

BLUE ANGEL

The German Ecolabel



Vacuum Cleaners

DE-UZ 188

Basic Award Criteria

Edition January 2015

Version 1

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 and Objective of the Blue Angel Eco-Label

Today, there are about 39 million vacuum cleaners in German households. All together they consume about 3.4 billion kilowatt hours per year.

During an eight-year service life the electricity costs sometimes add up to more than the purchase price. Energy efficient vacuum cleaners can help reduce electricity use.

An EU energy label for vacuum cleaners was introduced on September 1, 2014. It helps consumers to make informed choices on the basis of energy efficiency classes and other parameters. However, the differences in the efficiency of the various models are often still quite substantial. Here, the Blue Angel eco-label can offer guidance.

Climate protection, reduction of energy consumption and the avoidance of harmful substances and waste are key objectives of environmental protection. The Blue Angel eco-label for vacuum cleaners may be awarded to products with the following environmental attributes:

- Low energy consumption
- High dust pick-up and low dust re-emissions
- Low noise emissions
- Use of environmentally sound materials
- Long-lived and recyclable design.

1.3 Basic Legal Provisions

It is a matter of course for Blue Angel eco-labelled products to comply with current laws and regulations, especially with the following ones:

- The EU Directives¹ transposed into German law by the Elektro- und Elektronikgesetz (ElektroG) (Electrical and Electronic Equipment Act)² and the Ordinance on the restriction of the use of hazardous substances in electrical and electronic equipment (Elektro- und

¹ Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on Waste Electrical and Electronic Equipment (WEEE); Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

² Gesetz über das Inverkehrbringen, die Rücknahme und die umweltverträgliche Entsorgung von Elektro- und Elektronikgeräten, (Act on the placing on the market, return and environmentally sound disposal of waste electrical and electronic equipment), Federal Law Gazette 2005, Part I, No.17 (23 May 2005)

Elektronikgeräte-Stoff-Verordnung – ElektroStoffV - Electrical and Electronic Equipment Substances Ordinance)³ are complied with.

- The substance requirements defined by the Chemicals Regulation REACH (1907/2006/EC)⁴ and Regulation EC No. 1272/2008⁵ (or Directive 67/548/EEC) are taken into account.
- The requirements of the European Union with regard to the safety of appliances („CE“ Conformity Marking) are met.
- The requirements for energy labelling⁶ and for implementation of the Eco-Design Directive⁷ are met and the Guidelines⁸ are taken into account.

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



2 Scope

These Basic Criteria apply to vacuum cleaners for both commercial and household use.

Excluded from the scope are:

- wet, wet and dry, battery-operated vacuum cleaners,
- robot, industrial and central vacuum cleaners.
- floor polishers, outdoor vacuum cleaners.

3 Requirements

3.1 Rated Input Power

The rated input power during active operation of the appliance on carpet and hard floor must not exceed 900 watts.

³ Elektro- und Elektronikgeräte-Stoff-Verordnung (Electrical and Electronic Equipment Substances Ordinance) of 19 April 2013 (Federal Law Gazette I p. 1111)

⁴ REGULATION (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

⁵ 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

⁶ Commission Delegated Regulation (EU) No 665/2013 of 3 May 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of vacuum cleaners

⁷ Commission Regulation (EU) No 666/2013 of 8 July 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for vacuum cleaners

⁸ Guidelines and „frequently asked questions“ of the EU Commission with respect to Regulations (EU) No 665/2013 and 666/2013, http://ec.europa.eu/energy/efficiency/labelling/doc/guidelines_665_666_2013_vacuum_cleaners.pdf

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1, specify the measured value and present the relevant product documentation pursuant to Regulation (EU) 666/2013. The average power consumption shall be measured in accordance with EN 60335-1, EN 60335-2-2 or EN 60335-2-69. The applicant shall specify the rated input power in the consumer information (paragraph 3.9) auf.

3.2 Energy Efficiency

The appliances must be rated Class A for energy efficiency.

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1 and submit the relevant product documentation pursuant to Regulation (EU) No 665/2013.

3.3 Dust Pick-Up on Carpet and Hard Floor

- The product must be rated Class C for dust pick-up **on carpet**.
- The product must be rated Class C for dust pick-up **on hard floor and crevice**.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and submit the relevant product documentation pursuant to Regulation (EU) No 665/2013.

3.4 Dust Re-emission

- **Household** vacuum cleaners must be rated Class A for dust re-emission.
- **Commercial** vacuum cleaners must be rated Class C for dust re-emission.

Compliance Verification

The applicant shall specify the field of application in accordance with Directive 2006/42/EC, declare compliance with the requirement in Annex 1 and present the relevant product documentation pursuant to Regulation (EU) No 665/2013.

3.5 Noise Emissions

The noise emission (sound power level) on carpet shall not exceed 75 dBA (re 1 pW).

The noise emission of appliances with an electric, mechanical or airflow-driven active nozzle⁹ shall not exceed 80 dBA (re 1 pW) .

The results shall be listed in the product documentation.

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1, specify the measured value and present the relevant product documentation pursuant to Regulation (EU) No 665/2013. The sound power level shall be determined and specified in accordance with DIN EN 60704-1 or DIN EN 60704-3 and DIN EN 60704-2-1 or DIN EN 60335-2-69.

⁹ According to DIN EN 60312-1, para. 3.4.

3.6 Material Requirements for the Plastics used in Housings, Housing Parts and accessory parts (suction tube/hose, nozzle etc.)

No substances may be added to the plastics as constituent parts which are classified as:

- a) carcinogenic of categories 1A or 1B according to Table 3.1 of Annex VI to Regulation (EC) 1272/2008¹⁰,
- b) mutagenic of categories 1A or 1B according to Table 3.1 of Annex VI to Regulation (EC) 1272/2008
- c) toxic to reproduction of categories 1A or 1B according to Table 3.1 of Annex VI to Regulation (EC) 1272/2008
- d) being of very high concern for other reasons according to the criteria of Annex XIII to the REACH Regulation, provided that they have been included in the List (so-called Candidate List¹¹) prepared in accordance with REACH, Article 59, para. 1.

Halogenated polymers shall not be permitted. Nor may halogenated organic compounds be added as flame retardants. Moreover, no flame retardants may be added which are classified pursuant to Table 3.1 or 3.2 in Annex VI to Regulation (EC) 1272/2008 as very toxic to aquatic organisms with long-term adverse effect and have been assigned the Hazard Statement H410 or Risk Phrase R50/53.

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 less than or equal to 25 grams in mass.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and submit a written declaration from the plastic manufacturers or ensure the submission of such declaration to RAL gGmbH. Such declaration in Annex P-M shall confirm that the banned substances have not been added to the plastics and give the chemical designation of the flame retardants used, including CAS No. and classifications (H statements). When first applying for the Blue Angel

¹⁰ 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 Harmonised classification and labelling for certain hazardous substances, Part 3: Harmonised classification and labelling – Tables, Table 2.3 List of harmonised classification and labelling of hazardous substances from Annex I to Directive 67/548/EEC, short: GHS Regulation http://www.reach-info.de/ghs_verordnung.htm, 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, substances and preparations may be classified, labelled and packed 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 do not apply.

¹¹ The Candidate List, as amended at the time of application (first-time application), shall apply. Link to the Candidate List in Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH): <http://echa.europa.eu/web/guest/candidate-list-table>

eco-label the declaration submitted must not be older than 6 months. If one applicant files additional applications for the eco-labelling of products containing the same plastics the declarations submitted may be presented unchanged during the term of the Basic Criteria. Notwithstanding this, RAL shall be entitled to ask for an updated version of the declarations if the Umweltbundesamt (Federal Environmental Agency) finds that product-relevant substances have been added to the Candidate List. The applicant shall name the housing plastics used for parts ≥ 25 grams in mass and present a list of the housing plastics pursuant to Annex P-L25.

3.7 Recyclable and Easy-to-Maintain Design

The appliance shall be so designed as to allow quick and easy disassembly with a view to facilitating repair and separation of valuable components and materials. This means that:

- it must be possible to separate the connections concerned by the use of ordinary tools and the points of connection must be easily accessible,
- plastics should consist of one polymer only and plastic parts greater than 25 g in mass must be marked according to ISO 11469 to allow for a sorting of plastics by type and
- disassembly instructions must be made available to end-of-life recyclers or treatment facilities in order to recover as many valuable resources as possible,
- the plastics used should consist of recycled material, if possible.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the corresponding disassembly instructions for end-of-life recyclers or treatment facilities.

3.8 Longevity

3.8.1 Durability

The appliances shall meet the following durability requirements:

- The motor shall have a minimum service life of 600 hours.
- The suction nozzle must be able to withstand the impact of at least 600 drum rotations (or 1200 falls from as high as 80 cm).
- The suction hose must withstand at least 40,000 deformations.
- The appliance must survive a threshold and doorpost impact test of at least 500 cycles.

Test Method for Motor Life Evaluation

Testing shall be done on the basis of DIN EN 60312:2008-11. The vacuum cleaner shall be operated together with the floor nozzle during testing. The vacuum cleaner shall run intermittently with periods of 14 minutes and 30 seconds On and 30 seconds Off. The floor nozzle shall be placed 1 cm above the floor. If the vacuum cleaner is equipped with a rotating brush such brush shall be running but not be in contact with the floor. The filters shall be replaced after an operating time of 100 +/- 5 h.

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1 and present a test report pursuant to DIN EN 60312 as well as a test report based on DIN EN 60312:2008-11 with respect to the motor's service life.

3.8.2 Spare Parts Supply

The applicant undertakes to ensure spare parts supply for appliance repair for at least 8 years from the time that production ceases.

Spare parts are those parts which, typically, may break down within the scope of the ordinary use of a product - whereas those parts which normally exceed the average life of the product are not to be considered as spare parts.

Also, the applicant undertakes to provide after-sales services.

The product documentation shall include information on the above requirements.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the relevant pages of the product documentation.

3.9 Consumer Information

When sold to the final consumer the product shall be accompanied by easy-to-understand product documentation (Operating Instructions) including at least the following data. Such information shall also be available on the manufacturer's website:

- Information on the average rated input power (watts) during operation and on the energy efficiency class (provided in a table, if possible).
- Information on dust pick-up and dust re-emission classes.
- Noise emission data.
- Instructions on how to replace the dust bag or empty the dust box and the filters as well as on how to clean the nozzle.
- Data on weight (kg) and operating range (m) as well as details of spare parts availability.
- Information and instructions for using the vacuum cleaner on carpet and hard floor by means of clear and user-selectable settings on the appliance.

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1 to the Contract and present the relevant pages of the product documentation.

3.10 Outlook

A revision of these Basic Criteria is expected to include the evaluation and, where applicable, the inclusion of requirements for dust pick-up with dust loaded, for a certain recycle percentage as well as for vacuum cleaners with water filters.

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, 2019. They shall be extended by periods of one year each, unless terminated in writing by March 31, 2019 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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