BLUE ANGEL

The Environmental Label

Mattresses

DE-UZ 119

Basic Award Criteria

Edition of January 2018

Version 1

The Environmental Label is supported by the following institutions:

Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit

The Federal Ministry for the Environment, Nature Conservation, Building 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. It includes representatives from environmental and consumer associations, trade unions, industry, trade, crafts, local authorities, science, media, churches, young people and the German federal states.

RAL gGmbH

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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1 Introduction

1.1 Preface

The Environmental Label Jury has set up these Basic Criteria for Award of the Environmental Label in co-operation with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the German Environmental Agency and considering the results of expert hearings conducted by RAL gGmbH. 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 for all products, provided that they meet the requirements specified hereinafter.
The product must comply with all the legal requirements of the country in which it is to be placed on the market. The applicant shall declare that the product meets this requirement

1.2 Background

Mattresses may cause environmental impacts throughout their entire life cycles. That is why these requirements for award of the Blue Angel eco-label refer to both the materials used in the manufacture of the products and the period of use as well as to the disposal of used mattresses. In addition, mattresses are large objects used in indoor environments and, when lying, the user is in close proximity to the product. Therefore, for reasons of environment and health, lowest-possible emissions from these products are desirable in the interest of the user. Here, the eco-label is a good means to distinguish low-emission products. To allow an evaluation of emissions from mattresses these Award Criteria are set up on the basis of the evaluation scheme (AgBB evaluation scheme) developed by the Committee for Health-related Evaluation of Building Products (Ausschuss zur gesundheitlichen Bewertung von Bauprodukten) - a joint state and federal government committee composed of experts from German environmental and health authorities.
Since emissions are often accompanied by odours which may also cause health effects the sensory test is an important element in evaluating the individual products designed for interior use. The DIN ISO 16000-28 standard "Indoor air - Part 28: Determination of odour emissions from building products using test chambers" of 2012 provides a measurement method. This standard describes the measurement of odours from building products in test chambers in parallel with the measurements of volatile organic compounds (VOC). That is why the verification of low odour has been incorporated into these Award Criteria as an optional requirement. During the current term of these Award Criteria data regarding the odour tests of mattresses will be generated within the scope of a research project. The next revision of the Award Criteria is expected to include the odour test as a binding requirement.

1.3 Objectives of the Environmental Label

The Blue Angel Eco-label for mattresses can be awarded to products which, beyond legal requirements:

- are free from hazardous substances that would considerably impede recycling. The use of wood of wood from sustainable forestry and recycled material is encouraged.

- are manufactured using materials that have a lower impact on the environment.

This is why the benefit logo lists the following benefits to environment and health:

2 Scope

These Award Criteria apply to ready-to-use mattresses for indoor use. The term "mattresses" (bed mattresses) refers to products providing a surface to sleep or rest upon, consisting of a strong cloth cover filled with materials that can be placed on a supporting bed structure. This also includes all types of mattresses with an integrated bed frame, i.e. upholstered bed bases with a flexible core surrounded by filling material on a rigid frame to be used in a bed frame or free standing, including the mattress bases specifically destined for use therewith. Included are headrest pillows belonging to the mattresses and made of the same materials.
Excluded are inflatable mattresses and water mattresses as well as mattresses classified under Council Directive 93/42/EEC („medical mattresses“).
Beds primarily used for sleeping (e.g. box spring beds) shall also fall within the scope these Award Criteria. Upholstered furniture that is only occasionally used for sleeping falls within the scope of DE-UZ 117. If box spring beds are manufactured using materials not being listed in DE-UZ 119 (leather, coated textiles, metals, etc.) they shall meet the requirements of DE-UZ 117.

3 Requirements

The Environmental Label shown on page 1 may be used for the labelling of products under paragraph 2, provided that they meet the following requirements:

3.1 General Substance Requirements

Compliance with the provisions of the European and German chemicals legislation is a matter of course for Blue Angel eco-labelled products; with regard to mattresses this includes, above all: REACH Regulation[1], Annexes XIV and XVII, Persistent Organic Pollutant Regulation (POP)[2], Annex I, GefStoffV (Ordinance on Hazardous Substances), Directive on Industrial Emissions[3],

1 Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
2 Regulation (EC) No 850/2004 on persistent organic pollutants (POP)
3 Directive 2010/75/EU on industrial emissions

25th Federal Immission Protection Ordinance (25. BImSchV)[4], Biocidal Products Regulation[5], Decopaint Directive[6] and CLP Regulation[7],[8].
Moreover, the product shall not contain as constituents any substances with the following properties[9]:

- Substances that have been identified as substances of very high concern in accordance with the REACH Regulation[2] and have been included in the list set up in accordance with REACH, Article 59, paragraph 1[10] (so-called Candidate List).
- Substances that are classified according to the CLP Regulation[8] in the following hazard categories or meet the criteria for such classification [11],[12]:
  - carcinogenic of category Carc. 1A or Carc. 1B
  - mutagenic of category Muta. 1A or Muta. 1B
  - reprotoxic of category Repr. 1A or Repr. 1B
  - acutely toxic of category Acute Tox. 1 or Acute Tox. 2
  - toxic to specific target organs of category STOT SE. 1, STOT SE. 2, STOT RE. 1 or STOT RE. 2
- The H-Statements corresponding to the hazard classes and categories can be seen from Appendix 1.

- Substances classified in TRGS 905[13] as:
  - carcinogenic (K1, K2),
  - mutagenic (M1 , M2),
  - reprotoxic (RF1, RF2, RE1, RE2).

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4 25th Ordinance implementing the German Federal Immission Protection Law
5 Regulation (EU) No 528/2012 on the placing on the market and use of biocidal products
6 Directive 2004/42/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes
7 Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, (short: CLP Regulation) replacing the old Directives 67/548/EEC (Dangerous Substances Directive) and 1999/45/EC (Dangerous Preparations Directive)
8 Provided that the specific product is subject to additional regulations such rules shall also be complied with.
9 Constituents are substances added to the product as such or as ingredients of mixtures in order to achieve or influence certain product properties as well as those which are required as chemical decomposition products to achieve the product properties. They do not include, for example, minimized residual monomers.
10 The Candidate List as amended at the time of filing the application shall be applicable. It can be found at: REACH-Kandidatenliste.
11 The list of harmonised classification and labelling of hazardous substances is included in Part 3 of Annex VI to the CLP Regulation. Moreover, a comprehensive classification and labelling inventory is publicly accessible via the website of the European Chemicals Agency ECHA which also includes all manufacturer-provided self-classifications of hazardous substances: ECHA Einstufungs- und Kennzeichnungsverzeichnis.
12 Substances with additional hazardous properties (among others: CMR substances of category 2) are not excluded here but are reduced by the emission evaluation according to the AgBB scheme (see paragraph 3.2.1 - Indoor Air Quality).
13 TRGS 905, (Technical Rules for Hazardous Substances 905) – List of carcinogenic, mutagenic or reprotoxic substances of the Committee on Hazardous Substances (AGS): TRGS 905. The TRGS 905 list, as amended at the time of filing the application, shall be applicable (last amended in June 2017 – as of November 2017). The TRGS lists those CMR substances where no harmonised classification exists so far or where the Committee on Hazardous Substances arrives at a different classification. The total CMR list of the statutory accident insurance may also be used as a tool: CMR-Gesamtliste (Combined list of CMR substances according to CLP Regulation and TRGS 905).

Compliance Verification:

The applicant shall declare compliance with the requirements in Annex 1, give the trade names, name the suppliers of all individual primary products/individual parts of the mattresses and specify the materials used as well as their percentage and their function in the manufactured final product (Annex 2).
All suppliers (cover and filling materials for use in prolonged contact with skin) shall declare compliance with the requirements in Annex 3 and present, at the request of RAL gGmbH, the relevant Technical and Safety Data Sheets.

3.2 Manufacture

3.2.1 Requirements to by met by the Wood

3.2.1.1 Origin of the Wood

The applicant shall make sure that all processed wood comes from legal sources. Moreover, at least 50 percent of the wood or 50 percent of the primary raw materials for wood-based materials shall be sourced from sustainable forests which are managed in a verifiably economically viable, environmentally sound and socially responsible way.

Compliance Verification

The applicant shall declare compliance with the legal source requirement according to Regulation (EU) 995/2010[14]*.*
Compliance with the requirement for using wood from sustainable forestry can be verified as follows:

- *If the applicant itself is certified according to the FSC or PEFC criteria for a chain of custody (CoC) the applicant shall present the relevant certificate. In such case no further evidence shall be required.*
- *If the applicant itself is not certified the applicant shall submit appropriate certificates of its raw material supplier. RAL accepts certificates from the Forest Stewardship Council (FSC) and from the Programme for the Endorsement of Forest Certification Schemes (PEFC) certifying sustainable forestry and a chain of custody (CoC). The applicant shall submit a record of the wood used specifying the percentage of certified wood used (Annex 2 to the Contract pursuant to DE-UZ 38).*
- *The applicant shall submit other appropriate compliance verifications according to Appendix A to DE-UZ 38 (Annex 3 to the Contract pursuant to DE-UZ 38).*

3.2.1.2 Formaldehyde Release from Wood-Based Materials

Products under paragraph 2 can be manufactured using DE-UZ 76-eco-labelled wood-based materials. If the wood-based materials used have not been awarded the Blue Angel eco-label pursuant to DE-UZ 76 they shall not exceed in their raw state, i.e. prior to machining or coating, a formaldehyde steady state concentration of 0.1 ppm in the test chamber.

[14] OJ L 295 of November 2010

Compliance Verification

In the case of DE-UZ 76 eco-labelled wood-based materials, the applicant shall name the manufacturer and give the product designation (Annex 2). In those cases where wood-based materials have not yet been awarded the Blue Angel eco-label pursuant to DE-UZ 76 the applicant shall present a test report on the basis of DE-UZ 76.

3.2.2 Textiles

3.2.2.1 Dyes and Pigments

The dyes and pigments listed in Appendix C to DE-UZ 148 shall not be used.

Compliance Verification:

The applicant shall present declarations from its textile suppliers pursuant to Annex 3 confirming that these substances have not been used or submit evidence according to a test method listed in OEKO-TEX Standard 100[15].

3.2.2.2 Biocide Residues

Cover fabrics made of vegetable natural fibres, wool or other animal fibres shall meet the requirements for pesticides of OEKO-TEX Standard 100[16], product category I or II. This shall also apply to horsehair used as padding.
Baby mattresses shall be exclusively governed by the requirements for product category I.

Compliance Verification:

The applicant shall present the test results obtained using a test method mentioned in OEKO-TEX Standard 100 for a representative sample of cover fabrics selected in consultation with the testing laboratory (Annex 3).

3.2.2.3 Biocidal Finishing

A biocidal finishing of the textiles shall be prohibited.

Compliance Verification:

The applicant shall present a declaration from the textile suppliers (Annex 3) confirming that the textiles have not undergone a biocidal finishing process.

3.2.2.4 Mothproofing

Mothproofing agents shall not be used to protect the cover fabrics and their natural-fibre padding (wool and other animal fibres).

Compliance Verification:

The applicant shall submit declarations from its textile suppliers pursuant to Annex 3 confirming that no mothproofing agents have been used. This requirement shall also be considered met if the textiles bear the "Naturtextil" quality mark.

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[15] OEKO-TEX Standard 100, Test Method, as amended at the time of filing the application
[16] OEKO-TEX Standard 100, General and Special Conditions, as amended at the time of filing the application

3.2.2.5 Extractable Heavy Metals

The extractable heavy metals shall meet the requirements of Annex 4 to OEKO-TEX-Standard 100.

Compliance Verification:

The textile supplier shall present a declaration confirming compliance with the requirement and, in addition, submit a test report in accordance with DIN 54233-2[17] (Annex 3). Extraction shall be made from an artificial acidic sweat solution within 4 hours at 37°C. Chromium VI can be measured using the method specified in DIN 38405-24 (D-24). The detection limit shall not, however, exceed 0.5 mg/kg (Annex 3).

3.2.3 Filling Materials (Padding)

The following criteria need only be met if latex foam accounts for at least 5 % of the total weight of the mattress.

3.2.3.1 Latex Foam

The filling materials shall not exceed the concentration limits of the metals listed in Table 1 below:

Table 1

Extractable Heavy Metals	Limit
Antimony	0.5 mg/kg
Arsenic	0.5 mg/kg
Lead	0.5 mg/kg
Cadmium	0.1 mg/kg
Chromium (total)	1.0 mg/kg
Cobalt	0.5 mg/kg
Copper	2.0 mg/kg
Nickel	1.0 mg/kg
Mercury	0.02 mg/kg

Compliance Verification:

The applicant shall present a report on a test conducted in accordance with the following method (Annex 4): Extraction of a ground sample in accordance with DIN 38414-S4, L/S=10[18]. Filtration by use of a 0.45µm membrane filter. Analysis by atomic emission spectroscopy using inductively coupled plasma (ICP-AES or ICP-OES) or by atomic absorption spectroscopy (AAS) using hydride or cold vapour technique. The test can also be conducted using random samples of uniform groups of foam.

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[17] Test reports pursuant to OEKO-TEX Standard 100 (DIN EN ISO 105-E04; test solution II) will also be accepted.

[18] DIN 38414-4: 1984, German Standard Procedure for Water, Wastewater and Sediment Testing (Group S)," Determination of Leachability by Water (S 4)

Chlorophenols, butadiene, nitrosamines and carbon disulfide shall not exceed the following substance-specific limits in the latex foam or as emissions:

- Chlorophenols (including salts and esters) < 1 mg/kg

Compliance Verification:

The applicant shall present a report on a test conducted in accordance with the following method (Annex 4): Comminution of a 5g sample, extraction of the chlorophenol or the corresponding salt. Analysis by gas chromatography (GC); verification by means of a mass spectrometer or an electron capture detector (ECD).

- Butadiene < 1 mg/kg

Compliance Verification:

The applicant shall present a report on a test conducted in accordance with the following method (Annex 4): Comminution and weighing of the sample. Sampling by use of a headspace sampler. Analysis by gas chromatography (GC); verification by means of a mass spectrometer or flame ionization detector (FID).

- N-nitrosamines * (test chamber measurement) < 1 µg/m³

Compliance Verification:

The applicant shall present a test report on a test chamber measurement according to paragraph 3.3.1 (Annex 4). The analysis of N-nitrosamines shall be performed using the BGI 505-23 method (formerly ZH 1/120.23) acknowledged by the Hauptverband der Berufsgenossenschaften (HVGB) (German Federation of Institutions for Statutory Accident Insurance and Prevention) or a similar method using gas chromatography in combination with a thermal energy analyser (TEA) detector. Testing shall be done on day 7 after loading.

*especially N-nitrosodimethylamine (NDMA), N-nitrosodiethylamine (NDEA), N-nitrosomethylethylamine (NMEA), N-nitrosodi-i-propylamine (NDIPA), N-nitrosodi-n-propylamine (NDPA), N-nitrosodi-n-butylamine (NDBA), N-nitrosopyrrolidinone (NPYR), N-nitrosopiperidine (NPIP), N-nitrosomorpholine (NMOR).

- Carbon disulphide (test chamber measurement) < 20 µg/m³

Compliance Verification:

The applicant shall present a test report on a test chamber measurement according to paragraph 3.3.1 (Annex 4). Testing shall be done on day 7 after loading. The analysis should be made with a view to avoiding values that are too low due to a "breakthrough".

3.2.3.2 Polyurethane Foam (PUR)

Dyed filling materials shall not exceed the concentration limits of the metals listed in Table 2 below:

Table 2

Extractable Heavy Metals	Limit
Antimony	0.5 mg/kg
Arsenic	0.2 mg/kg
Lead	0.2 mg/kg
Cadmium	0.1 mg/kg
Chromium (total)	1,0 mg/kg
Chromium (VI)	0.1 mg/kg
Cobalt	0.5 mg/kg
Copper	2.0 mg/kg
Nickel	1.0 mg/kg
Mercury	0.02 mg/kg
Selenium	0.5 mg/kg

Compliance Verification:

The applicant shall present a report on a test conducted in accordance with the following method (Annex 4): Extraction of a ground sample in accordance with DIN 38414-S4, L/S=10[19]*. Filtration by use of a 0.45µm membrane filter. Analysis by atomic emission spectroscopy using inductively coupled plasma (ICP-AES or ICP-OES) or by atomic absorption spectroscopy (AAS) using hydride or cold vapour technique. The test can also be conducted using random samples of uniform groups of foams.*
In the case of undyed filling materials, the applicant shall present a declaration from the supplier confirming that the above-listed heavy metals have not been added intentionally.

The following requirements shall apply to organic tin, plasticizers and physical blowing agents containing polyurethane foam:

- Tin in organic form (tin bonded to a carbon atom) shall not be used.
- If plasticizers are used the applicant shall present a declaration confirming that the plasticizer has not been added intentionally.
- Halogenated organic compounds shall not be used as physical blowing agent or auxiliary blowing agent.

[19] DIN 38414-4: 1984, German Standard Procedure for Water, Wastewater and Sediment Testing (Group S)," Determination of Leachability by Water (S 4)

Compliance Verification:

The applicant shall present the declarations confirming the PUR foam suppliers' compliance with this requirement (Annex 4).

3.2.3.3 Coconut Fibres

The criteria applying to latex foam shall also be met for rubberised coconut fibres.

Compliance Verification:

The applicant shall either declare in Annex 1 that no rubberised coconut fibres have been used or submit the test reports as required above for latex foam.

3.2.3.4 Wires and Springs

a) Degreasing: If degreasing and/or cleaning of wire and/or springs is carried out with organic solvents, use shall be made of a closed cleaning/degreasing system.

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1.

b) Galvanisation: The springs shall not be covered with a galvanic metallic layer.

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1.

3.3 Use

3.3.1 Indoor Air Quality

The products under paragraph 2 shall not exceed the following emission values in the test chamber following the procedure specified in the "Health-related Evaluation Procedure for VOC Emissions from Building Products" developed by the Ausschuss zur gesundheitlichen Bewertung von Bauprodukten (Committee for Health-Related Evaluation of Building Products)[20]:

[20] The VOC emission requirements are aimed at limiting the contribution of mattresses to the VOC content of the indoor air to 100 µg/m³ after 28 days in an average-sized living room with an air change of 0.5/h.

	Requirements		
Substance	3 days	Final value[21] 7 days	Final value 28 days
Formaldehyde	-	< 20 µg/m³ (< 0.016 ppm)	< 20 µg/m³ (< 0.016 ppm)
Other aldehydes[22] (total)	-	< 10 µg/m³	< 10 µg/m³
Total organic compounds within the retention range C6 – C16 (TVOC)	-	< 300 µg/m³	< 150 µg/m³
Total organic compounds within the retention range > C16 – C22 (TSVOC)	-	< 50 µg/m³	< 25 µg/m³
C-substances [23]	< 10 µg/m³ total	< 1 µg/m³ per single value	< 1 µg/m³ per single value
R-substances without LCI [23]		< 20 µg/m³ total	< 20 µg/m³ total
Total VOC without LCI [23, 24]	-	< 100 µg/m³	< 50 µg/m³
R-value [23]	-	< 1	< 1

The test may be stopped on the 7th day after loading if the required final values of day 7 are reached and if, compared with the measurement of day 3, no rise has been detected in the concentration of any of the detected substances.

Compliance Verification:

The applicant shall submit a test report in accordance with the BAM Test Method[25](Method for the detection of emissions of formaldehyde and other volatile compounds) based on Standard DIN EN ISO 16000-925 and DIN EN ISO 16000-10 prepared by a testing laboratory accredited for this test by BAM (Bundesanstalt für Materialforschung und –prüfung - Federal Institute for Material Research and Testing), (Appendix 2 to the DE-UZ 119 Award Criteria) confirming compliance with the requirement. The mattresses to be tested shall be taken directly from current production. The product shall be packed air-tight immediately after sampling. The packed mattress shall be delivered as fast as possible to the testing laboratory. No more than 7 days shall elapse between packing and arriving at the testing laboratory.

[21] Testing shall be done with a volumetric load of 1-5 m²/m³ and an area-specific flow rate of q=0.5 m³/m² h.

[22] Other aldehydes that can be determined using a BAM test method, (Method for the measurement of emissions of formaldehyde and other volatile compounds). Aldehydes can also be determined by use of the DNPH method (DNPH - dinitrophenylhydrazine) (DIN ISO 16000-3).

[23] C substances = carcinogenic substances, according to EU classification carc. 1A and 1B, muta. 1A and 1B, repro. 1A and 1B as well as TRGS 905

[24] including non-identifiable substances

[25] Amts- und Mitteilungsblatt der Bundesanstalt für Materialforschung und –prüfung (Official Journal of the Federal Institute for Material Research and Testing) Issue 29, 1999 p. 234-250

Notwithstanding the above-cited BAM test method testing of mattresses is done by use of one complete or one half mattress with a corresponding covering of the cut edges.

The sampling protocol shall be submitted along with the test report.

3.3.2 Odour Test[26]

The odour test shall be conducted in accordance with DIN ISO 16000-28 in connection with the emission test under para. 3.3.1 (Indoor Air Quality). The criteria for a premature stopping of the test shall apply here too. Alternatively to DIN ISO 16000-28 the odour test can also be conducted in accordance with RAL-GZ 430.

If the test is conducted in accordance with RAL-GZ 430 a value ≤ 3 shall be targeted.

Outlook: The next revision of these Award Criteria is expected to make DIN ISO 16000-28 a binding requirement. The target limit is expected to a pi value of 5-7. This value is currently still under discussion.

Compliance Verification:

The applicant shall submit a test report prepared in accordance with DIN ISO 16000-28 in combination with VDI 4302 for the initial test.
Alternatively, the applicant may also present a certificate or contract confirming that the products meet the requirements of RAL-GZ 430.

3.3.3 Fitness for Use

The mattresses shall meet the standard quality requirements for fitness for use taking into account the following standards: DIN EN 1334 (Domestic furniture - Beds and mattresses - Methods of measurement and recommended tolerances), DIN EN 1725 (Domestic furniture - Beds and mattresses - Safety requirements and test methods) and DIN EN 1957 (Furniture - Beds and mattresses - Test methods for the determination of functional characteristics and assessment criteria). Cot mattresses shall additionally meet the requirements of DIN EN 16890 (Children's furniture - Mattresses for cots and cribs - Safety requirements and test methods).

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1.
Moreover, the following fatigue strength requirements shall apply:

a) Loss in height: the loss in height shall be shall be less than 10 mm.
b) Loss in hardness: the loss in strength shall be less than 15%.

[26] During the first term of these Award Criteria the testing laboratories will determine the odour parameters without the risk of denial. The decision as to whether these values are adopted will be taken in consideration of the results at the hearing on the revision of these Award Criteria.

Compliance Verification:

The applicant shall present a test report pursuant to EN 1957. The loss in height and the loss in strength relate to the initial measurements (after 100 cycles) and the measurements at the end of the durability test (after 30 000 cycles).

As regards product purity and durability, the ash content of the original material shall be determined in accordance with DIN 3451-1/2008 (Plastics- Determination of ash- Part 1: General methods). However, in order to avoid unwanted conversions from calcium carbonate to calcium oxide and for better comparability of results the annealing temperature shall be 550°C for the analysis of the matrasses and not 600-950°C as specified in DIN 3451-2008. The ash content of polyurethane foam shall be < 1% while that of latex foam shall be < 6%.

Compliance Verification:

The applicant shall present a test certificate from its pre-supplier.

3.4 Recycling and Disposal

With a view to recycling and disposal neither material protection agents (fungicides, insecticides, flame retardants) nor halogenated organic compounds (e.g. chloroorganic carriers in textiles) may be added to mattresses, including the materials used for the manufacture (textiles, foams, wood-based materials, adhesives etc.). Exempted from this requirement are biocides exclusively used for in-can preservation in aqueous adhesives as well as adhesives based on aqueous dispersions.

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 and present corresponding declarations form its pre-suppliers.

3.5 Consumer Information

The mattresses shall be accompanied by Consumer Information providing at least the following basic information, possibly in conjunction with other information:

- Manufacturer / distributor (including address)
- Model name
- Product description, including information on material structure
- Hardness value
- Suitability for adjustable spring bases
- Information on the overall durability (loss in height and strength)
- Information on the product's wear resistance (fields of application and, if applicable, results of material tests, product-specific properties, changes resulting from product use)
- Cleaning and care instructions.

Compliance Verification:

The applicant shall present the Consumer Information.

3.6 Advertising Messages

Advertising messages shall not include any notes such as „tested for its biological living quality" or those which would play down risks in terms of Article 25, para. 4 of Regulation (EC) No 1272/2008 (CLP Regulation), as, for example "non toxic", "non harmful". Product designations containing the term "organic" or "bio" shall not be permissible. The same applies to designations like "health mattresses", "mattresses for persons suffering from intervertebral disc problems", "mattresses for allergic persons" and the like.

Compliance Verification:

The applicant shall declare compliance with the requirement.

4 Applicants and Parties Involved

Manufacturers or distributors of products under 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 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 applicant is governed by a contract on the use of the Environmental Label to be 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, 2022.
They shall be extended by periods of one year each, unless terminated in writing by March 31, 2022 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 purpose. 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 eco-label to 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 organisation.

Appendix A - 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 under para. 3.1.1.

Hazard Category	Regulation (EC) No 1272/2008 - CLP Regulation Hazard Statements	
	Hazard Code	Wording
		Carcinogenic Substances
Carc. 1A	H350	May cause cancer
Carc. 1B	H350	May cause cancer
Carc. 1A, 1B	H350i	May cause cancer by inhalation.
		Mutagenic Substances
Muta. 1A	H340	May cause genetic defects
Muta. 1B	H340	May cause genetic defects
		Reprotoxic Substances
Repr. 1A, 1B	H360D	May damage the unborn child.
Repr. 1A, 1B	H360F	May damage fertility.
Repr. 1A, 1B	H360FD	May damage fertility. May damage the unborn child.
Repr. 1A, 1B	H360Df	May damage the unborn child. Suspected of damaging fertility.
Repr. 1A, 1B	H360Fd	May damage fertility. Suspected of damaging the unborn child.
		Acutely Toxic Substances
Acute Tox. 1 Acute Tox. 2	H300	Fatal if swallowed
Acute Tox. 3	H301	Toxic if swallowed
Acute Tox. 1 Acute Tox. 2	H310	Fatal in contact with skin
Acute Tox. 3	H311	Toxic in contact with skin
Acute Tox. 1 Acute Tox. 2	H330	Fatal if inhaled
Acute Tox. 3	H331	Toxic if inhaled
		Substances Classified for Specific Target Organ Toxicity
STOT SE 1	H370	Causes damage to organs.
STOT SE 2	H371	May cause damage to organs.
STOTRE1*	H372	Causes damage to organs through prolonged or repeated exposure.
STOT RE 2*	H373	May cause damage to organs through prolonged or repeated exposure.

Appendix B to the Award Criteria DE-UZ 119 Award Criteria

Dyes and Pigments that are not permitted under paragraph 3.1.4.1:
(following Commission Decision 2014/350/EU (EU Ecolabel for textile products):

a) **Carcinogenic aromatic amines**
4-aminobiphenyl (92-67-1),
Benzidine (92-87-5),
4-chloro-o-toluidine (95-69-2),
2-naphthylamine (91-59-8),
o-aminoazotoluene (97-56-3),
2-amino-4-nitrotoluene (99-55-8),
p-chloroaniline (106-47-8),
2,4-diaminoanisole (615-05-4),
4,4'-diaminodiphenylmethane (101-77-9),
3,3'-dichlorobenzidine (91-94-1),
3,3'-dimethoxybenzidine (119-90-4),
3,3'-dimethylbenzidine (119-93-7),
3,3'-dimethyl-4,4'-diaminodiphenylmethane (838-88-0),
p-cresidine (120-71-8),
4,4'-methylene-bis-(2-chloroaniline) (101-14-4),
4,4'-oxydianiline (101-80-4),
4,4'-thiodianiline (139-65-1),
o-toluidine (95-53-4),
2,4-diaminotoluene (95-80-7),
2,4,5-trimethylaniline (137-17-7),
4-aminoazobenzene (60-09-3),
o-anisidine (90-04-0).
2,4-Xylidine (95-68-1),
2,6-Xylidine (87-62-7).

b) **Indicative list of dyes that may cleave to carcinogenic aromatic amines**
Disperse dyes
Disperse Orange 60
Disperse Yellow 7
Disperse Orange 149
Disperse Yellow 23
Disperse Red 151
Disperse Yellow 56
Disperse Red 221
Disperse Yellow 218

Basic dyes
Basic Brown 4
Basic Red 114
Basic Red 42

Basic Yellow 82
Basic Red 76
Basic Yellow 103
Basic Red 111

Acid dyes
CI Acid Black 29
CI Acid Red 24
CI Acid Red 128
CI Acid Black 94
CI Acid Red 26
CI Acid Red 115
CI Acid Black 131
CI Acid Red 26:1
CI Acid Red 128
CI Acid Black 132
CI Acid Red 26:2
CI Acid Red 135
CI Acid Black 209
CI Acid Red 35
CI Acid Red 148
CI Acid Black 232
CI Acid Red 48
CI Acid Red 150
CI Acid Brown 415
CI Acid Red 73
CI Acid Red 158
CI Acid Orange 17
CI Acid Red 85
CI Acid Red 167
CI Acid Orange 24
CI Acid Red 104
CI Acid Red 170
CI Acid Orange 45
CI Acid Red 114
CI Acid Red 264
CI Acid Red 4
CI Acid Red 115
CI Acid Red 265
CI Acid Red 5
CI Acid Red 116
CI Acid Red 420
CI Acid Red 8
CI Acid Red 119:1
CI Acid Violet 12

c) **Carcinogenic, mutagenic, reprotoxic and potentially sensitizing dyes**

Carcinogenic, mutagenic and reprotoxic dyes

C.I. Acid Red 26
C. I. Direct Black 38
C.I. Disperse Blue 1
C.I. Basic Red 9
C. I. Direct Blue 6
C.I. Disperse Orange 11
C.I. Basic Violet 14
C. I. Direct Red 28
C. I. Disperse Yellow 3

Potentially sensitizing dyes

C.I. Disperse Blue 1
C.I. Disperse Blue 124
C.I. Disperse Red 11
C.I. Disperse Blue 3
C.I. Disperse Brown 1
C.I. Disperse Red 17
C.I. Disperse Blue 7
C.I. Disperse Orange 1
C.I. Disperse Yellow 1
C.I. Disperse Blue 26
C.I. Disperse Orange 3
C.I. Disperse Yellow 3
C.I. Disperse Blue 35
C.I. Disperse Orange 37
C.I. Disperse Yellow 9
C.I. Disperse Blue 102
C.I. Disperse Orange 76
C.I. Disperse Yellow 39
C.I. Disperse Blue 106
C.I. Disperse Red 1