

The German Ecolabel

BLUE ANGEL



**Low-Emission
Flooring Underlays**

DE-UZ 156

Basic Award Criteria
Edition January 2019
Version 6

The Environmental Label is supported by the following four institutions:



Federal Ministry
for the Environment, Climate Action,
Nature Conservation and Nuclear Safety

The Federal Ministry for the Environment is the owner of the label, defines the fundamental guidelines for the award of the Blue Angel ecolabel and appoints the Environmental Label Jury.



The German Environment Agency with its specialist department for "Ecodesign, Eco-Labeling and Environmentally friendly Procurement" acts as the office of the Blue Angel ecolabel. It develops the technical criteria including the required compliance verifications in cooperation with relevant interest groups.



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, churches, young people and the German federal states.



RAL gGmbH is the awarding body for the environmental label. It examines the applications submitted by companies for the use of the Blue Angel ecolabel and concludes the "Contracts on the Use of the Environmental Label". It also monitors correct use of the ecolabel.

Please use the following format when adding citations:

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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

The Environmental Label Jury has set up these Basic Criteria for Award of the Blue Angel Eco-Label in co-operation with the Federal Minister for the Environment, Nature Conservation and Nuclear Safety, the German Umweltbundesamt (Federal Environment 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 to all products, provided that they comply with the requirements as specified hereinafter.

The product shall comply with all the legal requirements in the country where it is to be marketed. The applicant shall declare that the product meets this requirement.

1.2 Background

Flooring underlays may have significant environmental impact during the entire life cycle of the product. That is why the requirements for award of the Blue Angel eco-label refer to both the substances and materials used during the manufacturing process as well as to the period of use and the disposal of used underlays as well as to the transportation packaging for new underlays.

Moreover, flooring underlays cover large indoor surfaces and that is why from health and environmental perspectives the lowest-possible emissions from these products are of great value to the user. Here, the Blue Angel eco-label lends itself as an excellent guide to low-emission products. Likewise, a professional installation of the flooring underlay and the use of further low-emission products for the entire floor structure (e.g. floor coverings according to DE-UZ 120, 128 und 176, floor covering adhesives and other installation materials according to DE-UZ 113, sealants according to DE-UZ 123) play important roles in environmental and health protection. To allow and evaluation of the emissions from flooring underlays the concept of these Basic Criteria has been developed along the lines of the evaluation scheme established by the "Ausschuss zur gesundheitlichen Bewertung von Bauprodukten" (Committee for Health-Related Evaluation of Building Products).

1.3 Objectives of the Environmental Label

The Blue Angel eco-label for "low-emission flooring underlays" may be awarded to products which beyond meeting all relevant legal requirements

- are manufactured using substances and materials that are less harmful to the environment,
- do not pose any health risk in the living environment and
- do not contain any hazardous substances that would seriously hamper recycling.

Hence, the explanatory box lists the benefits to environment and health:



2 Scope

These Basic Criteria apply to flooring underlays for installation below floor coverings such as laminate, parquet and others solid floorings as well as textile floor coverings.¹

They shall apply to underlays made of the following materials (also in mixtures):

- wood fibres
- rubber
- cork
- pulp
- polyethylene
- polystyrene
- polyurethane

Flooring underlays requiring a building authority approval must be so approved. The Environmental Label Jury may include additional underlays at the suggestion of the German Umweltbundesamt (Federal Environment Agency).

Compliance Verification:

The applicant shall present a product description and the building authority approval certificate for the flooring underlays. If RAL gGmbH so requests, the applicant shall submit a schematic illustration of the structure and a product sample.

3 Requirements

The Blue Angel eco-label shown on page 1 may be used for the labelling of products under paragraph 2, provided that they meet the requirements set forth hereinafter:

¹ Definition of flooring underlays according to EPLF: "Resilient layer between the substrate and the floor covering added to obtain specific properties."

3.1 Manufacture

3.1.1 General Substance Requirements

All relevant substance restrictions laid down in EU and German legislation on chemicals as well as in industry-related regulations must be complied with as a matter of course; with regard to flooring underlays these are in particular the provisions of REACH Regulation (above all Annexes XIV and XVII)², POP Regulation³, Biocidal Products Regulation⁴ as well as German building legislation.⁵ Low-emission flooring underlays must not contain, as constituents⁶, any substances with the following properties:

[1] Substances that have been identified as substances of very high concern under the European chemicals Regulation REACH (EC/1907/2006) and have been included in the list (so-called "Candidate List") set up in accordance with REACH, Article 59 (1).⁷

[2] Substances that are classified in the following hazard classes and hazard categories in accordance with the criteria of the CLP Regulation⁸ or meet the criteria for such classification:

- ♦ carcinogenic of category Carc. 1A or Carc. 1B
- ♦ germ-cell mutagenic of category Muta. 1A or Muta. 1B
- ♦ reprotoxic of category Repr. 1A or Repr. 1B
- ♦ acutely toxic of category Acute Tox. 1, Acute Tox. 2 or Acute Tox. 3
- ♦ toxic to specific target organs of category STOT single exposure 1, or STOT repeated exposure 1

The H-Statements corresponding to the hazard classes and hazard categories can be seen from Appendix A.

[3] Substances classified in TRGS 905⁹ as:

- ♦ carcinogenic (K1, K2)
- ♦ mutagenic (M1, M2)
- ♦ reprotoxic (R_F1, R_F2)
- ♦ teratogenic (R_E1, R_E2);

² Regulation (EC) Nr. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

³ Regulation (EC) No 850/2004 on persistent organic pollutants

⁴ Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products

⁵ Provided that the specific product is subject to additional substance restrictions resulting from other provisions such provisions shall also be complied with.

⁶ Constituents are substances or preparations added to the product or intermediate in order to achieve or influence certain product properties as well as those required as chemical decomposition products to achieve the product properties. This does not include, for example, minimised residual monomers.

⁷ The Candidate List as amended at the time of filing the application shall be applicable. For the Candidate List, as amended, please go to:

http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp.

⁸ Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP for short).

⁹ TRGS 905 List of carcinogenic, mutagenic or reprotoxic substances, as amended in May 2018 and as amended from time to time.

[4] Substances classified in the MAK Values List¹⁰ as:

- ♦ carcinogenic working materials of Category 1 or Category 2
- ♦ germ-cell mutagenic working materials of Category 1 or Category 2.

The following shall be exempt from these regulations:

- Process-related, technically unavoidable impurities falling below the classification thresholds for mixtures.
- Monomers or additives which turn into polymers during the manufacture of plastics or are chemically (covalently) bound to the plastic if their residual concentrations are below the classification thresholds for mixtures.

Compliance Verification:

The applicant shall declare compliance with the requirements in Annex 1 to the Contract pursuant to DE-UZ 156. The applicant shall specify the materials used (Annex 4). The applicant shall present the Material Safety Data Sheets to RAL gGmbH if so requested.

3.1.2 Plasticizers

No plasticizing substances of the class of phthalates or the group of organophosphates may be used in the manufacture of flooring underlays.

Compliance Verification:

The applicant shall declare compliance with the requirements in Annex 1 to the Contract pursuant to DE-UZ 156. In the event of detection the content of phthalates shall be determined by extraction of a material sample and analysis using GC/MS. The quantitative determination of the target substances shall be done using an internal standard and a reference compound. The flooring underlays shall not, in total, contain more than 0.1 percent by mass of phthalates as impurities.

3.1.3 N-Nitrosamines in Rubber Underlays

Carcinogenic N-nitrosamines according to TRGS 552¹¹ must not be detectable in rubber underlays (detection limit: 3.6 µg/kg, determination limit: 11 µg/kg).

Compliance Verification:

The applicant shall submit a test report according to the DIK-Arbeitsvorschrift „Methoden zur Bestimmung von N-Nitrosaminen in der Luft, Vulkanisaten und Vulkanisationsdämpfen (DIK Working Regulations „Methods for determining N-nitrosamines in the air, vulcanized materials and vulcanized steam“) ¹² prepared by one of the following accredited testing laboratories (Institutes equipped with GC/TEA (Gas Chromatography/Thermal Energy Analyzer) for the analysis of carcinogenic N-nitrosamines. Additional testing laboratories capable of performing these tests may be added to the list upon approval by the German Umweltbundesamt (Federal Environment Agency):

¹⁰ MAK and BAT Values List, Permanent Senate Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area, as amended by Report No 53 (2017) and as amended from time to time.

¹¹ TRGS 552 N-nitrosamines, as amended in September 2018 - and as amended from time to time.

¹² DIK Working Regulations published in: R.Liekefeld, R.H. Schuster, G. Wünsch; Kautsch. Gummi Kunstst. (Natural Rubber, Rubber, Plastics), 1991, 44, 514.

- *Deutsches Institut für Kautschuktechnologie e.V., Hannover (DIK - German Institute for Rubber Technology, Hanover)*
- *SGS INSTITUT FRESENIUS GmbH, Taunusstein.*

3.1.4 Recyclate Materials

The following recyclate materials may be used in the manufacture of flooring underlays:

- Waste wood of categories A I and A II according to the German Altholzverordnung (German Waste Wood Ordinance)¹³
- Waste paper grades: ordinary and kraft waste paper grades, as well as special grades (groups 1, 4 and 5 - except for the following individual grades 1.11, 4.01, 4.05, 4.07, 4.08 and 5.09)¹⁴
- Rubber waste from the production of floor coverings (no post-consumer waste). The applicant shall name the manufacturing company and submit the technical data sheet or the building authority approval of the floor covering;
- Polyurethane foam waste from the production of finished polyurethane parts (no post-consumer waste); (information on finished parts, manufacturing company and technical data sheet shall be provided.)
- Post-consumer recycled materials in the form of polypropylene (PP) according to DIN EN 15345 and polyethylene terephthalate (PET) according to DIN EN 15348
- Post-consumer materials (PCR materials) according to DIN EN ISO 14021
- Post-consumer materials (PCR materials) from floor coverings

Upon approval by the German Umweltbundesamt (Federal Environment Agency) additional materials may be added to the list.

This shall not apply to production waste resulting from the manufacture of the flooring underlay.

Plastic recycled materials used in the manufacture of the products must meet the requirements of DE-UZ 120 (January 2026 edition) section 3.1.3.2.

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 to the Contract pursuant to DE-UZ 156. Furthermore, when using recycled plastics, evidence according to DE-UZ 120 (January 2026 edition) section 3.1.3.2 must be submitted.

3.1.5 Use of Blowing Agents in Foam Underlays

No halogenated organic compounds may be used as blowing agents (e.g. fluorinated hydrocarbons [H-FKW] in the manufacture of foam underlays.

¹³ Verordnung über Anforderungen an die Verwertung und Beseitigung von Altholz (Altholzverordnung – AltholzV) (Ordinance on the Requirements Pertaining to the Recovery and Disposal of Waste Wood - Waste Wood Ordinance) of 15 August 2002 (Federal Law Gazette I p. 3302) as last amended by Article 96 of the ordinance of 31 August 2015 (Federal Law Gazette I p. 1474)

¹⁴ DIN EN 643: Paper and board - European list of standard grades of recovered paper and board, 03/2002.

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 to the Contract pursuant to DE-UZ 156 or submit a corresponding declaration from its pre-suppliers (Annex 2 to the Contract pursuant to DE-UZ 156).

3.1.6 Colorants

Azo dyes or pigments that may separate of the amines listed in TRGS 614¹⁵ may not be used as colorants.

Colorants (pigments or dyes) containing mercury, lead, cadmium or chromium(VI)-compounds as constituents must not be used.

Compliance Verification:

The applicant shall establish compliance with the requirement by submission of a declaration from the colorant supplier (Annex 3 to the Contract pursuant to DE-UZ 156).

3.1.7 Origin of Timber for Wood Fibre Underlays

It shall be ensured that all timber processed originates from legal sources. Moreover, a total of at least 70 percent of the wood fibres used must come from sustainably managed forests which are managed in a verifiably economically viable, environmentally sound and socially responsible way or from waste wood of categories A I and A II under the German Altholzverordnung (Waste Wood Ordinance).

Compliance Verification:

The applicant shall establish the legality of the sources of timber in accordance with Regulation (EU) No 995/2010.

The use of timber from sustainable forestry can be verified by either of the following options:

- The applicant shall submit appropriate certificates from its raw material suppliers. These can be certificates from the Forest Stewardship Council (FSC) or from PEFC (Programme for the Endorsement of Forest Certification Schemes) providing evidence of sustainable forest management and a chain of custody (CoC). The applicant shall submit a record of the timber used specifying the percentage of certified timber used (Annex 2 to the Contract pursuant to DE-UZ 38).*
- The applicant shall submit other appropriate compliance verifications according to Appendix B (Annex 3 to the Contract pursuant to DE-UZ 76). The appendix may be extended at the request of and after review by the German Umweltbundesamt (Federal Environment Agency). In any case, the applicant shall submit a self-prepared record of the timber used specifying the percentage of certified timber used (Annex 2 to the Contract pursuant to DE-UZ 76).*

¹⁵ TRGS 614 – Restrictions on the use of azo dyes that may release carcinogenic aromatic amines, as amended in March 2001 and as amended from time to time.

3.1.8 Requirements for Paper Underlays

3.1.8.1 Recovered or Waste Paper

Paper underlays shall be manufactured of recovered paper classified as ordinary and kraft grades or special grades (groups 1, 4 and 5 – except for the individual grades 1.11, 4.01, 4.05, 4.07, 4.08 and 5.09) - related to the total use of fibrous material. Recovered paper is the generic term for paper and board recovered after use or processing. Mill broke shall not be considered as recovered paper.

The specifications of the different waste paper grades are listed in Appendix B to the Basic Award Criteria DE-UZ 56 (Recycled Board).

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 to the Contract pursuant to DE-UZ 156 and specify the percentages of waste paper fibres used in accordance with Survey A included in Annex 1 to the Contract pursuant to DE-UZ 56.

3.1.8.2 Chemical Auxiliaries

The only process auxiliaries permitted for use are those listed in the 36th Recommendation of BfR¹⁶ (Federal Institute for Risk Assessment) (positive list). The maximum quantities or concentrations, as specified in said Recommendation, shall not be exceeded. Paper underlays shall be manufactured without using any chemical auxiliaries that may contain glyoxal or formaldehyde as constituent or may separate formaldehyde.

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 to the Contract pursuant to DE-UZ 156.

3.1.8.3 Processing of Recovered Paper

The processing of recovered paper for the manufacture of paper underlays shall be done without the use of chlorine, halogenated bleaching chemicals and poorly biodegradable complexing agents as, for example, ethylenediaminetetraacetic acid (EDTA) and diethylenetriaminepentaacetic acid (DTPA).

No optical brighteners may be used for product manufacture and refinement.

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 to the Contract pursuant to DE-UZ 156 and name the bleaching agents and complexing agents used in Survey B included in Annex 1 to the Contract pursuant to DE-UZ 56.

3.1.8.4 Biocides and Preservatives

The only substances permitted for use as biocides in the manufacture of paper underlays (or in the manufacture of recycled paper) are those which have been approved under the Biocidal

¹⁶ <https://bfr.ble.de/kse/faces/DBEmpfehlung.jsp>

Products Regulation (Regulation (EU) No 528/2012) (Union list of approved active substances; (formerly inclusion in Annex 1 to the Biocidal Products Directive 98/09 EC) or which are still being reviewed as notified existing active substances for the respective type of biocidal product under the EU Review Programme for Existing Active Substances.

Only those products may be used as biocidal products that have been approved for the respective field of use. Products containing existing active substances still under EU review may continue to be used without authorisation until a decision is reached.

Moreover, the products shall not contain any active substances that are considered candidate for substitution in accordance with Article 10 of the Biocidal Products Regulation (EU 528/2012). Pending the final decision on the approval of biocidal products containing existing active substances only those substances may be used which are additionally listed in the 36th Recommendation of BfR (Federal Institute for Risk Assessment).

The following substances shall not be used:

- Tetramethylthiuram disulfide (CAS No 137-26-8) and
- Nano-silver (CAS No 7440-22-4).

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1 to the Contract and name the biocidal active substances used by indicating their IUPAC names and CAS Registry Numbers together with their quantities per kilogram of dry pulp.

3.2 Use

3.2.1 Indoor Air Quality

The products under paragraph 2 shall not exceed the emission values listed in Table 2 in the test chamber following the „Vorgehensweise bei der gesundheitlichen Bewertung der Emissionen von flüchtigen organischen Verbindungen (VOC und SVOC) aus Bauprodukten“ (health risk assessment process for emissions of volatile organic compounds (VOCs and SVOCs) from building products) developed by the Ausschuss zur gesundheitlichen Bewertung von Bauprodukten (AgBB) (Committee for Health-Related Evaluation of Building Products)¹⁷. Sampling and sample transport and storage as well as manufacture and preparation of the test specimen shall be done in accordance with DIN EN ISO 16000-11.

Emissions shall be measured in accordance with DIN EN 16516.¹⁸ Based on the AgBB-requirements the total volatile organic compounds (TVOC) shall be determined in accordance with DIN EN 16516, chapter 8.2.6.1, para. 2 as the sum of all volatile organic compounds (target compounds¹⁹ and non-target compounds²⁰, identified and non-identified compounds) TVOCspez.

¹⁷ AgBB Evaluation Scheme, August 2018. Published on the homepage des Umweltbundesamt (Federal Environment Agency) <https://www.umweltbundesamt.de/dokument/agbb-bewertungsschema-2018>, as amended.

¹⁸ The loading of the test chamber shall be 0.4 m²/m³. The backside of the test specimen shall be covered. The side edges shall not be taped.

¹⁹ The substances listed in the LCI list shall serve as target compounds.

²⁰ The substances without a LCI value are defined as non-target compounds.

The requirements are aimed at limiting the contribution of floor coverings to the content of volatile organic compounds in the indoor air in an average-sized living room with an air change rate of 0.5 per hour after 28 days to 300 µg/m³.

Table 2: Emission Requirements

| Compound or Substance | 3rd Day | Final Value (28th Day) |
|--|---|---|
| Total organic compounds within the retention range $C_6 - C_{16}$ (TVOC _{spez}) | $\leq 1000 \mu\text{g}/\text{m}^3$ | $\leq 300 \mu\text{g}/\text{m}^3$ |
| Total organic compounds within the retention range $> C_{16} - C_{22}$ (TSVOC) | - | $\leq 30 \mu\text{g}/\text{m}^3$ |
| Carcinogenic substances ²¹ | $\leq 10 \mu\text{g}/\text{m}^3$ total | $\leq 1 \mu\text{g}/\text{m}^3$ per single value |
| Total VOC without LCI ²² | - | $\leq 100 \mu\text{g}/\text{m}^3$ |
| R value ²³ | - | ≤ 1 |
| Formaldehyde | - | $\leq 60 \mu\text{g}/\text{m}^3$ (0.05 ppm) |

The test may be stopped from the 7th day after loading if the required final values of day 28 are reached prematurely and if, compared with the measurement of day 3, no rise in the concentration of any of the detected substances has been observed.

Compliance Verification:

The applicant shall submit a test report according to Part II of the "Grundsätze des DIBt zur gesundheitlichen Bewertung von Bauprodukten in Innenräumen" (DIBt Guidelines for health assessment of construction products used in interiors)²⁴, based on DIN EN 16516 which confirms compliance with this requirement. The test report shall be prepared by a testing laboratory accredited for this test by BAM.

The format of the test report is based on DIN EN 16516 [paragraph 10], (the AgBB evaluation shall be conducted by the use of the ADAM evaluation mask]. The most recent test report to be sent to DIBt shall be kept on file and made available to RAL gGmbH if the latter so requests.

²¹ Carc. 1A or 1B according to CLP Regulation or K1 or K2 according to TRGS 905.

²² NIK = Lowest Concentration of Interest; cf. AgBB evaluation scheme; (footnote 17)

²³ R = total of all quotients (C_i / LCI_i) ≤ 1 (where C_i = substance concentration in the chamber air, LCI_i = LCI value of the substance), cf. AgBB evaluation scheme (footnote 17)

²⁴ DIBt (Deutsches Institut für Bautechnik – German Institute for Structural Engineering, Grundsätze zur gesundheitlichen Bewertung von Bauprodukten in Innenräumen (Guidelines for health assessment of construction products used in interiors) Part II: Bewertungskonzepte für Spezielle Bauprodukte (Part II: Evaluation Concept for Special Building Products), as of October 2010, https://www.dibt.de/fileadmin/dibt-website/Dokumente/Referat/II4/Innenraume_Bauprodukte_Gesundheitliche_Bewertung.pdf., as amended.

3.2.2 Odour Test (optional)

The measurement of the likewise significant odour properties is recommended for the entire term of these Basic Criteria. For guidance on evaluating the measurement results, reference is made to the research report "UBA research report Texts 35/2011".^{25 26}

If the product is to be claimed to be "low-odour" the odour test shall be mandatory and the odour intensity shall not exceed 7 pi.

Compliance Verification:

The applicant shall present a test report pursuant to DIN ISO 16000-28²⁷ in combination with VDI 4302.

3.2.3 Fitness for Use

The flooring underlays shall meet the usual quality requirements for fitness for use. Flooring underlays for use underneath laminate floorings shall meet the requirements of DIN EN 16354.²⁸

Compliance Verification:

The applicant shall declare compliance with the requirements in Annex 1 to the Contract pursuant to DE-UZ 156.

3.3 Recycling and Disposal

3.3.1 Halogens

With a view to future recycling and disposal, no halogenated organic compounds shall be used in the manufacture of flooring underlays (e.g. as binders, flame retardants).

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 to the Contract pursuant to DE-UZ 156. In the event of detection, the content of the halogens fluorine, chlorine and bromine shall be determined by combustion analysis (total dissolution) and shall not exceed, as a fraction of tolerable impurities, 1 gram per kg.

3.3.2 Flame Retardants

The following flame retardants may be used, if any: inorganic ammonium phosphates (diammonium phosphate, ammonium polyphosphate etc.), other dehydrating minerals (aluminium hydroxide or the like), or expandable graphite.

²⁵ „Sensorische Bewertung der Emissionen aus Bauprodukten – Integration in die Vergabegrundlagen für den Blauen Engel und das AgBB-Schema" (Sensory evaluation of emissions from building products – Integration into the Basic Criteria for Award of the Blue Angel eco-label and the AgBB scheme), Project No. 37 07 62 300; <http://www.umweltbundesamt.de/produkte/bauprodukte/schadstoffe-gerueche.htm>

²⁶ If during the term of these Award Criteria the odour parameters are determined by the testing laboratories this will not lead to rejection. The decision as to whether these values should be adopted will be taken in consideration of the results at the hearing on the next revision of these Award Criteria.

²⁷ DIN ISO 16000-28 - Indoor air - Part 28: Determination of odour emissions from building products using test chambers

²⁸ DIN EN 16354 Laminate floor coverings - Underlays - Specification, requirements and test methods;

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 to the Contract pursuant to DE-UZ 156.

3.4 Declaration and Consumer Information

The manufacturer shall provide a clear product declaration giving the following details either on the packaging or on a label. Alternatively, the manufacturer shall provide dealers with the following information for presentation to the customer upon request:

- Identification of manufacturer or supplier company,
- Product name and material,
- Product details (composition),
- Traceability information, e.g. lot/batch number,
- Colour/pattern data (if applicable),
- Building authority approval,
- Length, width and thickness or covered surface for rolls or - with respect to tiles - tile dimensions as well as the area in square meters contained in one pack.

A short version of the following instructions and recommendations shall be enclosed with the product, including a note about how to obtain a more detailed version (e.g. upon request to the manufacturer, reference to the manufacturer's website).

- Installation instructions and information including recommendations for the use of other Blue Angel eco-labelled low-emission building products for use in floor construction (e.g. low-emission floor covering adhesives, surfacers and fillers according to DE-UZ 113, floor coverings according to DE-UZ 120, 128, 176),
- Instructions for disposing of packages and product residues (e.g. return and recycling options),
- Information on and instructions for improving sound insulation.

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 to the Contract pursuant to DE-UZ 156 and submit the corresponding product information (e.g. technical data sheet).

3.5 Advertising Messages

Advertising messages shall not include any notes such as „non-hazardous in terms of building biology" or those which would play down risks in terms of Article 23, para. 4 of Directive 67/548/EEC, as, for example, „non-toxic", „non-hazardous to health".

Compliance Verification:

The applicant shall declare compliance with the requirement in Annex 1 to the Contract pursuant to DE-UZ 156 and submit a technical data sheet.

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

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Appendix A H-Statements applicable to the Award

Table 1: H-Statements and R-Phrases applicable to the Award of the Blue Angel Eco-Label

| Hazard Category | EC Regulation 1272/2008 (GHS Regulation) | Wording |
|------------------------|---|---|
| Acute Tox. 1,2 | H300 | Fatal if swallowed |
| Acute Tox. 3 | H301 | Toxic if swallowed |
| Asp. 1 | H304 | May be fatal if swallowed and enters airways |
| Acute Tox. 1,2 | H310 | Fatal in contact with skin |
| Acute Tox. 3 | H311 | Toxic in contact with skin |
| Acute Tox. 1,2 | H330 | Fatal if inhaled |
| Acute Tox. 3 | H331 | Toxic if inhaled |
| STOT SE 1 | H370 | Causes damage to organs |
| STOT RE 1 | H372 | Causes damage to organs through prolonged or repeated exposure |
| Muta. 1 [A,B] | H340 | May cause genetic defects. |
| Carc. 1 [A,B] | H350 | May cause cancer. |
| Carc. 2 | H350i | May cause cancer by inhalation. |
| Repr. 1 [A,B] | H360F | May damage fertility. |
| Repr. 1 [A,B] | H360D | May damage the unborn child. |
| Repr. 1 [A,B] | H360FD | May damage fertility. May damage the unborn child. |
| Repr. 1 [A,B] | H360Fd | May damage fertility. Suspected of damaging the unborn child. |
| Repr. 1 [A,B] | H360Df | May damage the unborn child. Suspected of damaging fertility. |
| Lact. | H362 | May cause harm to breast-fed children. |
| Aqu. acute 1 | H400 | Very toxic to aquatic life. |
| Aqu. chron. 1 | H410 | Very toxic to aquatic life with long-lasting effects. |
| Aqu. chron. 2 | H411 | Toxic to aquatic life with long-lasting effects. |
| Ozone 1 | H420 | Harms public health and the environment by destroying ozone in the upper atmosphere |

Appendix B Version history

The following changes were made to ecolabel DE-UZ 156 "Low-Emission Flooring Underlays, Edition January 2019, Version 1" and required the issuing of an updated version in each case. The version at the time of application is valid. If the changes were required for the implementation of new legal regulations, they apply to all certified products.

Version 1.2 (05/2019): Editorial changes: Scope (2)

Version 2 (12/2021): Prolongation without any changes, until 31.12.2024

Version 3 (01/2024): Prolongation without changes, Expiry date: December 31, 2025

Version 4 (01/2025): Prolongation without changes, Expiry date: December 31, 2026

Version 5 (01/2026): Prolongation without changes, Expiry date: December 31, 2028

Version 6 (04/2026): Opening the list of permissible recycled materials for selected plastics and extending the verification requirements for these materials in section 3.1.4.