BLUE ANGEL

The German Ecolabel

Products made from recycled plastics

DE-UZ 30a

Basic Award Criteria

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Version 2

The Environmental Label is supported by the following four institutions:

Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

The Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection 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, Nuclear Safety and Consumer Protection, 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

Post-consumer waste from private households, agriculture, trade and industry accounts for by far the largest proportion of the total amount of plastic waste generated. In 2021, the total amount of plastic waste was 5.67 million t and post-consumer waste accounted for around 96 % of this waste with 5.44 million t [1]. In contrast, post-industrial waste is generated in production processes and thus does not fulfil the actual intended use of the material (e.g. in the event of production errors). However, this type of waste can often be directly fed back into the same process or efficiently recycled by third parties and thus has a significantly higher level of reuse than post-consumer materials. Therefore, the DE-UZ 30a ecolabel focuses on the less used post-consumer waste flows. From an ecological point of view [2][3], recycling according to the type of material is usually superior to all other forms of recycling – such as e.g. thermal processing. Nevertheless, only a relatively small proportion of post-consumer plastics are recycled according to the type of material today (only 33 % of the plastic waste in Germany ultimately undergoes a final recycling process and is then resused). The amount of plastic recyclates used in new products is even smaller. The annual report on plastic consumption and recycling data produced by the German Plastics Association stated: "Overall, the proportion of processed plastic accounted for by plastic recyclate (from post-consumer and post-industrial waste) in Germany was approximately 11.7% in 2021. The proportion of this recyclate from post-consumer waste was approximately 9.1 % or a volume of 1.3 million t." [1] One reason for this is that there have not been enough well-established sales channels for these recycled materials up to now. This could in turn be due to the fact that the market prices for recyclates are too high in comparison to new plastic or due to perceived disadvantages in terms of material quality as well as a lack of facilities for sorting the materials.

An ecolabel for finished products containing a high proportion of these recycled materials can help to promote sales and thus boost the recycling of post-consumer plastic waste.
Apart from packaging, there are many other waste streams containing plastic that are relevant to plastic recycling, such as film products used for commercial applications (agriculture, building industry, etc.), plastic moulded parts for the automotive sector and electrical industry as well as building materials (e.g. profiles, pipes, floorings).

This perspective is also reflected in environmental policy targets at an EU level within the scope of the EU Commission's so-called "circular economy" activities [4]. The EU's plastics strategy explicitly mentions environmental labels as instruments for enhancing the sale of recycled materials [5].

Nevertheless, such labelling must be accompanied by criteria for the guaranteed monitoring and control of certain pollutants in the waste phase so that acceptance for products made of recycled plastics is not jeopardised. Some types of plastics are excluded from use within the scope of DE-UZ 30a because it cannot be guaranteed that they will not transfer certain pollutants to the finished products. In addition, far-reaching requirements on the addition of additives such as dyes or fillers to the recycled materials or new plastics have been formulated. A range of different finished products can be labelled with the DE-UZ 30a ecolabel "Products made from recycled plastics" based on their future intended use. This range of different products is also reflected in graduated criteria. Accordingly, finished products with a high probability of contact with consumers or the environment must comply with more demanding requirements with respect to the monitoring and control of pollutants than finished products where there is largely no contact with consumers or the environment.

1.3 Objectives of the Environmental Label

This Blue Angel ecolabel is designed to promote products with a high proportion of post-consumer recycled materials, or more specifically a high proportion of recycled plastics from recycling according to the type of material. The reuse of these polymers/materials is an objective of environmental policy and in the interest of this ecolabel because it saves resources (by acting as a substitute for new plastics).
These Basic Award Criteria ensure a high level of protection for consumers and the environment by placing fundamental requirements on the use and content of pollutants. Sustainable environmental benefits are achieved by combining these two fundamental types of requirements: the conservation of resources and monitoring and controlling pollutant levels.

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

1.4 Definitions

Finished product: A product that has undergone all stages of the company's production process and is made available on the market (for sale to downstream companies or to the final consumer). Finished products do not include preliminary or intermediate products which undergo further processing steps. A finished product is also always an article in the sense of REACH Article 3, Number 3 [6] and cannot be a substance or mixture (preparation) in the sense of Article 3 Number 1 or Article 3 Number 2.

Mixture: Mix, mixture or solution composed of two or more substances. (REACH Article 3 [6] and CLP Article 2 [7]) Examples in the sense of these Basic Award Criteria include: the master batch, dyes (consisting of the carrier and pigment), UV stabilisers, etc.

Substance on the list of candidates[1]**:** A substance on the list of candidates has a property according to Article 57 of REACH [6] and following a formal procedure has been included on the list of substances requiring authorisation pursuant to Article 59 of the REACH Regulation and included in Annex XIV (usually called "list of candidates").

Post-consumer recycled material (PCR material): Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the goods or service which can no longer be used for its intended purpose. [7].

Recycling: In the German Circular Economy Act (Kreislaufwirtschaftsgesetz – KrWG) [9], recycling is defined as any process of converting waste to products, materials or substances, either for the original purpose or for other needs. It includes the processing of organic materials but not the energetic recovery and treatment of materials intended for use as fuel or for backfilling.

Recycled material: In the sense of these Basic Award Criteria, a recovered material consisting of one polymer and the additives from its first life cycle (e.g. fillers, IV stabilisers, etc.). Additives that are added to the waste or material after it is collected as waste are not part of the recyclate and must be considered non-PCR materials.

Substance: A chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition [6][7].

An independent specialist body:

- An independent environmental verifier in accordance with Article 9 of the German Environmental Audit Act (Umweltauditgesetz) [10] for approval area 38 (recycling, waste disposal) or
- A publicly certified expert in accordance with Article 36 of the German Industrial Code [11] for the Specialist Areas of Waste Recycling, Waste Disposal Technology, Plastic Recycling, Plastic Technology and the Disposal of Packaging (Gewerbeordnung für die Sachgebiete Abfallverwertung, Abfalltechnik, Kunststoffrecycling, Kunststofftechnik bzw. Verpackungsentsorgung) or
- An environmental verifier in accordance with Directive (EC) No. 1221/2009 Article 2 [12], Definition no. 20. If the verification checks are carried out by environmental verification organisations (i.e. not by natural persons), the person responsible for the completion of the tests must be specifically named by the organisation.

Packaging: Packaging is a product manufactured from any material that is designed to contain, protect, handle, deliver or present goods, which may range from raw materials to processed products, and which is passed on from the manufacturer to the distributor or end consumer[2].

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[1] REACH Article 57 contains various substance properties that are considered substances of very high concern (SVHC). A German version of the list of candidates is available on the REACH/CLP/Biocide helpdesk from the Federal Office for Chemicals at https://www.reach-clp-biozid-helpdesk.de/SiteGlobals/Forms/Suche/DE/Kandidatenlistesuche_Formular.html?nn=e4ca2540-6f33-4a0a-99fd-74df5d8dd0d8 .

[2] All of the definitions for packaging refer to the German Packaging Act (Verpackungsgesetz – Act on the putting into circulation, return and high-grade recycling of packaging). However, the assessment of whether something is packaging or not within the scope of the Blue Angel ecolabel does not constitute a legal classification within the meaning of the German Packaging Act.

Sales packaging: Packaging that is typically offered to end consumers as a sales unit consisting of the goods and packaging. Packaging that is filled at the final distributor is also considered sales packaging. This includes service packaging, such as carrier bags, and shipping packaging.
Delivery packaging: Sales packaging that enables or supports the delivery of goods to the end consumer.
Composite packaging: Packaging that consists of different materials that cannot be separated by hand, in which no material accounts for more than 95% by mass of the packaging.
Impurity [13]: An unintended constituent present in a substance as manufactured. It may originate from the starting materials or be the result of secondary or incomplete reactions during the manufacturing process. While it is present in the final substance or mixture, it was not intentionally added.

2 Scope

These Basic Award Criteria apply to finished products[3]

- with a plastic content of more than 90 % by mass (exceptions may be accepted upon application to the German Environmental Agency) and
- a minimum PCR material content of 80 % by mass of these plastics, which has been sourced from recycling according to the type of material.

Some examples of finished products that can be certified with this ecolabel are:

- Office equipment (e.g. letter trays/drawer boxes)
- Waste and recycling bins,
- Plastic buckets, pots and containers, watering cans
- Garden tables and chairs or similar items for outdoor use
- Palisades, fences, lawn grids
- Playground equipment
- Compost silos and composters
- Film or sheet products, such as garbage and carrier bags, protective sheets and tarpaulins.

However, the following products with a plastic content of less than 90 % by mass are also permissible (exceptions may be accepted upon application to the German Environmental Agency): Other plastic materials are permissible if they are necessary for the function of the product (e.g. carrying or driving mechanisms, stabilisation frames for hollow bodies, reinforcements on edges and openings). The minimisation principle applies to all foreign materials added to the product. They should only be used in the quantities that are absolutely essential to fulfil certain functions. Exceptions may be accepted upon application to the German Environmental Agency.

The following products with a plastic content of less than 90 % by mass are permissible:

- In the case of waste and recyclable material containers within the meaning of DIN EN 840 [14], the wheel system (wheels, rollers, brake system and axles) is excluded from this requirement. The requirement applies to the waste and recyclable material container minus the wheel/brake system.

[3] Finished products within the scope of other product-specific Basic Award Criteria for the Blue Angel may not be labelled with this general Blue Angel ecolabel. An exception is made for reusable carrier bags made of synthetic fibre (DE-UZ 154).

- In the case of buckets with metal handles, the handle is excluded from these requirements. The requirement applies to the bucket minus the metal handle.
- In the case of ring binders, the metal ring mechanism is excluded from these requirements. The requirement applies to the ring binder minus the metal ring mechanism.
- In the case of plastic products that require steel reinforcement for static reasons, this is permissible up to a proportion of 20 % by mass of the total product; accordingly, the proportion accounted for by plastic must be at least 80 % by mass.

The Basic Award Criteria also apply to the intermediate recycled film (the so-called "mother film") intended for further processing (packaging, printing, etc.) if it contains at least 80 % PCR material by mass. A separate application must be submitted to RAL gGmbH for finished products made from these mother films and they may only be awarded the Blue Angel ecolabel if they fall within the scope of these Basic Award Criteria. An exemption will be made in the case of a separate application for carrier bags and refuse sacks made of recycled film on a transitional basis until at least the end of the term of these Basic Award Criteria in 2027. The labelling of film products and delivery packaging is described in Paragraph 3.8.

Any type of composite packaging that could severely hamper or even prevent the recycling of the finished products in the future (such as fibre-reinforced plastics) and composite packaging and sales packaging (e.g. bottles, cans, blister packs, film packaging, etc.) – with the exception of carrier bags and delivery packaging – are excluded from the scope of these Basic Award Criteria. Carrier bags can only be certified with the ecolabel if the film from which they are produced has a minimum thickness of 65 µm or higher (i.e. carrier bags with a thickness < 65 µm are not permitted). The communication criteria for using certified source materials are described in Paragraph 3.8.
Any finished products that consume energy or which have electrical components are excluded from the scope of these Basic Award Criteria because this would require consideration of other environmental effects that have not been taken into account as part of the DE-UZ 30a ecolabel.

Manufacturers who sell their products to commercial customers (e.g. mother films) are obligated to inform their customers about which products fall within the scope of these Basic Award Criteria and which are excluded, as well as to provide them with the applicable requirements for labelling the end product.

Photos of the product must be submitted to RAL gGmbH with the application.

3 Requirements

This section lists the individual award criteria and the relevant compliance verifications. The diagram in Appendix B provides a schematic overview of the different criteria.

In order to be certified with the Blue Angel ecolabel, a finished product must comply with the following general award criteria (Paragraphs 3.1, 3.2, 3.3, 3.4, 3.7, 3.8).
If these products are intended for use either in direct contact with water or soil (Paragraph 3.5) or in direct contact with skin (Paragraph 3.6), they must also comply with other specific award criteria.

If the award criteria require the submission of test reports, the tests must be carried out by laboratories that meet the general requirements of EN ISO 17025 [15] or an equivalent standard (e.g. GLP [16]). Compliance with these requirements must be verified in writing by the respective testing laboratories in the form of a corresponding certificate.

The required test reports, certificates, safety data sheets, etc. must be up to date, i.e. these documents may not be more than one year old at the time of application.

3.1 Requirements for the recycled content

The applicant must enclose a description of the finished product, advertising materials and, if requested by RAL gGmbH, a reference product (including a sample of the mother film used) with the application. The applicant must also list all of the materials and their contents in the product according to their type (type of polymer). Non-declared materials may only account for a maximum of 2 % by mass of the finished product.
The origin and composition of the PCR materials used in the product must be verified by the applicant in the form of a certificate (including a report) from a certification scheme based on EN 15343:2007 or DIN EN 15343:2008 [17] (with calculated and plausibly justified verification of the proportion of post-consumer plastics).

This includes as a minimum:

- Verification and documentation of the materials input into the recycling process (characterisation of the post-consumer status), e.g.:
  - Characterisation of the waste flow (waste code)
  - Description of the output product (film, packaging, etc.)
  - Other relevant information (e.g. sorting standards)
- A description of the recycling plant, the separation processes and mixing processes in the plant and the calculated proportion of PCR material
  - Basic description of the plant and the flows of bulk material
  - Characterisation of the recycling process, with clear reference to a process that involves recycling according to the type of material
  - Verification of an environmental management system and a description of the processes that have been established to prevent emissions (e.g. of microplastics)
  - Identification of other input flows into the waste phase (e.g. already existing additives, addition of aggregates, etc.[4]).
- Characterisation of the output materials at a batch level with appropriate documentation
  - Identification of the purity of the plastic (main polymer, foreign polymers, non-polymer components)
  - The expected pollutant content[5]

[4] It is important to note here that these substances must be taken into account when determining the proportion of PCR materials and designated as either plastics from new goods (e.g. the addition of additives that are dissolved in the polymers) or non-plastic parts (e.g. the addition of inorganic fillers that cannot be recycled from the waste flow and therefore are not part of the PCR plastic flow).

[5] This could be based on e.g. a series of tests carried out over time and on knowledge of the average composition and consistency of the waste flow. If maximum values are measured that could conflict with the legal limits for the target application, the applicant must measure them for the specific batch to verify that they are marketable.

The EuCertPlast certification scheme[6], the RecyClass certification scheme for the "recycling process"[7] and the Global Recycled Standard (GRS) certification scheme will currently be accepted[8]. The applicant may request in advance that other certification schemes to the ones stated above are also approved. These alternative systems must include at least a test of the documentation by an externally approved auditor for this scheme to verify compliance with the requirements stated above and an audit of the proportion of PCR material based on an understandable calculation process (with calculated and plausible verification of the proportion of post-consumer materials, which demonstrates that the material was sourced from recycling according to the type of material). This audit must be carried out by a body that is independent of the company and the certification scheme (Annex 3).
Furthermore, the applicant shall specify the qualitative and quantitative composition of the finished product named in the application, i.e. the proportions of recycled plastics and new plastics for every component.
All of the plastics contained in the finished product must be included when calculating the contents. Components made from non-plastic materials should not be taken into account when calculating the PCR content. In the case of finished products consisting of several different components, it is not necessary for every component to contain PCR material. It is thus possible that certain components are completely made out of new plastics. However, these plastics must also be included in the calculations.
The records and results must be checked, evaluated for their plausibility and confirmed in a test report in accordance with Annex 3 to the contract pursuant to DE-UZ 30a by an independent specialist body at the site where the finished product is produced.
This confirmation (Annex 3) must be submitted at the time of application and then annually at the latest one year after the issuing date of the previous confirmation. The annual confirmations must cover consecutive time periods without any gaps.

3.2 Requirements on the handling of PCR materials used in the production of blown film

PCR materials used in the production of blown film, e.g. for use in carrier bags, must undergo a washing process in the recycling process. Alternatively, a dry processing method may also be accepted if an audit verifies that the waste flow used for the production process is free of adhering particles (e.g. impurities resulting from the use of plastic containers for cosmetic products, food, etc.) that could cause the target product to have an unacceptable level of quality and that this is regularly checked during plant operation.

Compliance verification

The applicant shall document the type of plastic waste processing in Annex 3.
If dry processing is confirmed as the processing method in Annex 3, the applicant shall submit a detailed statement from the auditor about the input material used in the product and the quality assurance measures established at the plant with respect to adhering particles as well as the available plant technology (see Annex 3 - Preliminary remark on Paragraph 3).

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6 http://www.eucertplast.eu
7 https://recyclass.eu/
8 https://textileexchange.org/knowledge-center/documents/global-recycled-standard-grs/

3.3 Restriction on the use of certain PCR materials[9]

Finished products that contain the following PCR materials are excluded from certification with the Blue Angel:

- PCR materials sourced from another process other than recycling according to the type of material (e.g. chemical recycling of plastics)
- PCR materials that contain a SVHC on the list of candidates above a limit of 0.1 % by mass.
- PCR materials that contain halogenated blowing agents or halogenated flame retardants
- PCR materials made of soft PVC
- PCR materials made of hard PVC containing cadmium and/or lead
- PCR materials made of PET, which is sourced from the PET (drinks) bottle product category

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1. In addition, the applicant shall submit the following compliance verifications on the basis of a random sample of each PCR material:

- *For soft and flexible plastic materials as well as for all recycled PVC materials, the applicant shall determine the concentrations of those phthalates that appear on the list of candidates at the time of application. The applicant shall verify that the materials do not contain phthalates by submitting a test report in accordance with EN ISO 18856 [[18]] or EN 14602 [[19]] or an equivalent standard.*
- *The applicant shall determine the halogen content (chlorine and bromine) in accordance with DIN 53474:2017-12 (Wickbold combustion method) in combination with ISO 10304-1 "Determination of dissolved anions by liquid chromatography of ion" [20] or alternatively using a non-destructive spectroscopic measurement in accordance with DIN EN 62321-3-1:2014-10 [21]. A general limit of 0.1 % by mass for bromine and 0.3 % by mass for chlorine is valid for verifying that the plastics are halogen-free. Further verification methods may be permitted if their suitability is demonstrated. Hard PVC is exempt from this compliance verification.*
- *For hard PVC, the applicant shall determine the concentrations of cadmium and lead using an appropriate decomposition method and subsequent measurement by means of ICP-OES (optical emission spectrometry) or ICP-MS (mass spectrometry). The concentration of cadmium (expressed as Cd metal) must not exceed 0.01 % by mass, or 0.1 % by mass for hard PVC intended for use in building profiles and pipes[10]. The concentration of lead (expressed as pb metal) must not exceed 0.05 % by mass or 0.3 % by mass for hard PVC intended for use in building profiles and pipes[11].*
- *For PET, the applicant shall unequivocally and explicitly verify in detail that the PET was not sourced from the PET (drinks) bottle product category and that it complies with the requirements for PCR materials in Paragraph 3.1.*

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[9] It is generally assumed that the recyclate and the finished product meet all of the requirements in the applicable chemical regulations (e.g. restrictions according to Annex XVII of the REACH Regulation). This includes, for example, existing rules on the presence of cadmium in the plastic materials.

[10] Building profiles and pipes according to REACH, Annex XVII Entry 23 Column 2 Paragraph 4

[11] Building profiles and pipes according to REACH, Annex XVII Entry 23 Column 2 Paragraph 4

3.4 Requirements for the addition of substances to the PCR material

Substances exhibiting one or more of the classifications listed in Table 1 may not be added to the PCR materials. This requirement encompasses both the harmonised classifications according to Annex VI of the CLP Regulation and also self-classifications made by the distributors of the substances. In addition, the following applies to PCR Materials used in the production of finished products that can come into repeated, direct physical contact with consumers during their intended use: No substances classified (harmonised classification and/or self-classification) with Skin Sens. 1, H317 "May cause an allergic skin reaction" may be added. In-can preservatives of type PT 6 according to the Biocidal Products Regulation in water-based inks and propylidynetrimethanol (CAS no. 77 99-6) in concentrations ≤ 0.25% in titanium dioxide-based printing inks that are used to print film or finished products are excluded from this requirement.

Biocides in the sense of the Biocidal Products Regulation (EU) No 528/2012 of 22 May 2012, which came into force on 1 September 2013, may not be used, with the exception of the in-can preservatives stated above.

Furthermore, no substances that have been included in the so-called "list of candidates" in accordance with Article 59 of the REACH Regulation may be added[12] to the PCR materials. The version of the list of candidates at the time of application is valid.

Table 1: List of non-permitted classifications for substances added to the PCR materials

Hazard class	**Hazard category**	**H Phrases according to the CLP Regulation (EC) No. 1272/2008**	
Carcinogenicity	Carc. 1A, 1B	H350	May cause cancer
Carcinogenicity	Carc. 1A, 1B	H350i	May cause cancer if inhaled
Carcinogenicity	Carc. 2	H351[13]	Suspected of causing cancer
Germ cell mutagenicity	Muta. 1A, 1B	H340	May cause genetic defects
Germ cell mutagenicity	Muta. 2	H341	Suspected of causing genetic defects
Reproductive toxicity	Repr. 1A, 1B	H360	May damage fertility or the unborn child
Endocrine disruption for human health	ED HH 1	EUH380	May cause endocrine disruption in humans*
Endocrine disruption for human health	ED HH 2	EUH381	Suspected of causing endocrine disruption in humans*
Reproductive toxicity	Repr. 2	H361	Suspected of damaging fertility or the unborn child
Specific target organ toxicity single exposure	STOT SE1	H370	Causes damage to organs
Specific target organ toxicity single exposure	STOT SE2	H371	May cause damage to organs
Specific target organ toxicity repeated exposure	STOT RE1	H372	Causes damage to organs through prolonged or repeated exposure
Environmental hazards	Hazardous to water Chronic 1	H410	Very toxic to aquatic life with long-lasting effects

[12] Above the classification threshold for the safety data sheet.
[13] An exception is made for titanium dioxide because its classification is only based on the respirable dust.

Hazard class	Hazard category	H Phrases according to the CLP Regulation (EC) No. 1272/2008	
Endocrine disruption for the environment	ED ENV 1	EUH430	May cause endocrine disruption in the environment*
Endocrine disruption for the environment	ED ENV 2	EUH431	Suspected of causing endocrine disruption in the environment*
Persistent, Bioaccumulative, Toxic	PBT	EUH440	Accumulates in the environment and living organisms including in humans*
Very persistent Very bioaccumulative	vPvB	EUH441	Strongly accumulates in the environment and living organisms including in humans*
Persistent Mobile Toxic	PMT	EUH450	Can cause long-lasting and diffuse contamination of water resources*
Very persistent Very mobile	vPvM	EUH451	Can cause very long-lasting and diffuse contamination of water resources*
*Newly added hazard categories in the CLP Regulation, legally binding for substances newly placed onto the market from 1 May 2025 and for existing substances on the market from 1 November 2026, and legally binding for mixtures newly placed onto the market from 1 May 2026 and for existing mixtures on the market from 1 May 2028			

Compliance verification

The applicant shall declare compliance with these requirements. In addition, the applicant shall list all of the substances added to the PCR materials in Annex 1. The applicant shall state both the trade names and also the chemical designations (e.g. CAS number).
If a data safety sheet is required by law for the relevant substance or mixture added to the product, the applicant shall enclose the safety data sheet with the application.
If desired, such verification can also be sent directly to RAL gGmbH by the supplier of the substance or mixture in order to protect any existing trade secrets (Annex 4).
The applicant shall notify the awarding body for the ecolabel immediately about any changes to the composition of the PCR materials that are relevant to this requirement.

3.5 Specific requirements for finished products in direct contact with soil and water

If PCR materials are used in finished products that come into direct contact with soil and water during their intended use, they must be tested to verify that the migration of the compounds stated below in Paragraphs 3.5.1, 3.5.2 and 3.5.3 to environmental media is limited.
Possible indications of direct contact with soil and water are:

- Permanent outdoor use of installed finished products
- In-ground installation
- Use of finished products in or on surface waters

3.5.1 Halogens

Until 31/12/2025, the applicant is free to choose which of the following test methods to use for determining the organically bound halogens. After 31/12/2025, the applicant must use the second test method stated below to determine the adsorbable organically combined halogens. As it has not yet been possible to define a suitable limit value but it is important to gather experience in the completion of these tests so that the findings can be used as part of a future revision of these Basic Award Criteria, the test results must only be submitted for reporting purposes.

- Method for determining the extractable organically bound halogens (EOX) according to DIN 38414-17:2017 [22];
- Method for determining the adsorbable organically combined halogens (AOX) according to DIN EN ISO 9562:2005-02[14] [23][15] in an aqueous eluate, which has been produced using an elution method based on RAL Quality Mark 944 Annex D2 (adapted column experiment from the Federal Institute for Materials Research and Testing (BAM) based on DIN 19528 (2009); also see the explanations in the following Paragraph 3.5.2).

Compliance verification

The applicant shall submit a test report to verify the test method used and the measured values. The testing laboratory must have implemented a quality assurance system according to DIN EN ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories" or a comparable standard (e.g. GLP) and confirm that this is the case in the test report.

3.5.2 Ecotoxicity

In order to evaluate the environmental compatibility of the plastic product with respect to soil and groundwater, the applicant must use an elution method based on RAL Quality Mark 944 Annex D2 (adapted column experiment from the Federal Institute for Materials Research and Testing (BAM) based on DIN 19528 [23] (2009)). This method involves a laboratory test to determine the mobilisable potential pollutants.
The processes for producing the eluate and analytically determining the substances are described in Annex D2 of the RAL Quality Assurance and Test Specifications for RAL Quality Mark 944. The process must be carried out and evaluated separately for each PCR material. The ecotoxicity of the eluate must be tested in accordance with Table 2 below.

Table 2: Test criteria for ecotoxicity

Test species	Test standard	Endpoint	Criterion
Luminescent bacteria (Vibrio fischeri)	EN ISO 11348-1 [24]	Light	$G_L \leq 8$
Algae (Raphidocelis subcapitata or Desmodesmus subspicatus)	EN ISO 8692 [25]	Growth	$G_A \leq 4$
Crustaceans (Daphnia magna)	EN ISO 6341 [26]	Mobility	$G_D \leq 4$
umu test	ISO 13829 [27]	Genotoxicity	$G_{EU} \leq 1{,}5$

[14] DIN EN ISO 9562:2005-02 Water quality -Determination of adsorbable organically bound halogens (AOX) (ISO 9562:2004); German version EN ISO9562:2004

[15] This reference must also be included in Appendix A of the Basic Award Criteria and the numbering of the references in the main text and Appendix A must be amended.

Compliance verification

The applicant shall submit a test certificate that verifies compliance with the criteria. The testing laboratory must have implemented a quality assurance system according to DIN EN ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories" or a comparable standard (e.g. GLP) and confirm that this is the case in the test report.

3.5.3 Heavy metals, PAH, PCB

The applicant must use an elution method based on RAL Quality Mark 944 Annex D2 (adapted column experiment from the Federal Institute for Materials Research and Testing (BAM) based on DIN 19528 (2009)). The following test values according to the Federal Soil Protection and Contaminated Sites Ordinance (BBodSchV) (Table 3) in the eluate must be complied with by each PCR material:

Table 3: BBodSchV / ErsatzbaustoffV 2732 / Table 4 / Values for evaluating materials designed for installation or insertion below or above a layer of soil containing roots / value in the eluate in µg/l

Parameter	**BBodSchV / ErsatzbaustoffV 2732 / Table 4 / Values for evaluating materials designed for installation or insertion below or above a layer of soil containing roots / value in the eluate in µg/l**	**Measurement method according to BBodSchV / ErsatzbaustoffV Annex 3**
Mercury (Hg)	0.1	DIN EN ISO 12846 [28]
Arsenic (As)	13	DIN 11885:2009-09 [29]
Total chromium (Cr)	19	
Cadmium (Cd)	4	
Zinc	210	
Nickel	31	
Copper	41	
Lead (Pb)	43	
Sum of PCB6 and PCB-118	0.01	DIN 38407-37:2013 [30]
PAH15 (PAH16 excluding naphthaline and methylnaphthaline	0.2	DIN 38407-39:2011 [31]

Compliance verification

The applicant shall submit a test report that verifies compliance with the criteria. The testing laboratory must have implemented a quality assurance system according to DIN EN ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories" or a comparable standard (e.g. GLP) and confirm that this is the case in the test report.

3.6 Specific requirements for finished products in direct contact with consumers

If PCR materials are used in the production of finished products that come into repeated, direct physical contact with consumers during their intended use, the following requirements apply:

- The restricted migration of heavy metals must be verified in a separate test for each PCR material. The PCR materials must comply with the limits stated in Table 4.
- The restricted content of polycyclic aromatic hydrocarbons (PAHs) must be verified in a separate test for each PCR material by means of a test report according to AfPS GS 2019:01 PAK [32] (GS mark). The PCR materials must comply with the threshold values for the following categories in AfPS GS 2019:01:
- Finished products in category 1 that are primarily designed for use by children[16]
- Finished products in category 2 (other products according to the German Product Safety Act (ProdSG) [34]) that are primarily designed for use by other consumers

Table 4: Migration limits for metals and elements [17]

Element	**Migration limit** **mg/kg in dry, brittle, powder-like or pliable materials**
Aluminium	2 250
Antimony	45
Arsenic	3.8
Barium	1 500
Boron	1 200
Cadmium	1.3
Chromium (III)	37.5
Chromium (VI)	0.02
Cobalt	10.5
Copper	622.5
Lead	2
Manganese	1 200
Mercury	7.5
Nickel	75
Selenium	37.5
Strontium	4 500
Tin	15 000
Organotin	0.9
Zinc	3 750

Possible indications of repeated contact with consumers over a prolonged period are (a test will be required if just one criterion applies):

- Direct skin contact several times a day (more than 5 times)
- Direct skin contact over a period > 15 minutes

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1. In addition, the applicant shall submit the following verifications for the PCR materials used in the product:

[16] Please note that toys cannot be certified with the ecolabel within the scope of these Basic Award Criteria. The Basic Award Criteria DE-UZ 207 "Toys" should be used for this purpose [33].

[17] Based on the Toy Safety Directive [38] and taking into account the updated BfR opinion No 034/2012 of 10 August 2012 "Health Risks through heavy metals from toys" (BfR - Federal Institute for Risk Assessment)[35]

- *The applicant shall determine the restricted migration of heavy metals in accordance with DIN EN ISO 71-3 [36] or using a comparable method.*
- *The applicant shall determine the PAH content of the PCR materials in accordance with AfPS GS2019:01 PAK [32], taking into account the threshold values specified therein for the respective category of finished product.*

3.7 Substance requirements for non-PCR plastic parts

No substances (e.g. dyes, UV stabilisers, fillers or other additives) exhibiting one or more of the classifications listed in Table 5 may be added to the non-PCR plastics in the finished product to be certified with the Blue Angel ecolabel either during their production or their further processing. This requirement encompasses both the harmonised classifications according to Annex VI of the CLP Regulation and also self-classifications made by the distributors of the substances. In addition, the following applies to PCR plastics used in the production of finished products that can come into repeated, direct physical contact with consumers during their intended use: No substances classified (harmonised classification and/or self-classification) with Skin Sens. 1, H317 "May cause an allergic skin reaction" may be added. In-can preservatives of type PT 6 according to the Biocidal Products Regulation in water-based inks and propylidynetrimethanol (CAS no. 77 99-6) in concentrations ≤ 0.25% in titanium dioxide-based printing inks that are used to print film or finished products are excluded from this requirement.

Biocides in the sense of the Biocidal Products Regulation (EU) No 528/2012 of 22 May 2012, which came into force on 1 September 2013, may not be used, with the exception of the in-can preservatives stated above.

Furthermore, no substances that have been included in the so-called "list of candidates" in accordance with Article 59 of the REACH Regulation may be added[18] to the non-PCR materials. The version of the list of candidates at the time of application is valid.

Table 5: List of non-permitted classifications for substances added to the non-PCR Plastics

Hazard class	**Hazard category**	**H Phrases according to the CLP Regulation (EC) No. 1272/2008**	
Carcinogenicity	Carc. 1A, 1B	H350	May cause cancer
Carcinogenicity	Carc. 1A, 1B	H350i	May cause cancer if inhaled
Carcinogenicity	Carc. 2	H351[19]	Suspected of causing cancer
Germ cell mutagenicity	Muta. 1A, 1B	H340	May cause genetic defects
Germ cell mutagenicity	Muta. 2	H341	Suspected of causing genetic defects
Reproductive toxicity	Repr. 1A, 1B	H360	May damage fertility or the unborn child
Endocrine disruption for human health	ED HH 1	EUH380	May cause endocrine disruption in humans*
Endocrine disruption for human health	ED HH 2	EUH381	Suspected of causing endocrine disruption in humans*

[18] Above the classification threshold for the safety data sheet.
[19] An exception is made for titanium dioxide because its classification is only based on the respirable dust.

Hazard class	Hazard category	H Phrases according to the CLP Regulation (EC) No. 1272/2008	
Reproductive toxicity	Repr. 2	H361	Suspected of damaging fertility or the unborn child
Specific target organ toxicity single exposure	STOT SE1	H370	Causes damage to organs
Specific target organ toxicity single exposure	STOT SE2	H371	May cause damage to organs
Specific target organ toxicity repeated exposure	STOT RE1	H372	Causes damage to organs through prolonged or repeated exposure
Environmental hazards	Hazardous to water Chronic 1	H410	Very toxic to aquatic life with long-lasting effects
Endocrine disruption for the environment	ED ENV 1	EUH430	May cause endocrine disruption in the environment*
Endocrine disruption for the environment	ED ENV 2	EUH431	Suspected of causing endocrine disruption in the environment*
Persistent, Bioaccumulative, Toxic	PBT	EUH440	Accumulates in the environment and living organisms including in humans*
Very persistent Very bioaccumulative	vPvB	EUH441	Strongly accumulates in the environment and living organisms including in humans*
Persistent Mobile Toxic	PMT	EUH450	Can cause long-lasting and diffuse contamination of water resources*
Very persistent Very mobile	vPvM	EUH451	Can cause very long-lasting and diffuse contamination of water resources*
*Newly added hazard categories in the CLP Regulation, legally binding for substances newly placed onto the market from 1 May 2025 and for existing substances on the market from 1 November 2026, and legally binding for mixtures newly placed onto the market from 1 May 2026 and for existing mixtures on the market from 1 May 2028			

Compliance verification

The applicant shall declare compliance with this requirement. In addition, the applicant shall list all of the existing substances in the new materials and all of the substances added to them in Annex 1. The applicant shall state both the trade names and also the chemical designations.
If a data safety sheet is required by law for the relevant substance or mixture added to the product, the applicant shall enclose the safety data sheet with the application.
If desired, such verification can also be sent directly to the awarding body for the ecolabel by the supplier of the substance or mixture in order to protect any existing trade secrets (Annex 4).
The applicant shall notify the awarding body for the label immediately about any changes to the composition of the new material that are relevant to this requirement.

3.8 Labelling of the end product

Plastic parts with geometrical dimensions larger than 5 cm x 5 cm must be marked in accordance with DIN EN ISO 11 469 [37]. The applicant may apply to RAL gGmbH for an exemption to this labelling requirement in the event of technical difficulties.

Due to a possible risk of confusion about the contents, all finished products made of plastic film and delivery packaging (e.g. carrier bags, refuse sacks, bubble wrap and padded envelopes) that are printed with the Blue Angel logo must also include the explanatory box and the relevant registration number (UZ 30a/contract number) or it is not permitted to print the logo on the product.
For sales packaging that is excluded from the scope of these Basic Award Criteria but whose original material is certified according to UZ 30a, only the following analogous wording is allowed: "The plastic in the packaging is made of at least 80 % PCR plastic and is certified with the Blue Angel ecolabel". Furthermore, the relevant registration number (UZ 30a/contract number) must be depicted on the certified plastic packaging material used in the product. The use of the logo is prohibited.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1 and shall in consultation with RAL gGmbH submit a sample of the product at the time of the application or after the award of the label. In the case of larger products, the applicant may also submit informative image materials that verify compliance with the requirements.

3.9 Outlook

Future revisions of the Basic Award Criteria will examine whether to split the current DE-UZ 30a ecolabel because film products can currently already be produced using a higher proportion of PCR materials than the 80 % by mass limit stated here, while some finished products covered by this ecolabel are unable to achieve higher PCR contents for technical reasons and some others are not even able to achieve the 80 % by mass limit at the current time due to technical reasons.

4 Applicants and Parties Involved

Manufacturers 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, 2027.

They shall be extended by periods of one year each, unless terminated in writing by March 31, 2027 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)
- Brand/trade name, product description
- Distributor (label user), i.e. the above-mentioned marketing organisations.

Appendix A Cited legislations and standards, literature

[1] Conversio (2022): Stoffstrombild Kunststoffe in Deutschland 2021: Zahlen und Fakten zum Lebensweg von Kunststoffen. Kurzfassung der Conversio Studie. (Substance flow analysis for plastics in Germany 2021: Facts and figures on the life cycle of plastics. Short version of the Conversio Study. Published by the Plastics Industry Association (Verbände der Kunststoffindustrie) Available online at https://www.bkv-gmbh.de/files/bkv-neu/studien/Kurzfassung_Stoffstrombild_2021_13102022_1%20.pdf, last checked on 26/07/2023. S.12.

[2] Günter Dehoust, Joachim Christiani, 2012 "Analyse und Fortentwicklung der Verwertungsquoten für Wertstoffe"
(Analysis and further development of recycling rates for materials) UBA Texts 40/2012, FKZ 3711 33 316 https://www.umweltbundesamt.de/publikationen/analyse-fortentwicklung-verwertungsquoten-fuer

[3] BASF (2023): Life-Cycle Assessments of chemical recycling: an overview. Published by BASF. Available online at https://www.basf.com/global/documents/en/sustainability/we-drive-sustainable-solutions/circular-economy/chemcycling/LCA%20meta-study%20slide%20deck_final.pdf.assetdownload.pdf, last accessed on 08/11/2023

[4] European Commission, Directorate-General Environment Website http://ec.europa.eu/environment/circular-economy/index_en.htm

[5] COM(2018) 28 final COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS A European Strategy for Plastics in a Circular Economy {SWD(2018) 16 final}, https://eur-lex.europa.eu/resource.html?uri=cellar:2df5d1d2-fac7-11e7-b8f5-01aa75ed71a1.0002.02/DOC_3&format=PDF

[6] Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (text with EEA relevance); Official Journal of the European Union L 396, 30/12/2006, P. 1, consolidated text at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02006R1907-20230806

[7] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance), Official Journal of the European Union L 353, 31/12/2008, p. 1–1355,

[8] DIN EN ISO 14021:2021-10 Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) (ISO 14021:2016 + Amd 1:2021); German version EN ISO 14021:2016 + A1:2021; German version EN ISO 14021:2016 + A1:2021, Publication date 2021-10,
Original language German, Pages 44

[9] German Circular Economy Act (Kreislaufwirtschaftsgesetz – KrWG) of 24 February 2012 (BGBl. I p. 212), last amended by Article 2 Paragraph 9 of the act from 20 July 2017 (BGBl. I p. 2808)

[10] Regulation (EC) No. 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC
German Environmental Audit Act (Umweltauditgesetz – UAG) in the version published on 4 September 2002 (BGBl. I p. 3490), last amended by Article 13 of the law from 27 June 2021 (BGBl. I p. 1966).

[11] German Industrial Code (Gewerbeordnung – GewO) in the version published on 22 February 1999 (BGBl. I p. 202), last amended by Article 1 of the law from 17 October 2017 (BGBl. I p. 3562)

[12] Regulation (EC) No. 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC, Official Journal of the European Union L 342, 22/12/2009, p. 1–45, https://eur-lex.europa.eu/legal-content/DE/TXT/?uri=CELEX%3A32009R1221

[13] ECHA, 2017, Guidance for identification and naming of substances under REACH and CLP, May 2017, Version 2.1, Chapter 2.2, P. 17, https://echa.europa.eu/documents/10162/23036412/substance_id_de.pdf/eb1721f9-74ec-4f8c-8aa3-1490fd510685.

[14] Series of standards DIN EN 840 (2020), Mobile waste and recycling containers

[15] DIN EN ISO/IEC 17025:2018-03 General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:2017), German and English version EN ISO/IEC 17025:2017, Publication date 2018-03, Original languages German, English, DIN EN ISO/IEC 17025

[16] German Chemicals Act (Chemikaliengesetz) in the version published on 28 August 2013 (BGBl. I p. 3498, 3991), last amended by Article 115 of the law from 10 August 2021 (BGBl. I p. 3436).

[17] DIN EN 15343:2008-02 Plastics - Recycled Plastics - Plastics recycling traceability and assessment of conformity and recycled content; German version EN 15343:2007 Publication date 2008-02, Original language German, Pages 12

[18] DIN EN ISO 18856:2005-11 Water quality - Determination of selected phthalates using gas chromatography/mass spectrometry (ISO 18856:2004), German version EN ISO 18856:2005, Publication date 2005-11, Original language German

[19] DIN EN 14602 Footwear - Test methods for the assessment of ecological criteria; German version, Publication date 2012-01-09 Publication date 2012-01, Original language German

[20] DIN 53474:2017-12 Testing of plastics, rubber and elastomers - Determination of the chlorine content (Wickbold-Combustion) in combination with DIN EN ISO 10304-1:2009-07 - Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate (ISO 10304-1:2007); German version EN ISO 10304-1:2009

[21] DIN EN 62321-3-1:2014-10,VDE 0042-1-3-1:2014-10, VDE 0042-1-3-1:2014-10 Determination of certain substances in electrotechnical products - Part 3-1: Screening - Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry (IEC 62321-3-1:2013), German version EN 62321-3-1:2014, Publication date 2014-10, Original language German

[22] DIN 38414-17:2017-01 German standard methods for the examination of water, waste water and sludge - Sludge and sediments (group S) - Part 17: German standard methods for the examination of water, waste water and sludge - Sludge and sediments (group S) - Part 17: Determination of the organically bound halogens amenable to extraction (EOX) (S 17), Publication date 2017-01, Original language German, Pages 14

[23] DIN 19528:2009-01 Leaching of solid materials - Percolation method for the joint examination of the leaching behaviour of inorganic and organic substances

[24] DIN EN ISO 11348-1 Water quality - Determination of the inhibitory effect of water samples on the light emission of Vibrio fischeri (Luminescent bacteria test) - Part 1: Method using freshly prepared bacteria

[25] DIN EN ISO 8692 Water quality - Fresh water algal growth inhibition test with unicellular green algae

[26] DIN EN ISO 6341 Water quality - Determination of the inhibition of the mobility of Daphnia magna Straus (Cladocera, Crustacea) - Acute toxicity test

[27] ISO 13829 Water quality - Determination of the genotoxicity of water and waste water using the umu-test

[28] Water quality - Determination of mercury - Method using atomic absorption spectrometry (AAS) with and without enrichment (ISO 12846:2012); German version EN ISO 12846:2012

[29] Water quality - Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES) (ISO 11885:2007); German version EN ISO 11885:2009

[30] German standard methods for the examination of water, waste water and sludge – Jointly determinable substances (group F) - Part 37: Determination of organochlorine pesticides, polychlorinated biphenyls and chlorobenzene in water - Method using gas chromatography and mass spectrometric detection (GC-MS) after liquid-liquid extraction (F 37)

[31] German standard methods for the examination of water, waste water and sludge – Jointly determinable substances (group F) - Part 39: Determination of selected polycyclic aromatic hydrocarbons (PAH) - Method using gas chromatography with mass spectrometric detection (GC-MS)

[32] AfPS GS 2019:01 PAK: GS specification "Testing and assessment of polycyclic aromatic hydrocarbons (PAHs) in the course of awarding the GS mark" issued by the Product Safety Commission (AfPS)https://www.baua.de/DE/Aufgaben/Geschaeftsfuehrung-von-Ausschuessen/AfPS/pdf/AfPS-GS-2019-01-PAK.html

[33] RAL, 2017, DE-UZ 207 Toys https://produktinfo.blauer-engel.de/uploads/criteriafile/de/DE-UZ%20207-201701-de%20Kriterien.pdf

[34] German Product Safety Act (Produktsicherheitsgesetz) from 27 July 2021 (BGBl. I p. 3146, 3147), amended by Article 2 of the act from 27 July 2021 (BGBl. I p. 3146)

[35] BfR opinion No 034/2012 of 10 August 2012 "Health Risks through heavy metals from toys" http://www.bfr.bund.de/cm/343/gesundheitliche-risiken-durch-schwermetalle-ausspielzeug.pdf

[36] DIN EN 71-3:2021-06, Safety of toys - Part 3: Migration of certain elements; German version EN 71-3:2019+A1:2021, Publication date 2021-06, Original language German

[37] DIN EN ISO 11469:2017-01 Plastics - Generic identification and marking of plastics products (ISO 11469:2016), German version EN ISO 11469:2016, Publication date 2017-01, Original language German

[38] Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys (Text with EEA relevance), Official Journal of the European Union, L 170, 30/6/2009, p. 1–37, https://eur-lex.europa.eu/legal-content/DE/ALL/?uri=CELEX%3A32009L0048

Appendix B Schematic structure of the Basic Award Criteria DE-UZ 30a