BLUE ANGEL

The German Ecolabel

Baby Monitors

DE-UZ 125

Basic Award Criteria

Edition July 2018

Version 2

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.

Umwelt Bundesamt

The German Environmental Agency with its specialist department for "Ecodesign, Eco-Labelling 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.

Jury Umweltzeichen

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.

RAL gGmbH

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

Baby monitors are also known as baby intercoms or baby alarms. Baby monitors are designed for the acoustic and, in some cases, visual monitoring of babies and small children.
Traditional baby monitors consist of a microphone for capturing noises in the room, which are then sent to a transmitter. The transmitter either continuously transfers the signals to a receiver or only when a defined minimum sound level is exceeded. The signals transferred to the receiver are played back via a loudspeaker. Newer baby monitors with video functions have an additional camera on the transmitter and a monitor on the receiver. So-called baby webcams send sound and images to a mobile end device (e.g. tablet or smartphone) on which an associated app needs to be installed.
The data can be transferred either via cable or radio transmission. In the case of radio transmission, the Federal Network Agency has issued a general assignment[1] for a specific frequency range for this purpose. Baby monitors that transfer information via radio signals generate high-frequency electromagnetic fields just like all radio transmitting equipment. In the case of devices operated using alternating current, additional low-frequency electric and magnetic fields are emitted, especially from the power supply units and power cables.
All scientifically proven impacts on health that are directly caused by electric, magnetic or electromagnetic fields can be excluded if exposure is limited. Independent panels of experts who have developed and recommended guidelines for limiting exposure are the International Commission on Non-Ionizing Radiation Protection (ICNIRP) and the German Commission on Radiological Protection (SSK). In addition, the Federal Office for Radiation Protection (BfS) and the SSK recommend that exposure is limited as much as possible and that the recommended maximum values are not exceeded. These recommendations refer to both low-frequency and also high-frequency fields and apply especially to children. They correspond to tried-and-tested methods in radiation protection and take into account scientific uncertainty in risk assessments. For example, epidemiological studies have indicated that weak low-frequency magnetic fields may possibly slightly increase the risk of childhood leukaemia. The International Agency for Research on Cancer (IARC) has thus classified low-frequency magnetic fields as a possible

[1] https://www.bundesnetzagentur.de/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Frequenzen/Allgemeinzuteilungen/allgemeinzuteilungen-node.html

carcinogen (high-frequency electromagnetic fields also have the same classification, although for a different reason). As a precautionary measure, manufacturers should utilise the technical possibilities to keep exposure to high-frequency and low-frequency fields as low as possible – especially for babies and small children.
In addition, the materials used should not contain any substances that are especially relevant to health and the environment and which could cause problems during their use or disposal.

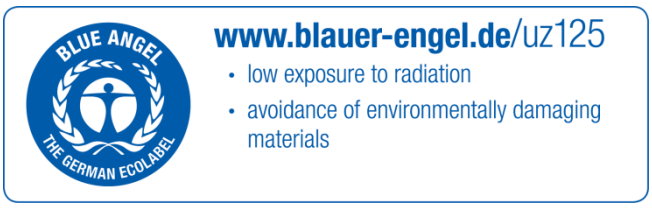
1.3 Objectives of the environmental label

The "Blue Angel" environmental label for baby monitors should inform customers purchasing these types of devices that products issued with this label – in contrast to other products – provide greater preventative protection for the environment, human health and consumer protection. Therefore, the environmental label can act as a decision-making aid for purchasing new devices.

The Blue Angel environmental label for baby monitors may be awarded to products featuring the following environmental and health aspects:

- low exposure to radiation;
- avoidance of environmentally damaging materials.

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



1.4 Definitions

- **Baby unit:** This includes all device components in the room being monitored. It also includes e.g. adapters for transmitting signals via the power grid if they are used in the room being monitored.
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- **Parent unit:** All device components that are primarily designed for receiving the signals from the baby unit.
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- **Standby mode:** All of the device components for the baby unit are in a passive state in this mode. This means that they are not transmitting any signals to the parent unit. Even devices that use radio transmission do not emit any high-frequency radiation in this mode. As soon as the baby unit detects a noise above a threshold value for the sound level, it switches to active mode.

- **Standby mode incl. connectivity check:** The same as standby mode; although a connectivity check, also described as a "range control check", is additionally carried out at regular intervals. This means that a signal is regularly transmitted from the baby unit to the parent unit to check whether the parent unit is still within the reception range. If the parent unit does not receive regular signals, it indicates this with e.g. an alarm tone. In the case of devices using radio transmission, the child is exposed to high-frequency radiation at regular intervals as a result.
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- **Active mode:** This mode is triggered as soon as the child makes a noise above the set threshold value for the sound level. The baby unit then begins to transmit the noises to the parent unit. Devices that use radio transmission generate high-frequency electromagnetic fields in this mode. As soon as the child is sleeping calmly again, the baby unit switches back to standby mode (if necessary, incl. the connectivity check) after a defined delay period.
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- **Continuous transmission:** The baby unit continuously transmits the room noises to the parent unit in this mode. Devices that use radio transmission generate high-frequency electromagnetic fields in this mode.
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- **Lamps:** In the sense of these Basic Award Criteria, this describes electrical equipment that convert electrical energy into light or optical radiation (incl. infrared radiation). They can be designed as a light bulb, fluorescent lamp, light emitting diode (LED) or another form of equipment. Another description for lamps are lights.
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2 Scope

The Basic Award Criteria apply to all types of baby monitors (also frequently called baby intercoms or baby alarms), irrespective of whether the signal is transmitted via radio or cables. Alongside the main function of the baby monitor, the devices may also offer additional functions such as e.g. two-way voice transmission.
Baby webcams and devices that exclusively work in continuous transmission mode are excluded from being awarded this Blue Angel environmental label.

3 Requirements

The baby monitors named under Paragraph 2 can be labelled with the environmental label if they fulfil the requirements in Paragraph 3 below. If there is no differentiation made between the baby unit and the parent unit in the requirements, they apply to all device components contained within the scope of delivery for the baby monitor.

3.1 Requirements for standby modes

The device components located near to the baby ("baby unit") must fulfil the following requirements in their various operating states:

- **Standby mode incl. connectivity check:** In order to minimise the child's exposure to high-frequency radiation during the monitoring of the baby, the baby monitor must fulfil the following requirements in this mode:
  - The frequency and duration of the transmission signals for the connectivity check must be limited as follows:
    - Frequency: no more than twice per minute (interval ≥ 30 seconds) and
    - Duration < 20 milliseconds.
- **Continuous transmission**: If the baby monitor features this type of operating mode, it must be possible for the device to be actively switched on and off.
- It must be possible to set the threshold value for the sound level in the monitored room from which the device switches to active mode.
- The device must end this active mode within 10 seconds if the device no longer detects any noises above the set threshold value.

Compliance verification

The applicant shall state the operating states of the device in Annex 1 to the contract and declare compliance with the requirements. The applicant shall mark the corresponding sections of the product documentation in which the operating states are explained and submit the relevant pages of the product documentation as Annex 7 to the contract.
In addition, the applicant shall submit a test report in Annex 2 according to the measurement specifications in Appendix B that documents the transmission behaviour in standby mode, as well as how the device switches to active mode and returns back to standby mode once no further noises are detected.

3.2 Emissions

3.2.1 High-frequency radiation

High-frequency electromagnetic fields are generally emitted from an antenna. Electric and magnetic fields in a frequency range from 100 kilohertz to 300 gigahertz are described as high-frequency fields.
In order to minimize the exposure to high-frequency electromagnetic fields when monitoring the baby, the electrical field strength of the radio equipment located near to the baby ("baby unit") must not exceed the following limit values – which represent 1% of the reference value according to the EU Council recommendation (1999/519/EC)[2] – in all operating states (see Paragraph 3.1) at a distance of one metre:

[2] See Table 2; Council Recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) (1999/519/EC), Official Journal of the European Communities of 30/7/1999

Table 1 Reference and limit values for the electrical field strength of the radio equipment located near to the baby ("baby unit") in all operating states at a distance of one metre

Frequency (f)	Reference value Electric field strength according to the EU Council recommendation	Limit value Electric field strength for the Blue Angel DE-UZ 125
10 MHz – 400 MHz	$28\frac{V}{m}$	$0{,}28\frac{V}{m}$
400 MHz – 2 GHz	$1{,}375\sqrt{f\ [MHz]}\frac{V}{m}$	$0{,}01375\sqrt{f\ [MHz]}\frac{V}{m}$
2 GHz – 300 GHz	$61\frac{V}{m}$	$0{,}61\frac{V}{m}$

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1 to the contract and submit a test report from a DIN EN ISO/IEC 17025 accredited testing laboratory (Annex 3). The measurement of the maximum electrical field strength of the radio equipment located near to the baby ("baby unit") at a distance of one metre shall be carried out in accordance with the measurement specifications in Appendix B.
Testing laboratories used to measure high-frequency radiation must be a notified body[3] appointed by the Federal Network Agency in accordance with the RED Directive[4] or a notified body appointed by another European notifying authority[5].

3.2.2 Low-frequency radiation

In the frequency range from 0.025 to 150 kHz ("low-frequency radiation"), the device components (including the power supply unit) located near to the baby ("baby unit") must not generate alternating electromagnetic fields at a measurement distance of 30 cm that exceed the effective values stated in the following table[6]:

Frequency range [in kHz]	Magnetic flux density [in nT]
0.025 – 0.8	5/f *
0.8 – 3	6.25
3 – 150	6.25

* The formula for the frequency range 0.025 – 0.8 kHz is to be used here for "f" – the frequency in kilohertz (kHz).

In the case of devices with adjustable transmission power, the above requirement must be complied with at the maximum settable transmission power in transmission mode (active mode or continuous transmission).

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[3] https://www.bundesnetzagentur.de/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Technik/AnerkKonformBbewStellen/BenannteStellenFTEG/benanntestellenfteg-node.html
[4] RED Directive: Directive 2014/53/EU on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment – Radio Equipment Directive
[5] The EU Commission provides information on notified bodies at http://ec.europa.eu/growth/tools-databases/nando/index.cfm?fuseaction=directive.notifiedbody&dir_id=154428
[6] These values were determined by transferring the reference values from 1999/519/EC to a requirement level of 100 nT for a magnetic flux density of 50 Hz

Compliance verification

The measurement of the magnetic flux density in transmission mode shall be carried out in accordance with EN 50413, Basic standard on measurement and calculation procedures for human exposure to electric, magnetic and electromagnetic fields (0 Hz - 300 GHz). Measurements shall be carried out in all spatial directions. None of these measurement values is permitted to exceed the requirements described above for the magnetic flux density.
The applicant shall declare compliance with the requirements in Annex 1 to the contract and submit a test report from a DIN EN ISO/IEC 17025 accredited testing laboratory (Annex 4). Test reports completed by the applicant are recognised as being of an equivalent standard when the testing laboratory used for the measurements is accredited by an independent body as an SMT laboratory (supervised manufacturer testing laboratory).

3.2.3 Optical radiation

If the baby monitor has lamps, these must be classified under the free group (risk class 0 - RG 0) as defined in DIN EN 62471[7]. It is important to ensure here that the lamps do not pose any photobiological danger.

Compliance verification:

The applicant shall state in Annex 1 whether the baby monitor has lamps. If this is the case, the applicant shall declare in Annex 1 that the lamps are classified under the "free group" (risk class 0) as defined in DIN EN 62471 (Photobiological safety of lamps and lamp systems). In addition, the applicant shall submit a test report or data sheet from the lamp manufacturer in Annex 5 that verifies this classification.

3.3 Material requirements for plastics used in the housing and housing parts

The plastics used in the housing and housing parts may not contain any substances as constituent parts[8] that have the following properties:

a) Substances which are identified as particularly alarming under the European Chemicals Regulation REACH (1907/2006/EC) and which have been incorporated into the list drawn up in accordance with Article 59, Paragraph 1 of the REACH Regulation (so-called "list of candidates").[9]
b) Substances that according to the CLP Regulation[10] have been classified in the following hazard categories or which meet the criteria for such classification[11]:

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7 DIN EN 62471:2009-03; VDE 0837-471:2009-03; Title (German): Photobiological safety of lamps and lamp systems (IEC 62471:2006, modified); German version EN 62471:2008

8 Constituent components are substances added to the product as such or as part of a mixture and remain there unchanged in order to achieve or influence certain product properties. This does not apply to residual monomers that have been reduced to a minimum.

9 The version of the list of candidates at the time of application is valid. The REACH list of candidates in its relevant version can be found under the following link: https://echa.europa.eu/candidate-list-table

10 Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures, short: CLP (Classification, Labelling and Packing). It replaces the old directives 67/548/EEC (Dangerous Substances Directive) and 1999/45/EC (Dangerous Preparations Directive).

11 The harmonized classifications and labellings of dangerous substances can be found in Annex VI, Part 3 of the CLP Regulation. Furthermore, a comprehensive classification and labelling inventory, which also includes all of the self-classifications of hazardous substances made by manufacturers, has been made

- Carcinogenic in categories Carc. 1A or Carc. 1B
- Germ cell mutagenic in categories Muta. 1A or Muta. 1B
- Reprotoxic (teratogenic) in categories Repr. 1A or Repr. 1B

c) Fluoropolymers (such as e.g. PTFE) used, for example, as cable sheathing may only contain perfluorinated carbon acids with 8-14 carbon atoms (PFOA, PFNA, PFDA, PFUnDA, PFDoDA, PFTrDA, PFTeDA) that have maximum residual contents of 25 ppb (total) or 25 µg/kg. (A DIN standard does not currently exist, the method used by the company 3M should thus be used[12]).

Halogenated polymers are not permitted in the housing and housing parts. Neither may halogenated organic compounds be added as flame retardants. In addition, no flame retardants classified according to the CLP Regulation as carcinogenic in category Carc. 2 or as hazardous to water in category Aquatic Chronic 1 are permitted.
The hazard statements (H Phrases) that correspond to the hazard categories can be found in Supplement C: "Assignment of hazard categories and H Phrases".
The following shall be exempt from this rule:

- fluoroorganic additives (e.g. anti-dripping agents) used to improve the physical properties of plastics, provided that they do not exceed a proportion of 0.5 % by mass;
- plastic parts with a mass of less than or equal to 10 g, whereby in the case of housings with multiple parts, the total of the individual parts made of the same plastic is definitive for determining the mass.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1 to the contract and submit a list of the plastics used in the housing according to Annex P-L 10 for those housings made of plastic with a mass greater than 10 grams. For the listed parts, the applicant shall submit a written declaration from the plastics manufacturer or guarantee the provision of these documents to RAL gGmbH. The declaration shall confirm that the excluded substances have not been added to the plastics and provide a chemical description of the flame-retardant materials used including the CAS number and its rating (H Phrases) (Annex P-M to the Contract). When first applying for the Blue Angel environmental label, the submitted declaration must not be older than 6 months. If one applicant submits additional applications for the labelling of products that contain the same plastics, the submitted declarations may be presented unchanged during the term of the Basic Award Criteria. Notwithstanding this, RAL shall be entitled to ask for an updated version of the declarations if the Federal Environmental Agency (Umweltbundesamt) finds that product-relevant substances have been added to the list of candidates.

available to the public on the website of the European Chemicals Agency: ECHA classification and labelling inventory.

[12] Standard Test Method, 3M, Edition 1.0 Nov 2016: https://multimedia.3m.com/mws/media/1356771O/3m-standard-method-for-pfas.pdf

3.4 Rechargeable batteries

If the device contains rechargeable batteries, it must be possible for them to be replaced by the user without damaging the device and without the aid of special tools.
In addition, the rechargeable batteries must comply with the valid regulations in DIN EN IEC 62133 and DIN EN IEC 61951-2[13]. The product documentation must include information on replacing the batteries and on the type of batteries used, as well as on the proper disposal of the batteries.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1 to the contract. The applicant shall mark the corresponding sections of the product documentation in which the replacement of the rechargeable batteries and the type of batteries are described and submit the relevant pages of the product documentation as Annex 7 to the contract.

3.5 Warranty cover

The applicant undertakes to grant a three-year warranty for the device (excluding the batteries) without any additional charge.
The product documentation must contain information about the warranty cover.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1 to the contract, mark the corresponding sections of the product documentation in which the warranty cover is indicated and submit the relevant pages of the product documentation as Annex 7 to the contract.

3.6 Availability of spare parts and repairs

The applicant undertakes to make sure that the provision of spare parts for the repair of the devices is guaranteed for at least 3 years following the termination of production. The spare parts must be available at reasonable prices from the manufacturer themselves or from a third party.
Spare parts are those parts which, typically, may fail or break down within the scope of the ordinary use of a product, especially device-specific rechargeable batteries or power supply units. Whereas those (aesthetic) parts which normally exceed the average life of the product are not to be considered as spare parts.
The product documentation must include information on the provision of spare parts and about repair services.

[13] DIN EN IEC 62133: Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications and DIN EN IEC 61951-2: Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary sealed cells and batteries for portable applications - Part 2: Nickel-metal hydride

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1 to the contract, mark the corresponding sections of the product documentation in which the provision of spare parts is indicated and submit the relevant pages of the product documentation as Annex 7 to the contract.

3.7 Recycling strategy

The baby monitor must be designed so that it is easy to separate important material fractions such as plastics, ferrous metals, copper and aluminium.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit its recycling strategy (Annex 6).

3.8 Requirements on the selection of recyclable materials

The following applies to plastic parts (except for cables) with a mass greater than 25 g and key caps, insofar as they have a total mass greater than 25 g:

- Only ABS, HIPS and PP plastics are approved for these parts.
- The materials used in the plastic housing must be recyclable.

Plastic parts with an individual mass greater than 25 g and an even surface area of more than 200 square millimetres must be permanently marked in accordance with ISO 11469, while taking ISO 1043, Parts 1 to 4, into consideration. Transparent plastic parts whose function requires transparency (e.g. visible film on displays) are exempt from labelling according to ISO 11469. Galvanised coatings and other metal coatings are not permitted.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 to the contract and state which plastics are used for plastic parts with a mass > 25 grams and the relevant proportion of recycled plastics used based on the mass of the plastic parts in Annex P-L 25 to the contract. In addition, the applicant shall mark the corresponding sections of the recycling strategy in which the recyclability of the materials is verified and submit the recycling strategy in Annex 6 to the contract.

3.9 Consumer information on minimising exposure to radiation and electrical power consumption

The specific radiation values for the respective device (for high-frequency and low-frequency radiation according to Paragraphs 3.2.1 and 3.2.2 of the Basic Award Criteria) must be stated in the product documentation in the same context as the other technical data.
Paragraphs 3.2.1 and 3.2.2 refer in each case to all of the device components located near to the baby ("baby unit"). In order to guarantee the proper assignment of the different components (especially the monitoring device and the power supply unit), device components that belong together must be clearly and permanently labelled. Corresponding explanations must be provided in the product documentation.

In addition, the user of the device must be informed in a separate section of the product documentation about precautionary measures when dealing with high-frequency and low-frequency fields. Furthermore, the following standard text must be used:
"The Federal Office for Radiation Protection (BfS) and the German Commission on Radiological Protection (SSK) recommend that exposure to low-frequency and high-frequency fields is limited as much as possible and that the recommended maximum values are not exceeded. These recommendations apply especially for children. They correspond to tried-and-tested methods in radiation protection and take into account scientific uncertainty in risk assessments. For example, epidemiological studies have indicated that weak low-frequency magnetic fields may possibly slightly increase the risk of childhood leukaemia. The International Agency for Research on Cancer (IARC) has thus classified low-frequency magnetic fields as a possible carcinogen (high-frequency electromagnetic fields also have the same classification, although for a different reason). As a precautionary measure, exposure to high-frequency and low-frequency fields should thus be kept as low as possible – especially for babies and small children.

As well as by using a device labelled with the Blue Angel environmental label, precautionary measures of your own can contribute to a further reduction in exposure:
- Place the device at a distance of -- m (a value of at least 1.0 m must be stated here by the applicant) from the child's bed
- Also ensure, in particular, that the power supply unit or an adapter for power line communication are placed as far as possible from the child."

Compliance verification

The applicant shall submit the corresponding pages of the product documentation in Annex 7.

4 Applicants and parties involved

Manufacturers or distributors of 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, (Federal Environmental Agency) which after the signing of the contract receives all data and documents submitted in application 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 31/12/2024.

They shall be extended by periods of one year each, unless terminated in writing by 31/03/2024 or 31 March 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 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 organizations.

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 marketing organization.

Appendix A Quoted laws and standards, literature

The observance of relevant existing laws and legal requirements is a prerequisite for those products awarded with the environmental label. In particular, the following legal requirements are observed:

[1] The WEEE Directive (2012/19/EU)[14] implemented in German law in the Electrical and Electronic Equipment Act (ElektroG)[15] that regulate the disposal of products.

[2] The ROHS Directive (2011/65/EU)[16] implemented in German law in the German Material Ordinance for Electrical and Electronic Equipment (ElektroStoffV)[17] that regulates the pollutant content of products.

[3] The substance requirements defined by the EU Chemicals Regulation REACH (1907/2006/EC)[18] and the POP Regulation (850/2004/EC)[19].

[4] The External Power Supplies Directive (EC/278/2009)[20] that regulates the ecodesign requirements for external power supplies.

[5] The Battery Directive (2006/66/EC)[21] implemented in German law in the German Battery Act (BattG)[22] must be observed.

[6] The General Product Safety Directive (2001/95/EC)[23] implemented in German law in the German Product Safety Act (ProdSG)[24] must be observed.

[7] The RED Directive (2014/53/EU)[25] implemented in German law in the German Radio Equipment Act (FuAG)[26] must be observed.

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[14] Directive 2012/19/EU on waste electrical and electronic equipment (new version); WEEE Directive

[15] Law for the sale, return and environmental disposal of electrical and electronic equipment, Electrical and Electronic Appliance Act from 20 October 2015; ElektroG

[16] Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (new version); ROHS Directive

[17] Ordinance to limit the use of hazardous substances in electrical and electronic equipment (Material Ordinance for Electrical and Electronic Equipment) from 19/04/2013; ElektroStoffV

[18] Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals; REACH Regulation

[19] Regulation (EC) No. 850/2004 on persistent organic pollutants; POP Regulation

[20] Regulation (EC) No. 278/2009 implementing directive 2009/125/EC (previously: 2005/32/EC) with regard to ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies; External Power Supplies Directive

[21] Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators; Battery Directive

[22] Law to revise the legal responsibility for waste batteries and accumulators; German Battery Act from 25/06/2009, BGBI. I S. 1582; BattG

[23] Directive 2001/95/EC on general product safety

[24] Law for making products available on the market (Produktsicherheitsgesetz – ProdSG) from 8 November 2011.

[25] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC (Radio Equipment Directive – RED)

[26] Law to revise the regulation on radio equipment and amend the German Telecommunications Act, as well as repeal the German Radio and Telecommunications Equipment Act, from 27 June 2017 (BGBI. I S. 1947); FuAG

Appendix B Measurement of high-frequency radiation

The measurement of the frequency and duration of the transmission signals and how the device switches between standby and active modes according to Paragraph 3.1, as well as the electrical field strength of the radio equipment located near to the baby ("baby unit") according to Paragraph 3.2.1 must be carried out using the following measurement setup.

The baby monitor and, if relevant, other device components that emit high-frequency electromagnetic fields and are assigned to the "baby unit" (e.g. a transmission unit separate to the microphone or camera) must be positioned on a suitable holding device made of electrically non-conductive materials at a distance of one metre to a measurement antenna suitable for the frequency range. The following diagram shows the arrangement of the baby monitor, antenna and connected spectrum analyser.

First, the frequency and transmission behaviour in the different operating states (see Paragraph 1.4 Definitions) of standby mode, standby mode incl. connectivity check and active mode is determined. The operating states are achieved here using suitable settings or applications (e.g. external noise source).

The following values and properties must be determined during the measurements:

- Transmission frequency (MHz)
- Transmission behaviour in standby mode without connectivity check (optional)
  - Confirmation that the device has a standby mode in which it does not transmit (Yes/No)

- Transmission behaviour in standby mode incl. connectivity check
  - Determining whether a connectivity check is performed by regularly transmitting a test signal (Yes/No)
  - Determining whether the connectivity check can be switched off (Yes/No)
  - Determining the frequency of the transmission signals for the connectivity check (number of transmission signals per minute)
  - Determining the duration of the transmission signals for the connectivity check (time in milliseconds)
- Transmission behaviour in active mode
  - Determining whether the baby monitor switches to active mode when the minimum sound level is exceeded (Yes/No)
  - Determining whether it is possible to set the threshold value for switching from standby mode or standby mode incl. connectivity check to active mode (Yes/No)
  - Determining the latent period after which the baby monitor switches from active mode back to standby mode (if relevant, incl. connectivity check) when the sound level falls back below the threshold value; determining whether the latent period is dependent on the set threshold value; stating the longest total latent period (time in seconds);

The maximum value for the electrical field strength is then determined by turning the baby monitor and, if relevant, other device components (see above) in all possible directions to the measurement antenna, while a connected spectrum analyser is operated in Max Hold mode (recording the maximum value). If the baby monitor supports different transmission modes or signal strengths (ranges), the setting that results in the highest electrical field strength must be selected. The measurement must be carried out in the operating state (see Paragraph 1.4 Definitions) in which the highest field strength is generated. During this process, it is important to ensure that, for example, the detector, resolution bandwidth and sweep time of the spectrum analyser are adjusted to the signal bandwidth and the temporal pattern of the transmissions in the relevant operating states so that the actual effective value is determined in each case. In the case of products operated using batteries or rechargeable batteries, it must be ensured that they are fully charged before each measurement and two simple comparative measurements before and after the actual test must be carried out to ensure that the discharge of the batteries or rechargeable batteries has not significantly influenced the measurement of the electrical field strength.

The measured value for the electric field strength represents the maximum effective value for the transmission at a distance of one metre and must be documented in the measurement report (units: volts per metre). This value is definitive for complying with the limit values stated in Paragraph 3.2.1.

Appendix C Assignment of hazard categories and H Phrases

The following table assigns the hazard categories for the general exclusion of substances to the corresponding hazard statements (H Phrases).

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Hazard category	H Phrases	Hazard statement
Carcinogenic substances		
Carc. 1A Carc. 1B	H350	May cause cancer.
Carc. 1A Carc. 1B	H350i	May cause cancer if inhaled.
Carc. 2	H351	Suspected of causing cancer.
Germ cell mutagenic substances		
Muta. 1A Muta. 1B	H340	May cause genetic defects.
Reprotoxic substances		
Repr. 1A Repr. 1B	H360D	May damage the unborn child.
Repr. 1A Repr. 1B	H360F	May damage fertility.
Repr. 1A Repr. 1B	H360FD	May damage fertility. May damage the unborn child.
Repr. 1A Repr. 1B	H360Df	May damage the unborn child. Suspected of damaging fertility.
Repr. 1A Repr. 1B	H360Fd	May damage fertility. Suspected of damaging the unborn child.
Environmental hazards		
Aquatic Chronic 1	H410	Very toxic to aquatic life with long-lasting effects.