

BLUE ANGEL

The German Ecolabel



Energy-Efficient and Water-Saving Hand-Held and Overhead Shower Heads

DE-UZ 157

Basic Award Criteria

Edition May 2011

Version 6

The Environmental Label is supported by the following four institutions:



The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety is the owner of the label. It regularly provides information on the decisions taken by the Environmental Label Jury.



The German Environmental Agency with its specialist department for "Ecodesign, Eco-Labeling and Environmentally friendly Procurement" acts as office of the Environmental Label Jury and develops the technical criteria of the Basic Criteria for Award of the Blue Angel.



The Environmental Label Jury is the independent, decision-making body for the Blue Angel and includes representatives from environmental and consumer associations, trade unions, industry, the trade, crafts, local authorities, academia, the media, churches, young people and the German federal states.



The RAL gGmbH is the awarding body for the Environmental Label. It organises the process for developing the relevant award criteria in independent expert hearings – which involve all relevant interest groups.

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This document is a translation of a German original. In case of dispute, the original document should be taken as authoritative.

1 Introduction

1.1 Preface

In cooperation with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the German Environmental Agency and considering the results of the expert hearings conducted by RAL gGmbH, the Environmental Label Jury has set up these Basic Criteria for the Award of the Environmental Label. RAL gGmbH has been tasked with awarding the Environmental Label.

Upon application to RAL gGmbH and on the basis of a Contract on the Use of the Environmental Label to be concluded with RAL gGmbH, the permission to use the Environmental Label may be granted to all products, provided that they comply with the requirements as specified hereinafter. The product must comply with all the legal requirements in the country in which it is to be marketed. The applicant shall declare that the product meets this requirement.

1.2 Background

The product group of water-saving hand-held and overhead shower heads focuses not only on the mere saving of water but also on the saving of energy as a result of the lower energy consumption for hot water for personal hygiene – compared to traditional shower heads. In 2009, the average water consumption in Germany was 122 litres per person per day (private households and small businesses; bdew 2010) out of which 44 litres were used per person per day for bathing, showering and personal hygiene. Significant savings can be achieved by the use of low-flow shower heads: the average flow rate of shower heads is about 15 litres per minute whereas low-flow shower heads use less than 9 litres/minute. Thus, the savings can be as high as 40 percent compared with customary products.

Water-saving tapware can help a two-person household using a gas-fired low-temperature boiler avoid climate-harming greenhouse gas emissions of 205 kg of CO_{2e} per year (based on a GfK assumption for 2005: one person showers 300 times a year for 6 minutes each) (GfK – German market research company).

1.3 Objectives of the Blue Angel Eco-Label

The reduction of energy consumption and the avoidance of pollutants and waste are key objectives of environmental protection. Pursuit of these goals will help protect the earth's climate, conserve resources, avoid the input of pollutants into the environment and save landfill space.

The Blue Angel eco-label for water-saving hand-held and overhead shower heads may be awarded to products with the following environmental properties:

- low water consumption,
- low energy consumption as a result of an efficient hot water usage,
- avoidance of a material-related contamination of the drinking water,
- low risk of bacterial contamination,
- longevity and serviceability.

Therefore, following benefits for the environment and health are stated in the explanatory box:



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- energy efficient
- low use of water

2 Scope

These Basic Criteria apply to hand-held and overhead shower heads according to DIN EN 1112. If hand-held and overhead shower heads are sold as a set with one shower hose according to DIN EN 1113 these shall be included within the scope.

3 Requirements

3.1 Flow Rate

The maximum flow rate shall not exceed 9 litres per minute independent of the pressure.

Compliance Verification

The applicant shall declare compliance with the requirement and submit a measurement protocol prepared by a DIN EN ISO/IEC 17025 accredited testing laboratory. The test set-up shall comply with DIN EN 1112:2008-06. Notwithstanding DIN EN 1112:2008-06 the measurement of the flow rate shall be taken at a pressure of 1.5 / 3.0 / 4.5 bar (to be measured in ascending order only). The average value of all three measurements shall not exceed 9 litres/min. In addition, the difference between lowest and highest value shall be less than 2 litres/min. If different types of water jets can be selected the measurement shall be made in the maximum flow rate mode.

3.2 Longevity and Serviceability

The shower shall meet the requirements of DIN EN 1112.

The shower shall feature an anti-clog system to prevent it from getting clogged with dirt particles in the water, e.g. in the form of a dirt-catcher sieve.

Compliance Verification

The applicant shall declare compliance with the requirements and present the corresponding pages of the product documentation.

3.3 Material Requirements

Materials and articles that come into contact with drinking water must be hygienically safe and shall not adversely impact the drinking water quality as specified in the German Trinkwasserverordnung (Drinking Water Ordinance).

They shall not release substances into the drinking water in concentrations higher than what would be considered unavoidable under generally accepted standards of technology or which would directly or indirectly reduce the protection of human health provided for in the German Trinkwasserverordnung or influence the odour or taste of drinking water.

Organic materials shall comply with the current guidelines of the German Umweltbundesamt (UBA - Federal Environmental Agency) for the hygienic assessment of materials in contact with drinking water¹, the KTW recommendation 1.3.13² -natural and synthetic rubber- (KTW – plastics in drinking water) or the corresponding follow-up regulation. In addition, the microbiological requirements in DVGW worksheet W 270³ shall be met (DVGW - German Association for Gas and Water).

Metallic materials must meet the requirements of DIN 50930, Part 6.

If hand-held and overhead shower heads are sold as a set with one shower hose according to DIN EN 1113 these products shall also meet the above-mentioned material requirements.

Compliance Verification

The applicant shall declare compliance with the requirement and present corresponding test reports prepared by a DIN EN ISO/IEC 17025 accredited testing laboratory or certificates issued by a correspondingly accredited certification body.

3.4 Noise Emissions

A certificate is to be presented to confirm that the shower belongs to group I or II of sanitary tapware according to DIN 4109.

Compliance Verification

The applicant shall declare compliance with the requirement and present a corresponding general building authority test certificate.

3.5 Consumer Information

Printed comprehensible and technical product information shall be enclosed with product, including at least the following:

- Flow rate of the hand-held or overhead shower head in l/min at a pressure of 3 bar. If the product features different types of water jets the maximum flow rate is to be indicated, and, if applicable, supplemented by additional types of water jets available.
- Instructions for proper cleaning, care and decalcification of the hand-held or overhead shower head.

¹ UBA Recommendation: Guideline for the Hygienic Assessment of Organic Materials in Contact with Drinking Water (KTW Guideline); please go to the UBA Website for the current version: <http://www.umweltbundesamt.de/wasser/themen/trinkwasser/verteilung.htm>

UBA Recommendation: Guideline for the Hygienic Assessment of Organic Coatings in Contact with Drinking Water; please go to the UBA Website for the current version:

<http://www.umweltbundesamt.de/wasser/themen/trinkwasser/verteilung.htm>

UBA Recommendation: Guideline for the Hygienic Assessment of Lubricants in Contact with Drinking Water (Sanitary Lubricants); please go to the UBA Website for the current version:

<http://www.umweltbundesamt.de/wasser/themen/trinkwasser/verteilung.htm>.

² KTW Recommendations: Health Assessment of Plastics and other non-metallic materials within the scope of the Lebensmittel und Bedarfsgegenständegesetz (Food and Consumer Goods Act) with respect to drinking water, Part 1.3.13 natural and synthetic rubber, Bundesgesundheitsblatt (Federal Health Bulletin) 20(1977) 10-13, 28(1985) 371-374 and 30(1987) 178

³ DVGW Worksheet W 270: Vermehrung von Mikroorganismen auf Werkstoffen für den Trinkwasserbereich – Prüfung und Bewertung (Reproduction of microorganisms on materials intended for use in drinking water systems - Examination and Assessment)

- Information on the water supply systems suited for use with the shower.
- Information on the recommended system pressure as well as the minimum and maximum operating pressure the shower requires for proper operation.
- Instructions for installation and connection of the shower.

Compliance Verification

The applicant shall declare compliance with the requirement and present the corresponding pages of the product documentation.

4 Applicants and Parties Involved

Manufacturers or distributors of final products according to Paragraph 2 shall be eligible for application.

Parties involved in the award process are:

- RAL gGmbH to award the Blue Angel Environmental Label,
- the federal state being home to the applicant's production site,
- Umweltbundesamt (German Environmental Agency) which after the signing of the contract receives all data and documents submitted in applications for the Blue Angel in order to be able to further develop the Basic Award Criteria.

5 Use of the Environmental Label

The use of the Environmental Label by the applicant is governed by a contract on the use of the Environmental Label concluded with RAL gGmbH.

Within the scope of such contract, the applicant undertakes to comply with the requirements under Paragraph 3 while using the Environmental Label.

Contracts on the Use of the Environmental Label are concluded to fix the terms for the certification of products under Paragraph 2. Such contracts shall run until December 31, 2022. They shall be extended by periods of one year each, unless terminated in writing by March 31, 2022 or March 31 of the respective year of extension.

After the expiry of the contract, the Environmental Label may neither be used for labelling nor for advertising purposes. This regulation shall not affect products being still in the market.

The applicant (manufacturer) shall be entitled to apply to RAL gGmbH for an extension of the right to use the ecolabel on the product entitled to the label if it is to be marketed under another brand/trade name and/or other marketing organisations.

The Contract on the Use of the Environmental Label shall specify:

- Applicant (manufacturer/distributor)
- Brand/trade name, product description
- Distributor (label user), i.e. the above-mentioned marketing organisations.