requirement and provide a sample(s) of the user information to the awarding competent body as part of the application.

Questions and points for discussion:

- Do you consider necessary/useful to add any additional information in this point?

Content**Generic criteria**

1. Criterion 8 – Packaging
2. Criterion 9 – User information
- 3. Criterion 10 – Information appearing on the EU Ecolabel**

Proposed criterion

The logo should be visible and readable. The use of the EU Ecolabel logo is protected in primary EU law. The EU Ecolabel registration/license number must appear on the product, it must be readable and clearly visible.

The optional label with text box shall contain the following text:

- Improved water efficiency,
- Improved hot water management,
- ...

The guidelines for the use of the optional label with text box can be found in the "Guidelines for use of the Ecolabel logo" on the website:

http://ec.europa.eu/environment/ecolabel/promo/logos_en.htm

Assessment and verification

The applicant shall declare the product's compliance with the requirement and provide a copy of the label as it will appear on the packaging and/or product to the awarding competent body as part of the application.

Questions and points for discussion:

- Do you consider any additional statement which shall be added at the Ecolabel placed on the product and/or packaging?

Thank you for the attention

