

# **BLUE ANGEL**

**The German Ecolabel**



## **Household Cooker Hoods**

**DE-UZ 147**

**Basic Award Criteria**

**Edition January 2010**

**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

Cooker hoods are energy-consuming appliances the environmental impact of which is heavily dependent on user behaviour. They can be operated in recirculation or exhaust mode.

If odour absorption is sufficiently high and if there is only little humidity the recirculation mode reduces the loss of heating energy. This efficiency advantage is also dependent on the energetic condition of the building and the type of heating energy supply.

On the other hand, exhaust hoods exhibit improved usage properties in terms of humidity and odour reduction as well as sound power level.

That is why some criteria in these Basic Award Criteria differentiate between exhaust and recirculation mode.

## 1.3 Objectives of the Environmental Label

Reduction of energy consumption and avoidance of pollutants and wastes are major goals of environmental protection. Pursuit of these goals will help protect the earth's climate, conserve resources and avoid the input of pollutants into the environment. The Blue Angel eco-label for cooker hoods may be awarded to appliances featuring low energy consumption, durable and recyclable design as well as good usage and repair properties.

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



## 2 Scope

These Basic Award Criteria apply to household cooker hoods with an inbuilt fan for either recirculation operation<sup>1</sup>- or exhaust operation<sup>2</sup> exhibiting a maximum air flow volume of 800 m<sup>3</sup>/h at maximum continuous operation<sup>3</sup>.

## 3 Requirements

### 3.1 Energy Efficiency of the Fan

The „specific fan power“ parameter (ratio between electric power consumption and air flow volume) of exhaust systems shall not exceed 0.40 W/(m<sup>3</sup>/h).

The „specific fan power“ of recirculating systems fitted with an odour filter shall not exceed 0.45 W/(m<sup>3</sup>/h).

The air flow volume shall be determined in accordance with DIN EN 61591 (free air delivery) at maximum rotational speed for normal use<sup>3</sup>. In recirculation mode this measurement shall be made with an odour filter installed.

The electric power consumption shall be measured at a supply voltage of 230 V +/- 1%, a frequency of 50 Hz +/- 1% and by means of a measuring instrument with a measuring accuracy of +/- 1%.

#### **Compliance Verification**

*The applicant shall submit a test report indicating power consumption, air flow volume as well as „specific fan power“. The test report shall be prepared by a testing laboratory meeting the general requirements for the competence of testing and calibration laboratories according to DIN EN ISO/IEC 17025.*

### 3.2 Energy-efficient Lighting

The ratio between the sum of the electric power consumption of all lamps for cooktop lighting and the average illuminance determined according to DIN EN 61591 shall not exceed

- 0.15 watts/lux.

If the cooker hood is equipped with dimmable lamps the measurement shall be made at maximum power.

The electric power consumption shall be measured at a supply voltage of 230 V +/- 1%, a frequency of 50 Hz +/- 1% and by means of a measuring instrument with a measuring accuracy of +/- 1%.

#### **Compliance Verification**

*The applicant shall submit a test report indicating type and efficiency class of the lamps, the measured value of the electric power consumption of all lamps used for cooktop lighting, the average illuminance determined according to DIN EN 61591 (2008 draft) as well as the ratio between power consumption and average illuminance. The test report shall be prepared by a*

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<sup>1</sup> Recirculating operation: The cooker hood removes impurities to filters and returns the air to the kitchen.

<sup>2</sup> Exhaust operation: The cooker hood guides the intake air to the outside via an exhaust system.

<sup>3</sup> The calculation is based on the air flow volume (free air delivery) determined in accordance with DIN EN 61591, as amended, at maximum rotational speed for normal use. If the hood offers a high-speed or intensive power mode this mode shall not be considered as a normal use mode.

testing laboratory meeting the general requirements for the competence of testing and calibration laboratories according to DIN EN ISO/IEC 17025.

### **3.3 Power Consumption in Off and Standby Mode**

The cooker hood should be equipped with an OFF switch to disconnect the appliance from the mains. Power consumption in Off<sup>4</sup> and Standby mode<sup>5</sup> shall not exceed 0.5 watts.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirement and submit the product documentation. The applicant shall give the power data in Off and Standby mode and submit a test report indicating the power consumption in Off and Standby mode measured according to DIN EN 62301:2005<sup>6</sup>. The test report shall be prepared by a testing laboratory meeting the general requirements for the competence of testing and calibration laboratories according to DIN EN ISO/IEC 17025.*

### **3.4 Automatic Reset**

Cooker hoods featuring a maximum air flow volume of more than 350 m<sup>3</sup>/h at maximum rotational speed for normal use<sup>3</sup> shall meet the following requirements:

- If the cooker hood is operated in intensive power mode the device shall be automatically reset to a lower power mode after a certain time interval. The factory-set time interval shall not exceed 10 minutes.

#### **Compliance Verification**

*The applicant shall state declare whether the cooker hood has an air flow volume of more than 350 m<sup>3</sup>/h at maximum rotational speed. If so, the applicant shall declare that the appliance features an automatic reset to a lower rotational speed level after a certain time interval. The manufacturer shall submit the corresponding product documentation including information on*

- *the air flow volume at maximum rotational speed*
- *the preset time interval for reset (if such factory setting exists) and*
- *the reduced air flow volume preceding the reset.*

*The test report shall be prepared by a testing laboratory meeting the general requirements for the competence of testing and calibration laboratories according to DIN EN ISO/IEC 17025.*

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<sup>4</sup> „Off mode“ means a condition in which the equipment is connected to the mains power source and is not providing any function; the following shall also be considered as Off mode:

- a) conditions providing only an indication of Off mode;
- b) conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council.

<sup>5</sup> „Standby mode“ means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time:

- reactivation function, or reactivation function and only an indication of enabled reactivation function,
- and/or
- Information or status display.

<sup>6</sup> Electric household appliances – Measurement of power consumption in standby mode

### 3.5 Grease and Odour Removal

Exhaust hoods must attain a grease removal efficiency of at least 85 % and an odour reduction efficiency of at least 92 %.

Recirculating hoods must attain a grease removal efficiency of at least 85 % and an odour reduction efficiency of at least 70 %.

Grease removal efficiency and odour reduction efficiency shall be measured according to DIN EN 61591.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirement and submit a measurement protocol. Such protocol shall be prepared by a testing laboratory meeting the general requirements for the competence of testing and calibration laboratories according to DIN EN ISO/IEC 17025.*

### 3.6 Noise Emissions

The evaluation of the noise emission level is based on the declared sound power level given to one decimal place. The noise emissions of cooker hoods shall not exceed the following values:

a) Exhaust hood:  $L_{WA,d} \leq 62.0 \text{ dB(A)}$

b) Recirculating hood:  $L_{WA,d} \leq 67.0 \text{ dB(A)}$

The declared A-weighted sound power level  $L_{WA,d}$  shall be measured according to the applicable measurement methods described in DIN EN 60704-1 and DIN EN 60704-2-13 and a correction value determined in accordance with DIN EN 60704-3 shall be added thereto. Single measurements shall not be permitted. The measurement results shall be included in the product documentation.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirement and submit a measurement protocol. Such protocol shall be prepared by a testing laboratory meeting the general requirements for the competence of testing and calibration laboratories according to DIN EN ISO/IEC 17025. In addition, the applicant shall submit the corresponding pages of the product documentation referring to the sound power level.*

### 3.7 Spare Parts Provision

The applicant undertakes to make sure that the provision of spare parts for appliance repair is guaranteed for at least 10 years following the termination of production.

Spare parts are functional parts and components for direct operation. Aesthetic components shall be exempt from this requirement.

The product documentation shall include information on the above requirements.

#### **Compliance Verification**

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

### 3.8 Material Requirements for Plastics used in Outer Case Parts (Hood Casing, Ducts)

The plastics must not contain as constituent parts any substances classified as:

- a) carcinogenic in categories 1 or 2 according to Table 3.2 of Annex VI to EC Regulation 1272/2008<sup>7</sup>,
- b) mutagenic in categories 1 or 2 according to Table 3.2 of Annex VI to EC Regulation 1272/2008,
- c) reprotoxic in categories 1 and 2 according to Table 3.2 of Annex VI to EC Regulation 1272/2008,
- d) persistent, bioaccumulative and toxic (PBT substances) or very persistent and very bioaccumulative (vPvB substances) according to the criteria of Annex XIII to the REACH Regulation or particularly alarming for other reasons and included into the List (so-called list of candidates<sup>8</sup>) set up in accordance with REACH, Article 59, paragraph 1.

Halogenated polymers shall not be permitted. Neither may halogenated organic compounds be added as flame retardants. Moreover, additions of flame retardants labelled with the Risk Phrase R50/53 pursuant to Table 3.2 of Annex VI to EC Regulation 1272/2008 shall not be permitted.

The following shall be exempt from this rule:

- process-related, technically unavoidable impurities;
- fluoroorganic additives (as, for example, anti-dripping agents) used to improve the physical properties of plastics, provided that they do not exceed 0.5 weight percent;
- plastic parts weighing less than 25 grams.

#### **Compliance Verification**

*Applicant shall declare compliance with the requirements and submit a written declaration from the plastic manufacturers or suppliers or request the submission of such declaration to RAL gGmbH. Such declaration shall confirm that the substances to be banned have not been added to the plastics and it shall give the chemical designation of the flame retardants used, including CAS-No.*

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<sup>7</sup> Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006, Annex VI on harmonized classification and labelling of hazardous substances, Part 3: Harmonized classification and labelling, Tables, Table 3.2, – List of harmonized classification and labelling of dangerous substances from Annex I to Directive 67/548/EEC, short: GHS-Regulation [http://www.reach-info.de/ghs\\_verordnung.htm](http://www.reach-info.de/ghs_verordnung.htm), each as amended.

The GHS Regulation (Global Harmonization System), that has come into force on January 20, 2009, replaces the old Directives 67/548/EEC and 1999/45/EC. According to the said regulation, substances are classified, labelled and packed until December 1, 2010 according to Directive 67/548/EEC (Dangerous Substances Directive) while mixtures are classified, labelled and packed until June 1, 2015 according to Directive 1999/45/EC (Dangerous Preparations Directive). Notwithstanding this, the classification, labelling and packaging of substances and preparations may be performed according to the provisions of the GHS Regulation already before December 1, 2010 or June 1, 2015, respectively. In such case, the provisions of Dangerous Substances Directive or Dangerous Preparations Directive shall not be applicable.

<sup>8</sup> Link to the list of candidates of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH): [http://echa.europa.eu/consultations/authorisation/svhc/svhc\\_cons\\_en.asp](http://echa.europa.eu/consultations/authorisation/svhc/svhc_cons_en.asp)



### **3.9 Disassembly-Friendly Design**

The cooker hood shall be so designed and constructed as to allow highest possible recycling rates in disassembling the appliance. That means that

- the cooker hood shall be easily demountable by the use of easily available tools.

#### ***Compliance Verification***

*The applicant shall declare compliance with the requirement relating to an easy availability of tools for disassembly.*

### **3.10 Consumer Information**

Comprehensible and detailed printed Operating Instructions and Product Information shall be enclosed with the product.

The energy consumption of the appliances is highly dependent on consumer behaviour. That is why the product documentation shall not only include information on the cooker hood's energy consumption and air flow volume in all operating modes, including the Standby mode, but also at least the gist of the following instructions/recommendations for an energy efficient use of the appliance:

- Instructions for an energy-efficient use of the cooker hood.
- Recommendation for prompt switching to a lower power level as soon as the odour, grease and vapour impact is reduced.
- Food should be cooked with the lid on in order to reduce odour, grease and vapour emissions.

#### ***Compliance Verification***

*The applicant shall declare compliance with the requirement and submit 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, 2020. They shall be extended by periods of one year each, unless terminated in writing by March 31, 2020 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.

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