

# **BLUE ANGEL**

**The German Ecolabel**



## **Auto-Off Power Strips and Socket Adapters**

**DE-UZ 134**

**Basic Award Criteria**

**Edition July 2012**

**Version 2**

**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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## Table of contents

1	Introduction.....	4
1.1	Preface .....	4
1.2	Background .....	4
1.3	Objectives of the Blue Angel Eco-Label.....	4
1.4	Basic Legal Provisions .....	5
2	Scope .....	5
3	Requirements .....	6
3.1	Own Power Consumption.....	6
3.2	Material Requirements for the Plastics used in Housings and Housing Parts .....	6
3.3	Safety Requirements .....	7
3.4	Surge Protection .....	8
3.5	Consumer Information .....	8
4	Applicants and Parties Involved.....	8
5	Use of the Environmental Label.....	9

**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**

Useless standby of appliances in private households amounts to an electric power consumption of about 400 kWh per year. The use of (manually) switchable power strips allows for the simultaneous disconnection of several devices from the mains, including those without a real power switch. Practical experience shows, however, that private households either do not use manually switchable power strips because they do not find them comfortable or they do use manually switchable power strips but, then, do not regularly use them to switch off their devices.

In contrast, the advantage of auto-off power strips is that devices are consequently disconnected when not in use. This advantage normally outweighs by far the disadvantage of the fact that these power strips themselves consume small amounts of electrical power.

There are two different types of auto-off power strips:

- a) Devices which - when falling below a user-set minimum power consumption (switching threshold) of the main device (master) and with the switch-off of the main device (master) – automatically disconnect the peripheral devices (slaves) connected to the power strip from the mains. These devices are also called master-slave power strips;
- b) Devices which - when falling below a minimum power consumption (switching threshold) – do not only fully disconnect the peripheral devices but also the main device (master) from the mains. Unlike with the standby power consumption of master devices connected to a master-slave power strip, the devices connected to this type of power strip do not consume any power at all. Such devices may also consist of only one mains socket and disconnect the device from the mains.

## **1.3 Objectives of the Blue Angel Eco-Label**

Reduction of power consumption, minimization of standby losses as well as avoidance of pollutants and waste are key objectives of environmental protection. The pursuit of these objectives can help protect our climate, conserve resources, avoid the input of pollutants into the environment and save landfill space.

The Blue Angel eco-label for auto-off power strips and socket adaptors may be awarded to products featuring the following environmental and performance properties:

- low power consumption
- minimization of standby losses
- compliance with high electrical safety standards
- use of environmentally friendly materials

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



## 1.4 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:

- EU Directives 2002/96/EC<sup>1</sup> and 2002/95/EC<sup>2</sup> - regulating the disposal of appliances - transposed into German law by the Elektro- und Elektronikgesetz (ElektroG) (Electrical and Electronic Equipment Act)<sup>3</sup> are complied with. For precautionary reasons, the product meets material requirements going beyond these provisions.
- The substance requirements defined by the EU Chemicals Regulation REACH (1907/2006/EC)<sup>4</sup> as well as Regulation EC No. 1272/2008<sup>5</sup> (or Directive 67/548/EEC) are met.

## 2 Scope

These Basic Criteria apply to auto-off power strips or socket adapters (with and without surge protector).

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<sup>1</sup> Directive on Waste Electrical and Electronic Equipment (WEEE), Directive 2002/96/EC of the European Parliament and of the Council, dated 27 January 2003

<sup>2</sup> Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, Directive 2002/95/EC, Official Journal No L 37, 13 February 2003

<sup>3</sup> 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)

<sup>4</sup> 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

<sup>5</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

### 3 Requirements

#### 3.1 Own Power Consumption

- a) The own power consumption of a power strip with surge protector, indicator light and an illuminated on/off switch (if available) shall not exceed 0.90 watts.
- b) The own power consumption of a power strip without surge protector but with an illuminated on/off switch (if available) shall not exceed 0.70 watts.
- c) The device shall feature a switching threshold control.
- d) The power strip shall come with a power switch to disconnect the device from the mains. Exempt from this requirement are power strips which, when falling below a preset switching threshold, do not only completely disconnect the peripheral devices but also the main device (master) or the connected single device from the mains. However, such power strips must have a wake-up function (e.g. key or infrared receiver) to restore power supply.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1 to the Contract and submit a test report prepared by a DIN EN ISO/IEC 17025 accredited testing laboratory or a testing laboratory that has been accredited as SMT<sup>6</sup> laboratory stating that the own power consumption has been measured in accordance with DIN EN 62301<sup>7</sup> (Annex 2). Also, the applicant shall give the measured own power consumption<sup>8</sup> in Annex 1.*

#### 3.2 Material Requirements for the Plastics used in Housings and Housing Parts

The plastics must not contain as constituent parts any substances that are classified as

- a) carcinogenic in categories 1 or 2 according to Table 3.2 or categories 1A and 1B according to Table 3.1 of Annex VI to Regulation (EC) No 1272/2008<sup>9</sup>
- b) mutagenic in categories 1 or 2 according to Table 3.2 or categories 1A and 1B according to Table 3.1 of Annex VI to Regulation (EC) No 1272/2008

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<sup>6</sup> SMT Laboratory: Supervised Manufacturer's Testing laboratory

<sup>7</sup> Household electrical appliances. Measurement of standby power.

<sup>8</sup> The requirements under para. 3.1 shall be considered met if the measured value is smaller than the value given in para. 3.1 plus 10% total tolerance (includes manufacturing and measurement tolerance)

<sup>9</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 Harmonized classification and labelling for certain 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), 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.

- c) reprotoxic in categories 1 or 2 according to Table 3.2 or categories 1A and 1B according to Table 3.1 of Annex VI to Regulation (EC) No 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>10</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, no flame retardants may be added which are labelled with Risk Phrase R50/53 or Hazard Phrase H410 pursuant to Part 3 of Annex VI to Regulation (EC) 1272/2008.

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**

*The applicant shall declare compliance with the requirements in Annex 1 to the Contract. With respect to the substances to be banned from the plastics for housings and housing parts, the applicant shall request the plastic manufacturers or suppliers to send a written declaration to RAL gGmbH stating that these substances have not been added (form of Annex 3). Also, the applicant undertakes to request the manufacturers or suppliers of housing plastics to confidentially report the chemical designation of the flame retardants used (CAS No.) to RAL gGmbH (Annex 4).*

### **3.3 Safety Requirements**

The auto-off power strips shall carry the CE Mark and hence comply with the following European Directives:

- 2006/95/EC Low Voltage Directive (LVD)
- 2004/108/EC Electromagnetic Compatibility (EMC) Directive

In addition, the auto-off power strips shall meet the electrical safety requirements under DIN VDE 0620-1 or IEC 60884-1. It shall be apparent from the test protocols or the certificate that the limits specified in DIN VDE 0620-1 or IEC 60884-1 are met for at least the following parameters:

- Protection against electric shock (No. 10)
- Insulation resistance and electric strength (No. 17)
- Temperature rise (No. 19)<sup>11</sup>
- Creepage distances, clearances and distances through sealing compound (No. 27)
- Resistance of insulating material to abnormal heat, to fire and to tracking (No. 28)

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<sup>10</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)

<sup>11</sup> If the devices are marketed in Germany the rated current of the plug and socket device pursuant to DIN VDE 0620-1 shall form the basis of measurement.

### **Compliance Verification**

*The applicant shall submit EU Certificates of Conformity certifying compliance with the above-mentioned European Directives. To verify compliance with the electrical safety requirements the applicant shall declare compliance with the requirement in Annex 1 to the Contract and submit test protocols prepared by a DIN EN ISO/IEC 17025 accredited testing laboratory or a certificate issued by an accredited testing laboratory on the basis of DIN VDE 0620-1 or IEC 60884-1 (Annex 5).*

### **3.4 Surge Protection**

If the device has a surge protector it shall meet the requirements specified by DIN EN 61643-11<sup>12</sup> and it shall be tested accordingly.

### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1 to the Contract and submit the corresponding test reports as well as the relevant pages of the product literature (Annex 6).*

### **3.5 Consumer Information**

The following basic user information shall be included in the Operating Instructions and available on the manufacturer's website:

- a) Own power consumption (W) of the auto-off power strips
- b) Description of function and operation of the auto-off power strips
- c) Description of function and operation of the adjustable switching threshold
- d) Range of the device's switching threshold (in watts)
- e) Note that power strips with surge protector (according to DIN EN 61643-11, if available) alone do not provide adequate surge protection and that a comprehensive surge protection concept should combine three elements (coarse, medium and fine protection).
- f) Information on replacing the micro-fuse (if available)
- g) Information on proper disposal
- h) Nominal voltage
- i) Nominal power

### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1 to the Contract and submit the relevant pages of the product literature (Annex 6).*

## **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,

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<sup>12</sup> Low-voltage surge protective devices – Part 11: Surge protective devices connected to low-voltage power systems; Requirements and tests



- 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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