BLUE ANGEL

The German Ecolabel

Products made from Recycled Plastics

DE-UZ 30a

Basic Award Criteria

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Version 7

The Environmental Label is supported by the following four institutions:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety is the owner of the label. It regularly provides information on the decisions taken by the Environmental Label Jury.

Umwelt Bundesamt

The German Environmental Agency with its specialist department for "Ecodesign, Eco-Labelling and Environmentally friendly Procurement" acts as office of the Environmental Label Jury and develops the technical criteria of the Basic Criteria for Award of the Blue Angel.

Jury Umweltzeichen

The Environmental Label Jury is the independent, decision-making body for the Blue Angel and includes representatives from environmental and consumer associations, trade unions, industry, the trade, crafts, local authorities, academia, the media, churches, young people and the German federal states.

RAL gGmbH

The RAL gGmbH is the awarding body for the Environmental Label. It organises the process for developing the relevant award criteria in independent expert hearings – which involve all relevant interest groups.

For further information please contact:
RAL gGmbH
RAL UMWELT
Fränkische Straße 7
53229 Bonn
Tel: +49 (0) 228 / 6 88 95 - 0
E-Mail: umweltzeichen@ral.de
www.blauer-engel.de

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This document is a translation of a German original. In case of dispute, the original document should be taken as authoritative.

1 Introduction

1.1 Preface

In cooperation with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the German Environmental Agency and considering the results of the expert hearings conducted by RAL gGmbH, the Environmental Label Jury has set up these Basic Criteria for the Award of the Environmental Label. RAL gGmbH has been tasked with awarding the Environmental Label.
Upon application to RAL gGmbH and on the basis of a Contract on the Use of the Environmental Label to be concluded with RAL gGmbH, the permission to use the Environmental Label may be granted to all products, provided that they comply with the requirements as specified hereinafter.
The product must comply with all the legal requirements in the country in which it is to be marketed. The applicant shall declare that the product meets this requirement.

1.2 Background

Post-consumer waste from private households, agriculture, trade and industry accounts by far for the major part of all plastic waste. From the ecological point of view [1][2][3][4], recycling by type of material is usually superior to all other forms of recycling - such as e.g. thermal processing. Nevertheless only a small part of post-consumer plastics is recycled by type of material today (approx. 17 percent of the total volume of plastic waste [4]). One reason for this is that, so far, there are not enough well-established sales channels for this type of recycled materials. This again may be due to market prices for recyclates being too high by comparison with virgin material, suspected disadvantages in terms of material quality as well as lacking facilities for material sorting.

Here, environmental labelling of finished products with a high percentage of recycled materials can help promote sales and thus enhance the recycling of post-consumer plastic waste.
Apart from packaging there are many other plastic-containing waste streams that are relevant to plastic recycling as, for example, sheets for industrial use (agriculture, building industry and other sectors) plastic moulded parts for the automotive sector and the electrical industry, other building materials (e.g. sections, tubes, floorings).

This perspective is also reflected in the environmental policy targets at EU level within the scope of the EU Commission's so-called circular economy activities [6]. The so-called plastics strategy explicitly mentions the environmental labels as instruments for enhancing the sales of recycled materials [7].

Nevertheless, such labelling must be accompanied by requirements for an assured control of certain contaminants from the waste phase in order not to jeopardize the acceptance of products made of recycled plastics. Some types of plastics are banned from use within the scope of DE-UZ 30a because an entrainment of certain contaminants in the final products cannot be adequately ruled out. In addition, far-reaching requirements for further additivation of recycled and virgin plastics have been drawn up. Different finished products are labelled by means of

the DE-UZ 30a Basic Criteria for 'Products made from Recycled Plastics' with a view to their future intended use. This range will also be reflected by graduated criteria. Finished products with high probability of contact with consumers or the environment will have to meet correspondingly more demanding requirements for contaminant control than finished products where such contact is highly improbable.

1.3 Objectives of the Environmental Label

This Blue Angel eco-label is to promote products with a high percentage of post-consumer recyclates or more precisely, with a high percentage of recycled plastics. The re-use of these polymers/materials is an objective of environmental policy and in the interest of the environmental label with a view to saving resources (substitution of virgin goods).
These Award Criteria provide a high level of protection to consumers and the environment by establishing basic requirements for the use and concentration of contaminants. Sustainable environmental effects are achieved by combining these two fundamental fields of requirements: protection of resources and control of contaminant levels.
Hence, the explanatory box lists the following benefits to environment and health:

Explanatory box for film products:

- Foil at least 80% recycled plastic
- Limitation of pollutants

Explanatory box for other products:

- At least 80% recycled plastic
- Limitation of pollutants

1.4 Definitions

- **Finished product**: a product that has undergone all stages of the company's production process and is made available to the market (for sale to downstream companies or to the final consumer. Finished products do not include preliminary or intermediate products which undergo further process engineering steps.
- **Candidate List Substances**[1]: substances having a property according to Article 57 of REACH [8] which have been included in the course of a formal procedure in the list of substances requiring authorisation pursuant to Article 59 of the REACH Regulation listing candidates for inclusion in Annex XIV (usually called "Candidate List").
- **Post-Consumer Material (PCR material)**: material generated by households or by commercial or industrial facilities or institutions (as final users of the product) that can no longer be used for its intended purpose. Included is material recovered from the supply chain [10].
- **Recycling** in terms of the German Kreislaufwirtschaftsgesetz (KrWG) [11] (Closed Cycle Management Act) and within the meaning of these Award Criteria means 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.
- **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 [8][9].
- **An independent expert body** is:
  - an independent environmental verifier according to Section 9 Umweltauditgesetz [12] (Environmental Audit Act) for sector 38 (recycling, waste disposal) or
  - a publicly appointed expert according to Section 36 of the German Gewerbeordnung [13] (Industrial Code) for the fields of waste recycling, waste technology, plastics recycling, plastics technology or packaging disposal or
  - an environmental verifier according to Regulation (EC) No 1221/2009, Article 2 [14], "Definition" No 20. If the environmental verifier is an organisation of environmental verifiers (i.e. not a natural person) the organisation shall separately list the names of the persons responsible for conducting the test.
- **Packaging:** Packaging is a product manufactured from any material and intended 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 final consumer[2].
- **Sales packaging:** Packaging which is typically offered to the final consumer as a sales unit consisting of goods and packaging. Packaging that is filled at the final distributor is also considered sales packaging. This also includes service packaging, such as carrier bags, and shipping packaging.

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[1] Article 57 of the REACH Regulation lists different properties of substances classified as Substances of Very High Concern (SVHC). For a German version of the Candidate List please go to the REACH/CLP/Biozid-Helpdesk der Bundesstelle für Chemikalien (Federal Office for Chemicals) at https://www.reach-clp-biozid-helpdesk.de/de/REACH/Kandidatenliste/Kandidatenliste.html.

[2] All definitions of packaging refer to the Packaging Act (Act on the putting into circulation, return and high-grade recycling of packaging). However, the assessment of whether packaging or no packaging is covered by the Blue Angel does not constitute a legal classification within the meaning of the German Verpackungsgesetz (Packaging Act).

- **Dispatch packaging:** Sales packaging that enables or supports the dispatch of goods to the final consumer.
- **Composite packaging:** Composite packaging is packaging that consists of different types of material that cannot be separated by hand, none of which exceeds 95% by weight.
  Mixture: mixtures or solutions composed of two or more substances. (Article 3 of REACH) [8] as well as CLP Article 2 [9]) examples within the scope of these Basic Criteria are: masterbatches, colorants (consisting of carrier material and pigment), UV stabilizers and others.**Impurity [15]**: an unintended constituent present in the substance or mixture as produced. It may originate from the starting materials or be the result of secondary or incomplete reactions during the production process. While it is present in the final substance or mixture it was not intentionally added.

2 Scope

These Award Criteria shall apply to finished products[3],

- with a plastics content of over 90 wt% (further exceptions can be done by the German Environmental Agency) and
- a minimum PCR content of 80 wt% in these plastics.

Examples of finished products that may be awarded this Blue Angel eco-label:

- office equipment (e.g. letter trays/drawer boxes),
- waste and recycling bins,
- plastic buckets, pots and containers, watering cans
- garden tables and chairs or the like,
- palisades, fences, lawn grids,
- compost silos and composters as well as
- film or sheet products, such as garbage and carrier bags, cover sheets and tarapaulins.

The following products with a plastic content of less than 90% by weight are permissible (exceptions on application by the German Environment Agency):

- In the case of waste and recyclable material containers within the meaning of DIN EN 840 [16], 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.
- In the case of buckets with metal brackets, the bracket is excluded from these requirements. The requirement applies to the bucket minus the metal bracket.
- In the case of plastic products which require steel reinforcement for static reasons, this is permissible up to a weight proportion of 20 % by weight of the total product; the plastic proportion must accordingly be at least 80 % by weight.

The award criteria also apply to the intermediate product recycled films (so-called "mother films") intended for further processing (packaging, printing, etc.) if they contain at least 80 % by weight of PCR material. Finished products made from these mother films require an

[3] Finished products falling within the scope of other product-specific Criteria for Award of the Blue Angel may not be labelled with this general Blue Angel eco-label. Excluded are reusable carrier bags made of synthetic fibre (DE-UZ 154)

independent application to RAL gGmbH and may only be awarded the Blue Angel if they fall within the scope of these award criteria. An exemption for the independent application is available on a transitional basis at least until the end of 2022 for carrier bags and refuse sacks made of recycled film. The labelling of film products is described in section 3.8.

Any kind of composite packaging and sales packaging (e.g. bottles, cans, blisters, foil packaging etc.) with the exception of carrier bags and shipping packaging are excluded from the scope of application. Communication when using certified original material is described in section 3.8.

Manufacturers who sell their products to commercial customers (e.g. mother film) are obliged to pass on to their customers the information as to which products fall within the scope and which are excluded, as well as the applicable requirements for labelling the end product.

Photographic samples must be submitted to RAL gGmbH with the application.

3 Requirements

This chapter lists the individual award criteria and the relevant compliance verifications. Please see the diagram in Appendix B for an easier approach to the systematics of these criteria.

All finished products to be Blue Angel eco-labelled must meet the following general award criteria (paras. 3.1, 3.2, 3.3, 3.4, 3.7, 3.8).
If the products are intended for use in either direct contact with water or soil (para. 3.5) or rather for use in direct contact with skin (para. 3.6) there are additional respective specific award criteria to be met as well.

If these award criteria require the submission of test reports the tests must be performed by laboratories meeting the general requirements of EN ISO 17025 [17] or an equivalent standard (e.g. GLP [18]). Compliance with these requirements shall be verified in writing by the respective testing laboratories by submission of an appropriate certificate.

Test reports, certificates, Safety Data Sheets etc. to be provided must be up to date and valid, i.e. these documents must be no older than one year.

3.1 Requirements for the Concentration of Recyclate

The percentage of PCR materials in the plastics fraction of a finished product or in the parent film shall, in total, be at least 80 wt% of the finished product.

Compliance Verification

Applicant's application for the Blue Angel eco-label shall be accompanied by a description of the finished product, product brochures and, if so requested by RAL gGmbH, a reference product (including a sample of the parent film used). In these documents the applicant shall list all materials contained in the finished product by type (type of polymer) and content. The concentration of non-declared materials in the finished products shall not exceed 2 wt%.

The applicant shall submit a certificate (including report) pursuant to the EuCertPlast certification scheme (including a calculated and plausibility-checked verification of the post-consumer percentage) to verify the origin and composition of the PCR materials used.[4]
Moreover, the applicant shall specify the qualitative and quantitative composition of the finished product applying for the Blue Angel eco-label, i.e. the proportions of plastic recyclates and virgin plastics related to each component.
The calculation of the percentages shall take into account all plastics contained in the finished product. Components made of non-plastic materials shall not be taken into account when calculating the PCR concentration. If the finished product consists of several components not every component needs to contain PCR material. It shall be possible to manufacture individual components completely from virgin plastics. However, these plastics shall be included in the result.
The records and results shall be reviewed by an independent expert body at the place of production of the finished product, checked for plausibility and confirmed as a test report in accordance with Annex 3) to the Contract pursuant to DE-UZ 30a.
The confirmation (Annex 3) to be submitted once a year shall be presented upon filing the initial application and thereafter each year no later than one year from the date of the previous confirmation. The annual confirmation shall be based on complete and continuous testing periods.

3.2 Requirements for the Treatment of PCR Materials

PCR materials used for the production of blown films as, for example, for the manufacture of carrier bags, shall be subjected to an additional washing process during recycling.
Notwithstanding this, dry processing may be permitted if auditing proves that the waste flow used is free of adhering particles (e.g. impurities resulting from the use of plastic containers as, for example, cosmetic products, food, etc.) 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 in Annex 3 the applicant shall submit a detailed commentary prepared by the auditor on the input material used and the established quality assurance regarding adhering materials as well as the plant technology available (see Annex 3 - preliminary remark to paragraph 3).

3.3 Restriction on the Use of Certain PCR Materials[5]

Finished products containing the following PCR materials shall be excluded from being Blue Angel eco-labelled:

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[4] See http://www.eucertplast.eu .
[5] It is principally assumed that the recyclates and the manufactured finished products meet all conditions of the relevant chemicals regulations (e.g. restrictions set forth in Annex XVII of the REACH Regulation). This includes, for example, existing provisions regarding cadmium in plastic materials.

- PCR materials containing an SVHC included in the Candidate List in a concentration above 0.1 wt%,
- PCR materials containing halogenated blowing agents or halogenated flame retardants,
- PCR materials made of soft PVC,
- PCR materials made of hard PVC containing cadmium and lead.

Compliance Verification

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

- *The concentrations of phthalates in the material shall be determined for soft and flexible plastic materials as well as for all recycled PVC materials that appear on the Candidate List at the time of application. The absence of phthalates shall be verified by means of a test report in accordance with EN ISO 18856 [19] or EN 14602 [20] or an equivalent method.*
- *The halogen content (choir and bromine) shall be determined by non-destructive spectroscopic measurement in accordance with DIN EN 62321-3-1:2014-10 [21]. A general threshold of 0.1 % by weight per element applies to the verification of halogen freedom. Further verification methods may be permitted if the suitability is demonstrated. Hard PVC shall be exempt from this compliance verification.*
- *As regards hard PVC, the cadmium and lead concentration shall be determined by means of 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) shall not exceed 0.01 wt%, or 0.1 wt% in hard PVC for use in building sections and tubes[6]. The concentration of lead (expressed as pb metal) shall not exceed 0.05 % or 0.3 wt%[7] in hard PVC for use in building sections and tubes.*

3.4 Requirements for the Addition of Substances to the PCR Material

Substances exhibiting one or more of the classifications listed in Table 1 shall not be added to the PCR materials. In addition, the following shall apply to PCR materials for use in finished products where - if used as intended - the possibility of repeated direct physical contact with the consumer exists: no substances classified as Sens. skin 1, H317 "May cause an allergic skin reaction" may be added. This requirement includes both the harmonised classifications under Annex VI to the CLP Regulation and the self-classifications of the distributors of the substances. Moreover, no substances shall, as a matter of principle, be added to the PCR materials[8] which have been included in the so-called Candidate List in accordance with Article 59 of the REACH Regulation. The Candidate List, as amended at the time of filing the application, shall be applicable. Biocides as defined by the Biocide Directive 98/8/EC (or Biocide Regulation EU No. 528/2012 of 22.5.2012, in force from 1 September 2013) may not be used.

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6 Sections for use in buildings and tubes in accordance with REACH, Annex XVII, Entry 23, Column 2, paragraph 4

7 Sections for use in buildings and tubes in accordance with REACH, Annex XVII, Entry 23, Column 2, paragraph 4

8 Above the limit of consideration for the Safety Data Sheet.

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

Hazard Class	Hazard Category	H-Statements according to CLP-Regulation (EC) No 1272/2008	
Carcinogenicity	Carc. 1A, 1B	H350	May cause cancer.
Carcinogenicity	Carc. 1A, 1B	H350i	May cause cancer by inhalation
Carcinogenicity	Carc. 2	H351[9]	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
Reproductive toxicity	Repr. 2	H361	Suspected of damaging fertility or the unborn child
Specific target toxicity - single exposure	STOT SE1	H370	Causes damage to organs
Specific target toxicity - single exposure	STOT SE2	H371	May cause damage to organs
Specific target toxicity - repeated exposure	STOT RE1	H372	Causes damage to organs through prolonged or repeated exposure
Environmental Hazards	Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects

Compliance Verification

The applicant shall declare compliance with this requirement. In addition, the applicant shall list, in Annex 1, all substances added to the PCR materials. Both the trade names and the chemical designations (e.g. CAS Registry No) shall be given.
If required by law for the respective substance or the mixture used, the applicant shall attach a Safety Data Sheet to the application.
If required, such verification can also be provided and directly sent to RAL gGmbH by the supplier of a substance or mixture in order to protect trade secrets, where appropriate.
The label-awarding body shall be informed immediately of any change in the substance composition of the PCR materials to which this requirement refers.

3.5 Specific Requirements for Finished Products for Use in Direct Contact with Water or Soil

If PCR materials are used in finished products intended for use in direct contact with water or soil a test shall be conducted to verify that the migration of heavy metals to environmental media is limited. In doing so, the limits specified in Table 2 for brittle, powder-like or pliable materials shall be met.

[9] Except titanium dioxide, because its classification only applies to inhalable powders.

Table 2: Migration Limits for Metals and Elements[10]

Element	**Migration Limit mg/kg in dry, brittle, powder-like or pliable materials**
Aluminium	5 625
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 direct contact with water and soil are:

- permanent outdoor use of installed finished products,
- in-ground installation,
- use of finished products in or on surface waters.

Compliance Verification

The applicant shall declare compliance with this requirement in Annex 1. In addition, the applicant shall provide the following compliance verifications with reference to the PCR materials used:
The restriction on migration of heavy metals from the PCR materials shall be determined in accordance with DIN EN ISO 71-3 [24] or according to a comparable method. The limits given in Table 2 are to be met.

[10] On the basis of the Toy Safety Directive (Directive 2009/45/EC) [22] and taking into account the updated BfR opinion No 034/2012 of 10 August 2012 „Health Risks through heavy metals from toys“[23] (BfR - Federal Institute for Risk Assessment)

3.6 Specific Requirements for Finished Products for Use in Direct Contact with the Consumer

If PCR materials are used to manufacture finished products intended for use where repeated direct physical contact with the consumer can be assumed the following requirements shall apply:

- A test shall be conducted to verify the restriction on migration of heavy metals for each PCR material separately. In doing so, the limits specified in Table 2, para. 3.5 shall be met.
- The restriction on the concentration of polycyclic aromatic hydrocarbons (PAHs) shall be verified for each PCR material separately by means of a test report pursuant to AfPS GS 2014:01 PAK [25] (GS certification). In doing so, the threshold values of the following categories given in AfPS GS 2014:01 shall be met:
  - threshold of category 1 for finished products primarily used by children[11] and
  - threshold of category 2 (other products according to ProdSG [27]) for finished products used by other consumers.

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

- direct skin contact several times a day (more than 5 times) and
- 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 provide the following compliance verifications with reference to the PCR materials used:

- *The restriction on migration of heavy metals from the PCR materials shall be determined in accordance with DIN EN ISO 71-3[24] or according to a comparable method.*
- *The concentration of polycyclic aromatic hydrocarbons (PAHs) shall be determined for the PCR materials in accordance with AfPS GS2014:01 PAK [25] taking into account the thresholds specified therein for the respective category applicable to the finished product.*

3.7 Substance Requirements for Concentrations of Non-PCR Plastics

No substances (e.g. pigments, UV stabilizers, fillers or other additives) that are labelled with the below-listed hazard statements in accordance with the CLP Regulation (see Table 3) may be added to non-PCR plastics contained in finished products to be Blue Angel eco-labelled during their manufacture and further processing. In addition, the following shall apply to non-PCR plastics for use in finished products where - if used as intended - the possibility of repeated direct physical contact with the consumer exists: no substances classified as Sens. skin 1, H317 "May cause an allergic skin reaction" may be added. This requirement includes both the harmonised classifications under Annex VI to the CLP Regulation and the self-classifications of the distributors of these substances.Moreover, no substances shall, as a matter of principle, be added to non-PCR plastics[12] which have been included in the so-called Candidate List in accordance with Article 59 of the REACH Regulation. The Candidate List, as amended at the time of filing the application, shall be applicable.

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[11] Please note that toys cannot be awarded a Blue Angel eco-label within the scope of these Award Criteria. Toys may apply for the Blue Angel by complying with the criteria set out in DE-UZ 207 "Toys".

[12] Above the limit of consideration for the Safety Data Sheet.

Table 3: List of non-permitted classifications of substances added to Non-PCR plastics

Hazard Class	**Hazard Category**	**H-Statements according to CLP-Regulation (EC) No 1272/2008**	
Carcinogenicity	Carc. 1A, 1B	H350	May cause cancer.
Carcinogenicity	Carc. 1A, 1B	H350i	May cause cancer by inhalation
Carcinogenicity	Carc. 2	H351	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
Reproductive toxicity	Repr. 2	H361	Suspected of damaging fertility or the unborn child
Specific target toxicity - single exposure	STOT SE1	H370	Causes damage to organs
Specific target toxicity - single exposure	STOT SE2	H371	May cause damage to organs
Specific target toxicity - repeated exposure	STOT RE1	H372	Causes damage to organs through prolonged or repeated exposure
Environmental Hazards	Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects

Compliance Verification

The applicant shall declare compliance with this requirement. In addition, the applicant shall, in Annex 1, list all substances contained in or added to virgin materials. Both the trade names and the chemical designations shall be given.
If required by law for the respective substances or the mixture used, the applicant shall attach a Safety Data Sheet to the application.
As required, such verification can also be provided and directly sent to the label-awarding body by the supplier of a substance or mixture in order to protect trade secrets, where appropriate.
The label-awarding body shall be informed immediately of any change in the substance composition of the virgin materials to which this requirement refers.

3.8 Requirements for the Finished Product

- Plastic parts with geometrical dimensions larger than 5 cm x 5 cm are to be marked according to DIN EN ISO 11 469 [28].
- Due to the possible danger of confusion regarding the contents, the declaration field and the respective valid registration number (UZ 30a/contract number) must be shown on finished products made of plastic film and shipping packaging (e.g. carrier bags, waste bags, bubble wrap and shipping bags) when the logo is printed or the logo must be omitted.
- Sales packaging which is excluded from the scope of application but whose original material is certified according to UZ 30a, only the following analogous wording is allowed: "The packaging consists of > 80% PCR plastic recyclate with Blue Angel". The use of the logo is not permitted.

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1 and attach to the application or file upon award of the eco-label a sample product to verify compliance. If the application is filed for larger products informative images will also do to confirm compliance with the requirements.

4 Applicants and Parties Involved

Manufacturers of finished products and parent films made of PCR as specified in 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 Environment Agency) which after the signing of the contract receives all data and documents submitted in application for the Blue Angel in order to be able to further develop the 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 to be concluded with RAL gGmbH.
Within the scope of this contract, the applicant undertakes to comply with the requirements under para. 3 for as long as the environmental label is used.

Contracts on the Use of the Environmental Label are concluded to fix the terms for the certification of products under paragraph 2. Such contracts shall run until December 31, 2022.
They shall be extended by periods of one year each, unless terminated in writing by March 31, 2022 or March 31 of the respective year of extension.
After the expiry of the contract, the Environmental Label may neither be used for labelling nor for advertising purposes. This regulation shall not affect products being still in the market.

The applicant shall be entitled to apply to RAL gGmbH for an extension of the right to use the ecolabel on the product entitled to the label if it is to be marketed under another brand/trade name and/or other marketing organisations.

The Contract on the Use of the Environmental Label shall specify:

- Applicant (manufacturer),
- Brand / trade name, product designation and
- Distributor (label user), i.e. the marketing organization.

Anhang A Reference List (Legislation, Standards, Literature)

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

[2] Rajendran, S. et al. Plastics recycling: insights into life cycle impact assessment methods. In: Plastics, Rubber and Composites 42 (1), p. 1–10. DOI: 10.1179/1743289812Y.0000000002

[3] Garraín, D. et al. 2007 LCA of thermoplastics recycling

[4] Björklund A. & Finnveden G. 2005, Recycling revisited -life cycle comparisons of global warming impact and total energy use of waste management strategies. In: Resources, Conservation and Recycling 44 (4), p. 309–317. DOI: 10.1016/j.resconrec.2004.12.002.

[5] Pre- und Post-Consumer zusammen cf. Conversio (2018) "Kurzfassung - Stoffstrombild Kunststoffe in Deutschland 2017, https://www.bkv-gmbh.de/fileadmin/documents/Studien/Kurzfassung_Stoffstrombild_2017_190918.pdf, p. 12.

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

[7] 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

[8] 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) OJ L 396, 30.12.2006, p.1, see the consolidated text at https://eur-lex.europa.eu/eli/reg/2006/1907/2014-04-10

[9] 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), OJ L 353, 31.12.2008, p. 1–1355, https://eur-lex.europa.eu/eli/reg/2008/1272/oj

[10] DIN EN ISO 14021:2016-07, Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) (ISO 14021:2016), German and English version EN ISO 14021:2016, publication date: 2016-07

[11] Kreislaufwirtschaftsgesetz (KrWG) (Closed Cycle Management Act) of 24 February 2012 (BGBl. I S. 212), last amended by Article 2, para. 9, of the Act of July 20, 2017 (Federal Law Gazette I p. 2808)

[12] Act implementing 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 (Umweltauditgesetz - UAG -German Environmental Audit Act) as amended by announcement of 4 September 2002 (Federal Law Gazette I p. 3490) as last amended by Article 13 of the Act of 27 June 2017 (Federal Law Gazette I p. 1966).

[13] Gewerbeordnung (GewO - German Industrial Code) as amended by announcement of 22 February 1999 (Federal Law Gazette I p. 202), as last amended by Article 1 of the Act of 17 October 2017 (Federal Law Gazette I p. 3562).

[14] Verordnung (EG) Nr. 1221/2009 des Europäischen Parlaments und des Rates vom 25. November 2009 über die freiwillige Teilnahme von Organisationen an einem Gemeinschaftssystem für Umweltmanagement und Umweltbetriebsprüfung und zur Aufhebung der Verordnung (EG) Nr. 761/2001, sowie der Beschlüsse der Kommission 2001/681/EG und 2006/193/EG, OJ L 342, 22.12.2009, p. 1–45, https://eur-lex.europa.eu/legal-content/DE/TXT/?uri=CELEX%3A32009R1221

[15] 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.

[16] Standard series DIN EN 840 (2013), Mobile waste and recycling containers

[17] 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

[18] Chemikaliengesetz (German Chemicals Act), as amended by the announcement of 28 August 2013 (Federal Law Gazette I p. 3498, 3991), as last amended by Article 2 of the Act of 18 July 2017 (Federal Law Gazette I p. 2774) Section §§ 19 and following.

[19] 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, Date of publication: 2005-11, original language: German

[20] DIN EN 14602 Footwear - Test methods for the assessment of ecological criteria; German version, publication date: 2012-01-09, original language: German

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

[23] BfR Opinion No 034/2012 of 10 August 2012 „Gesundheitliche Risiken durch Schwermetalle aus Spielzeug“ (BFR Opinion "Health risks through heavy metals from toys) http://www.bfr.bund.de/cm/343/gesundheitliche-risiken-durch-schwermetalle-aus-spielzeug.pdf

[24] DIN EN 71-3:2018-08 Safety of toys - Part 3: Migration of certain elements, German version EN 71-3:2013+A3:2018, Publication date: 2018-08, original language: German

[25] AfPS GS 2014:01 PAK: GS Specification - "Prüfung und Bewertung von Polyzyklischen Aromatischen Kohlenwasserstoffen (PAK) bei der Zuerkennung des GS-Zeichens" (Testing and assessment of polycyclic aromatic hydrocarbons (PAHs) in the course of awarding the GS mark" of the Product Safety Commission (AfPS) https://www.baua.de/DE/Aufgaben/Geschaeftsfuehrung-von-Ausschuessen/AfPS/pdf/AfPS-GS-2014-01-PAK.html

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

[27] Produktsicherheitsgesetz (German Product Safety Act) of 8 November 2011 (BGBl. I S. 2178, 2179, 2012 I S. 131) as amended by Article 435 of the Ordinance of 31 August 2015 (Federal Law Gazette I, p. 1474)

[28] 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

Anhang B Schematic Structure of the Award Criteria DE-UZ 30a

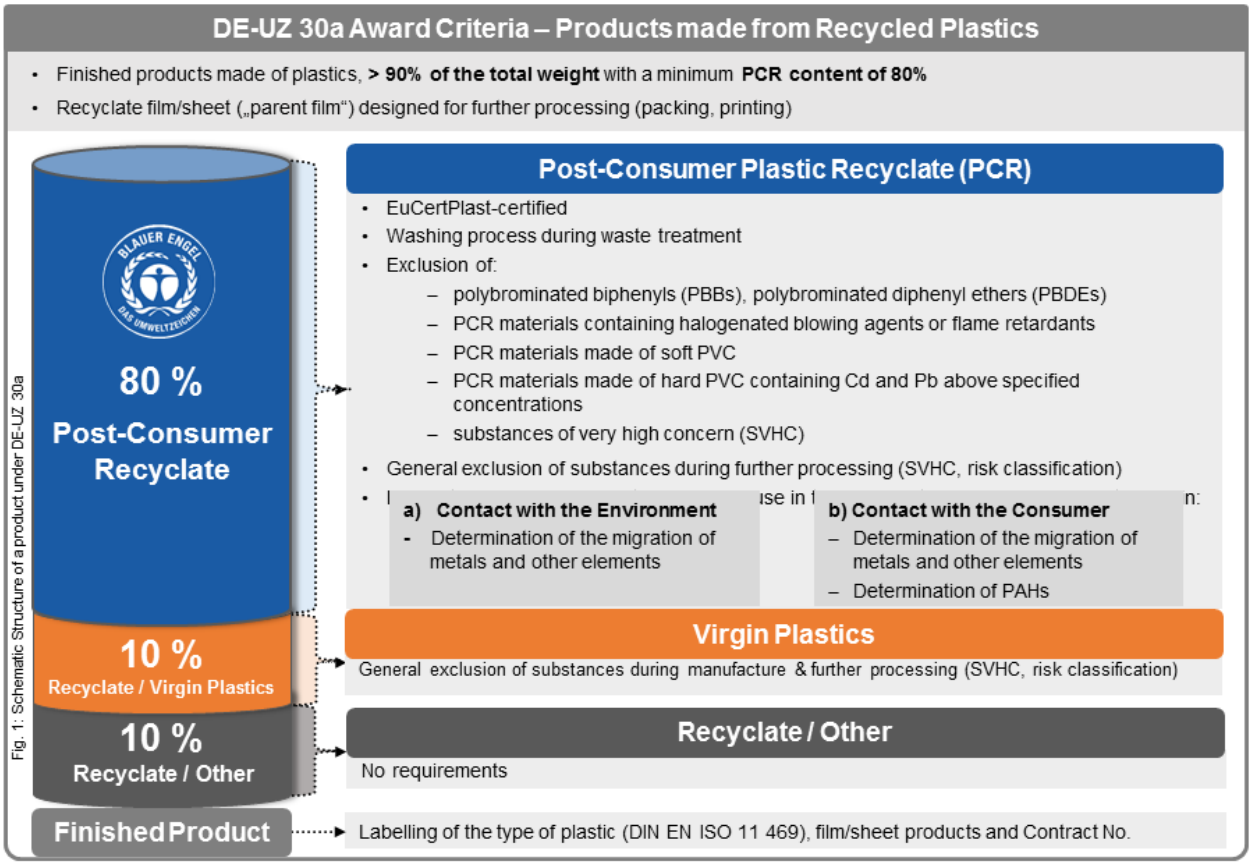

Fig. 1: Schematic Structure of a product under DE-UZ 30a