

# **BLUE ANGEL**

## **The German Ecolabel**



### **Data Shredders**

**DE-UZ 174**

**Basic Award Criteria**  
**Edition January 2018**  
**Version 3**

**The Environmental Label is supported by the following four institutions:**



Federal Ministry  
for the Environment, Nature Conservation  
and Nuclear Safety

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**

Data shredders, as, for example, document shredders, are used to destroy confidential documents and paper files that are no longer needed by mechanically cutting them into very small pieces. Numerous shredder models, so-called multi-media shredders, do not only shred paper but also other data carriers, such as CDs / DVDs or credit cards and, thus, protect them from data misuse.

Type of cut, shred length and shred width of the shredder define the cutting level of the product – also called security level. There are seven security levels which are defined according to DIN 66399 "Office machines - Destruction of data carriers".

Shredders are always driven by electric motors and they vary in the simple spindle motor including a shaft mounted to the motor. The maximum power of data shredders for personal and small office use is between 130 and 700 watts. The maximum power of appliances for open-plan offices or office floors is between about 700 and 2600 watts.

The greater part of the annual power consumed by inefficient data shredders (90 to 97 %) is not consumed in active mode (paper shredding) but in "Off" and "Standby" mode. Data shredders may have a power consumption of up to 1.2 watts in Off mode and 2 to 3.5 watts in standby mode. They do not fall under the "Standby Regulation", i.e. Commission Regulation (EC) No 1275/2008 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment. Depending on the utilization of the device the energy savings potential of an efficient data shredder may be 84 to 90 percent.

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

Reduction of power consumption and avoidance of pollutants and waste are key objectives of environmental protection. The pursuit of these objectives can help protect our climate and conserve resources. The Blue Angel eco-label for data shredders may be awarded to products featuring the following environmental properties:

- low power consumption;
- long-lived design;
- avoidance of environmentally harmful materials

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



#### 1.4 Compliance with 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.
- Low Voltage Directive (LVD) 2006/95/EC
- EMV Directive 2004/108/EC
- Produktsicherheitsgesetz (Product Safety Act) (ProdSG), of November 8, 2011

#### 1.5 Definitions

##### Off mode

Off mode describes a state in which the device has been disconnected from the mains power supply via a power switch and is not providing any functions.

##### Active mode

"Active mode" describes a state in which the device is connected to a power source and provides the following functions.

- Shredding of paper, CDs, DVDs and credit cards

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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

### **Idle mode**

"Idle mode" describes a state in which the motor and cutter are operating but no data carriers are being shredded.

### **Ready and standby modes**

- 1) Ready mode: describes a state in which the device – without operation of the motor – is able to detect data carriers and reactivate the device.
- 2) Standby: describes a state into which the device switches from ready mode after a defined period of time.

## **2 Scope**

These Basic Criteria apply to AC-powered data shredders, such as, for example, document shredders.

Excluded from the scope are devices and systems that need to be powered by three-phase alternating current (400 volts).

## **3 Requirements**

### **3.1 Power Consumption**

#### **3.1.1 Power Switch and Power Consumption in Off Mode**

The device shall have a user-accessible power switch or limit power consumption in Off mode to 0 watts by appropriate measures (for example, mechanical micro switch).

#### **Compliance Verification**

*The applicant shall declare compliance with the requirements in Annex 1 to the Contract and submit a corresponding test protocol prepared by a DIN EN ISO/IEC 17025 accredited testing laboratory (Annex 2). Test protocols prepared by the applicant will be accepted as equivalent if the latter uses a testing laboratory that has been accredited for these measurements by an independent body as SMT (Supervised Manufacturers' Testing) laboratory. The measurement shall be made in accordance with DIN EN 50564.*

#### **3.1.2 Power Consumption Minimization**

The shredder shall have an automatic switch-off function that switches the device from ready mode to a lower power consumption mode (standby mode). Power consumption in ready mode shall not exceed 1 Wh. Power consumption in standby mode shall not exceed 0.1 W.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirements in Annex 1 to the Contract and submit a corresponding test protocol prepared by a DIN EN ISO/IEC 17025 accredited testing laboratory (Annex 2). Test protocols prepared by the applicant will be accepted as equivalent if the latter uses a testing laboratory that has been accredited for these measurements by an independent body as SMT (Supervised Manufacturers' Testing) laboratory. The measurement shall be made in accordance with DIN EN 50564.*

### 3.2 Safety

The data shredder shall carry the GS ("certified safety") Mark.

#### **Compliance Verification**

*The applicant shall declare compliance with requirements in Annex 1 to the Contract and submit a valid mark award certificate (GS/VDE), (Annex 3).*

### 3.3 Noise Emissions

The evaluation of the noise emissions is based on the provision of the guaranteed A-weighted sound power level  $L_{WA,C}$  in decibels (dB).

Identical devices that differ based on the maximum shredding performance or the type of shredding (strips or particles, particle size) must be measured at the configuration with the highest sound power level for the device that the applicant intends to offer with the Blue Angel environmental label.

#### **Determination of the A-weighted sound power level**

The A-weighted sound power level  $L_{WA}$  is determined in accordance with ISO 7779. The noise emissions are measured here in two operating modes:

- Idle mode (B1) and
- Paper shredding with a maximum sheet shred capacity (B2): A4 paper with a weight of 80 g/m<sup>2</sup> should be used. The noise emissions for one test run are measured when shredding at the stated maximum sheet shred capacity. At least five test runs must be measured. The 3 highest measurement values for this test series are energetically averaged and provide the device-specific A-weighted sound power level  $L_{WA}$ . Noise emissions measured during periods in which no paper is being shredded (e.g. idle mode) are not taken into account when determining the average.

#### **Guaranteed A-weighted sound power level**

At least 3 devices must be tested for each model. The guaranteed A-weighted sound power level  $L_{WA,C}$  is determined in accordance with ISO 9296 and stated in decibels (dB). If it is only possible to carry out the noise emission measurements on one device, the following formula can be used as an alternative to find the guaranteed A-weighted sound power level  $L_{WA,C}$ .

$$L_{WA,C} = L_{WA1} + 3.0 \text{ dB}$$

( $L_{WA1}$  = A-weighted sound power level of a single device in dB)

#### **Test value**

The guaranteed A-weighted sound power level  $L_{WA,C}$  must not exceed a test value of 82 dB when shredding paper.

The sound power level for the operating states of idle mode and paper shredding must be stated in the product documentation.

#### **Compliance verification**

*The applicant shall declare compliance with the requirement in Annex 1 to the contract and submit a test report from a testing laboratory accredited according to ISO/IEC 17025 or a testing laboratory accredited as an SMT laboratory (Annex 4).*

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

The plastics used in housings and housing parts must not contain, as constituent components, any substances with the following characteristics:

- [1]** Substances that have been identified as substances of very high concern under Regulation (EC) No 1906/2006 (REACH)**Fehler! Textmarke nicht definiert.** and have been included in the list (so-called Candidate List) set up in accordance with REACH, Article 59(1).
- [2]** Substances that have been classified under the CLP Regulation into the following hazard categories or meet the criteria for such classification:
  - ♦ carcinogenic of category Carc. 1A or Carc. 1B
  - ♦ mutagenic of category Muta. 1A or Muta. 1B
  - ♦ reprotoxic of category Repr. 1A or Repr. 1B

Halogenated polymers shall not be permitted in housings and housing parts. Nor may halogenated organic compounds be added as flame retardants. Nor shall any flame retardants be permitted which are classified under the CLP Regulation as carcinogenic of Category Carc. 2 or as hazardous to waters of Category Aquatic Chronic 1.

The hazard statements (H phrases) assigned to the hazard categories can be seen from Appendix B: Assignment of Hazard Categories and Hazard Statements.

The following shall be exempt from this requirement:

- 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 25 grams or less

#### **Compliance Verification**

*The applicant shall declare compliance with the requirements in Annex 1 to the Contract and submit a written declaration from the plastic manufacturers or ensure the submission of such declaration to RAL gGmbH. Such declaration 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) (Annex P-M to the Contract). When first applying for the Blue Angel 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 Environment Agency) finds that product-relevant substances have been added to the Candidate List.*

### 3.5 Anti-Paper-Jam System / Technology

The device shall feature either a system that prevents too much paper from being inserted into the device, thus causing malfunction or paper jam, or a reverse function (automatic or manual) with power cut-off in case of paper jam.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirements in Annex 1 to the Contract and submit the relevant product documentation (Annex 5).*



### **3.6 Separate Waste Receptacle**

Devices that are designed to not only shred paper but also CDs and DVDs (see Operating Instructions) must be equipped with a separate waste receptacle to keep the waste plastic separate from the waste paper.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirements in Annex 1 to the Contract.*

### **3.7 Warranty**

The applicant undertakes to offer a 2-year warranty on the entire product.

The cutting roller of a security level 1-5 shredder (according to DIN 66399) shall be warranted against breakage for 10 years and the cutting roller of a security level 6-7 shredder shall be warranted against breakage for 2 years. The product literature shall include warranty details.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirements in Annex 1 to the Contract and submit the relevant pages of the product documentation (Annex 5).*

### **3.8 Repairability and Spare Parts Supply**

The applicant undertakes to make sure that the spare parts supply for equipment repair will be guaranteed for at least 8 years (typical product lifetime) after end of production.

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 life of the product are not to be considered as spare parts.

The product documentation shall include information on the above requirements.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirements in Annex 1 to the Contract and submit the relevant pages of the product documentation (Annex 5).*

### **3.9 Easy-Disassembly Design**

The devices shall be so designed as to allow future disassembly with a view to achieving the highest possible recycling rates. This means that

- connections must be easy to separate using universal tools and joints must be easily accessible,
- disassembly instructions must be made available to end-of-life recyclers with the aim to recover as many resources as possible.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirements in Annex 1 to the Contract and submit corresponding disassembly instructions for end-of-life recyclers (Annex 6).*

### **3.10 Consumer Information**

The documentation included with the devices must include both technical specifications and environmental and health-related consumer information.

The following important user information must be included in the documentation and also be accessible via the manufacturer's website:

- [1]**Information on the need for regular maintenance or oiling the device to maintain proper functionality
- [2]**Information on the noise emissions (according to Paragraph 3.3)
- [3]**Information on the energy consumption values (according to Paragraph 3.1)
- [4]**Information about using the power switch (if available) when the device is not in use.
- [5]**Information on the warranty (according to Paragraph 3.7)
- [6]**Information on repairability and the supply of spare parts (according to Paragraph 3.8)
- [7]**Information on the separate disposal of credit cards, CDs and DVDs.

### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1 to the contract and submit the corresponding pages of the product documentation (Annex 5).*

## **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, 2028. They shall be extended by periods of one year each, unless terminated in writing by March 31, 2028 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:

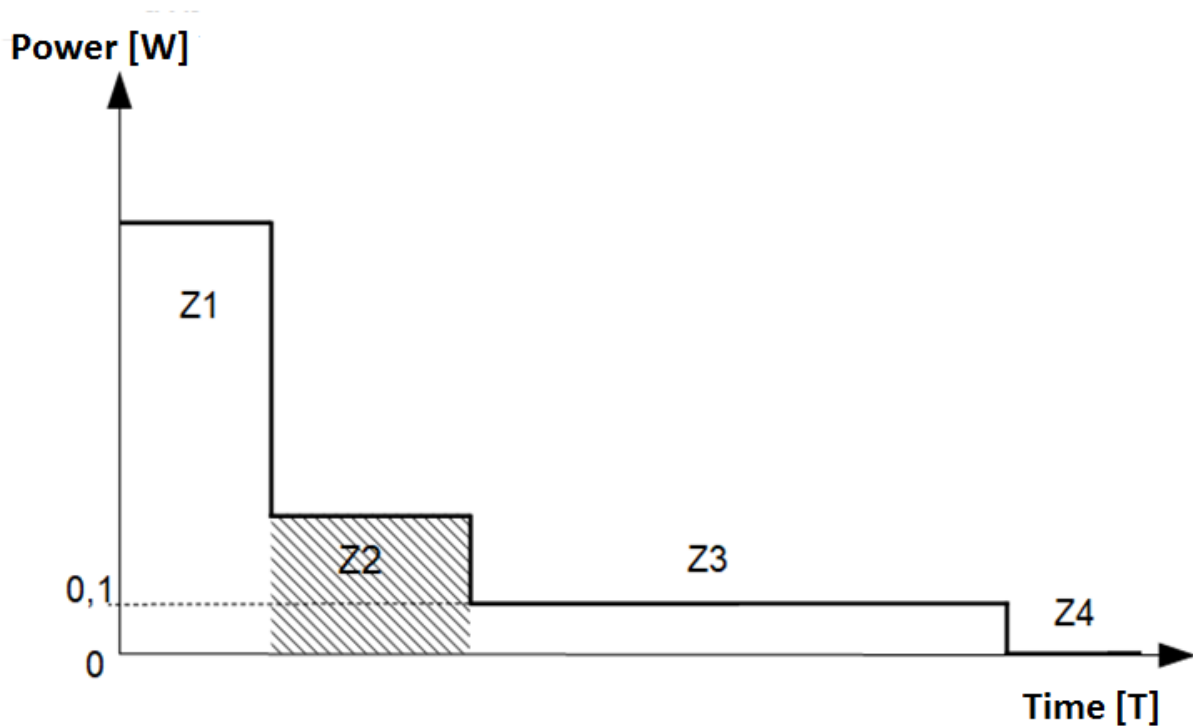
- Applicant (manufacturer/distributor)
- Brand/trade name, product description
- Distributor (label user), i.e. the above-mentioned marketing organisations.

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## Appendix A Measurement of power consumption in ready mode

Between the motor stopping and switching to standby or off mode, the device can also switch to ready mode. As no time period is defined for this phase, it is not the input power that is determined here but rather the power consumption in Wh.

The power consumption in ready mode (Z2) must not exceed a max. of 1 Wh.



Z1: Active mode

Z2: Ready mode (motor not running (max. 1 Wh)

Z3: Standby mode (max. 0.1 W)

Z4: Off mode (0 W)

## Appendix B Assignment of Hazard Categories and Hazard Statements

The following table assigns the respective hazard statements (H statements) to the hazard categories of the substances generally excluded.

### CLP Regulation (EC) Nr. 1272/2008

Hazard Category	Hazard Code	Hazard Statement (Wording)
		<b>Carcinogenic Substances</b>
Carc. 1A Carc. 1B	<b>H350</b>	May cause cancer.
Carc. 1A Carc. 1B	<b>H350i</b>	May cause cancer by inhalation.
Carc. 2	<b>H351</b>	Suspected of causing cancer.
		<b>Mutagenic Substances</b>
Muta. 1A Muta. 1B	<b>H340</b>	May cause genetic defects.
		<b>Reprotoxic Substances</b>
Repr. 1A Repr. 1B	<b>H360D</b>	May damage the unborn child.
Repr. 1A Repr. 1B	<b>H360F</b>	May damage fertility.
Repr. 1A Repr. 1B	<b>H360FD</b>	May damage fertility. May damage the unborn child.
Repr. 1A Repr. 1B	<b>H360Df</b>	May damage the unborn child. Suspected of damaging fertility.
Repr. 1A Repr. 1B	<b>H360Fd</b>	May damage fertility. Suspected of damaging the unborn child.
		<b>Environmentally Hazardous Substances</b>
Aquatic Chronic 1	<b>H410</b>	Very toxic to aquatic life with long lasting effects.