

BLUE ANGEL

The German Ecolabel



**Finished products made from recovered paper
and cardboard**

DE-UZ 14b

Basic Award Criteria

Edition January 2020

Version 3

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.



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



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.



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

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

1 Introduction

1.1 Preface

In cooperation with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the Federal 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 these conditions.

1.2 Background

Finished products made from paper are highly disseminated products. The use of recycled paper and cardboard to manufacture recyclable products primarily for office and school supplies contributes to the preservation of resources, especially ecosystems such as forests, and thus helps to protect species and the climate. It also reduces the amount of waste, especially when using recovered paper from household and commercial collections for the production of the base paper or cardboard.

The environmental pollution directly associated with the cellulose and pulp production is avoided. In a comparison of their impact on ecological systems, those paper products made from recovered paper perform significantly better in terms of their use of resources, waste water load and water and energy consumption than paper products made from virgin fibres that use wood as a source of fibrous raw materials – when the products have comparable performance characteristics.

1.3 Objectives of the Environmental Label

The objective of the environmental label is to highlight those finished products made from recycled paper that meet high environmental standards. Therefore, the requirements focus on the use of recycled paper certified with the Blue Angel for the production of finished products made from paper. The environmental label thus contributes to the preservation of resources and helps to protect species and the climate. All of the materials added to the finished products are subject to strict criteria and any substances harmful to the environment and human health should be avoided. The finished products should allow for the recycling of its paper fibres through the use of suitable inks, varnishes and adhesives as well as their applications. The environmental label thus also provides guidance in the area of procurement and for the consumption of environmentally friendly products.

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



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- aus 100% Altpapier
- spart Energie, Wasser und Holz
- schadstoffarm

1.4 Abbreviations and definitions

Finished products in the sense of these Basic Award Criteria are printed or unprinted products made from recycled paper certified with the Blue Angel that are primarily intended for office and school supplies.

Recycled paper describes paper and cardboard produced using fibres sourced 100 % from recovered paper (secondary fibres).

Recovered paper is the umbrella term for paper, cardboard and paperboard that is collected after use or processing. Refer to DIN EN 643 for specifications about the different grades of recovered paper.

Cover paper

A collective term for coated or uncoated printing paper made from recycled paper that is used to produce covers for exercise books, pads, etc. and has a grammage > 110 g/m².

2 Scope

These Basic Award Criteria apply to finished products made from recycled paper (certified according to DE-UZ 14a) and recycled cardboard (certified according to DE-UZ 56) that are primarily intended for office and school supplies.

The scope of the Basic Award Criteria thus includes¹:

- Exercise books
- Book covers²
- Writing pads, flip-chart pads, painting and drawing pads
- Ring binder dividers
- Labels
- Sticky memo notes, sticky notes
- Tinted drawing paper, tinted drawing card and handicraft paper
- Presentation cards, index cards
- Dividers
- Notebooks
- Memo cubes
- Unprinted postcards²

¹ It is possible for other products to be approved upon application and after consultation between RAL gGmbH and the UBA.

² With the exception of the Blue Angel logo and trading information: Order number, guide lines for e.g. address, small company logo.

- Unprinted envelopes, padded envelopes²
- Invoice sheets, form books
- Tokens
- Desk pads
- Colouring books
- Office calendars³
- Gift paper

3 Requirements

3.1 Use of fibrous raw materials and grades of recovered paper

The paper used for the products must be certified in accordance with DE-UZ 14a, while cardboard used for the products must be certified in accordance with DE-UZ 56. Accordingly, all of the paper fibres in the product according to Paragraph 2 must have been sourced 100% from recovered paper.

In the case of finished products, a tolerance limit of 5 % of other non-paper materials (e.g. metal, plastic) is permitted, based on the total mass of the product.

Until 31 December 2020, paper/cardboard certified according to DE-UZ 72 may be used for cover paper up to a maximum of 5 % of the total mass of the product.

Compliance Verification

The applicant shall state the recycled paper or recycled cardboard used for the product, its trade name, manufacturer and the relevant contract numbers in Annex 1 and submit a product sample as Annex 2.

3.2 Requirements for dyes, toners, printing inks, surface finishing agents, coating materials and adhesives

The minimisation principle applies to dyes, toners, printing inks, surface finishing agents, coating materials and adhesives. They should only be used in the quantities required to fulfil certain functions. Varnishes may only be used to protect the jackets/cover sheets of exercise books or calendars, drawing books and notebooks⁴.

It is not permitted to add any dyes, toners, printing inks, surface finishing agents, coating materials and adhesives which according to the criteria of Regulation (EC) No. 1272/2008⁵ are assigned the following H Phrases named in the table or which meet the criteria for such classification⁶ or are classified as carcinogenic, mutagenic or reprotoxic in the currently valid version of TRGS 905⁷. The requirement relates to the labelling of the substance or mixture and not to the individual substances they contain. The dyes, toners, printing inks, surface finishing

³ Decorative calendars, such as e.g. image, art and photo calendars, fall under the scope of DE-UZ 195 for printed matter.

⁴ The use of foils of any type is prohibited.

⁵ Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP Regulation).

⁶ The harmonized classifications and labellings of dangerous substances can be found in Part 3 of Annex VI to Regulation (EC) No 1272/2008 (GHS Regulation). Table 3.1 lists classifications and labellings using H Phrases; the GHS Regulation can be found, for example, at: <http://www.reach-info.de/ghs>.

⁷ <https://www.baua.de/DE/Angebote/Rechtstexte-und-Technische-Regeln/Regelwerk/TRGS/TRGS-905.html>

agents, coating materials and adhesives substances may not contain any substances which are identified as particularly alarming under the European Chemicals Regulation REACH (1907/2006/EC) and which have been incorporated into the list drawn up in accordance with Article 59, Paragraph 1 of the REACH Regulation (so-called "list of candidates"). The version of the list of candidates at the time of application is valid.

Table 1: H Phrases according to the CLP Regulation

EC Regulation 1272/2008 (CLP Regulation)	Wording
Toxic substances	
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
Carcinogenic, mutagenic and reprotoxic substances	
H340	May cause genetic defects.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H350i	May cause cancer if inhaled.
H351 ⁸	Suspected of causing cancer.
H360F	May damage fertility.
H360D	May damage the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H361f	Suspected of damaging fertility.
H361d	Suspected of damaging the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
Other potential hazards	
H362	May cause harm to breast fed children.
H370	Causes damage to organs.
H371	May cause damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Toxic to aquatic organisms.
H411	Toxic to aquatic organisms with long-lasting effects.
H412	Harmful to aquatic organisms with long lasting effects.
H413	May cause long lasting harmful effects to aquatic organisms.

⁸ Except titanium dioxide, because its classification only applies to inhalable powders.

EC Regulation 1272/2008 (CLP Regulation)	Wording
EUH059	Hazardous to the ozone layer.
EUH029	Contact with water liberates toxic gas.
EUH031	Contact with acids liberates toxic gas.
EUH032	Contact with acids liberates very toxic gas.
EUH070	Toxic by eye contact.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit declarations from the suppliers of the dyes, toners, printing inks, surface finishing agents, coating materials and adhesives (Annex 4). The relevant data sheets (Annex 3) shall be provided via the web portal (<https://portal.ral-umwelt.de/>). The safety data sheets should not be older than **2 years**.

3.3 Azo dyes and pigments in colourants

In accordance with Appendix B, no azo dyes or pigments in colourants that can cleave to one of the amines stated in Regulation (EC) No. 1907/2006, Annex XVII, Appendix 8 and 9 or in TRGS 614⁹ may be added.

Compliance verification

The applicant shall submit declarations from the suppliers of the dyes, toners, printing inks and varnishes as Annex 4. The relevant data sheets (Annex 3) shall be provided via the web portal (<https://portal.ral-umwelt.de/>). The safety data sheets should not be older than **2 years**.

3.4 Heavy metals

The following heavy metals must not be added to dyes, toners, printing inks and varnishes as a constituent component (dye, pigment, siccative): lead, cadmium, chromium VI, cobalt, mercury, nickel, and copper compounds with the exception of copper phthalocyanine.

Compliance verification

The applicant shall submit declarations from the suppliers of the dyes, toners, printing inks and varnishes as Annex 4. The relevant data sheets (Annex 3) shall be provided via the web portal (<https://portal.ral-umwelt.de/>). The safety data sheets should not be older than **2 years**.

3.5 Hydrocarbons in printing inks and varnishes

In order to avoid unhealthy impurities during the reuse of paper fibres, the following requirements should be fulfilled during the printing of products according to Paragraph 2:

- In the case of aliphatic hydrocarbons, only those substances with a chain length of C10 to C20 may be used. In addition, the following high-molecular compounds without solvent properties may be used if they have a carbon number greater than C30 and the proportion of those with a carbon number of C20 to C30 does not exceed a maximum of 1.5 %: microcrystalline waxes, Vaseline, polyolefin waxes, paraffin waxes or Fischer-Tropsch waxes.

⁹ <https://www.baua.de/DE/Angebote/Rechtstexte-und-Technische-Regeln/Regelwerk/TRGS/TRGS-614.html>

- Only those printing inks in which less than 1 % by mass of aromatic hydrocarbons sourced from mineral oil are used as constituent ingredients may be used. In addition, the defined limits for PAH that are regulated in Annex 17, No. 50 of the REACH Regulation are valid. This requirement also applies if the paper products are designed using colour or are dyed-through with colour.

Compliance verification

The applicant shall submit declarations from the suppliers of the dyes, toners, printing inks and varnishes as Annex 4. If requested by RAL gGmbH, the applicant shall submit the ingredients used in the formulations for the printing inks and varnishes. The relevant data sheets (Annex 3) shall be provided via the web portal (<https://portal.ral-umwelt.de/>). The safety data sheets should not be older than **2 years**.

3.6 Diisobutyl phthalate (DIBP)

No adhesives containing DIBP may be used to manufacture products according to Paragraph 2.

Compliance verification

The applicant shall submit declarations from the suppliers of the adhesives as Annex 4. The relevant data sheets (Annex 3) shall be provided via the web portal (<https://portal.ral-umwelt.de/>). The safety data sheets should not be older than **2 years**.

3.7 Products for children

Products according to Paragraph 2 that are primarily produced for children must also comply with the requirements in DIN EN 71-3 "Safety of toys".

Compliance Verification

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

3.8 Recyclability

The finished products must be deinkable¹⁰ and any adhesive applications on the products must be removable. The product must comply with the recyclability requirements of the European Paper Recycling Council (EPRC). An exception applies here to gift paper, anti-adhesive paper for labels and sticky notes. Information must be provided on the back of the anti-adhesive paper for labels or on its packaging to indicate that this paper should be disposed of as residual waste. The test methods for evaluating the recyclability of printed matter are:

- INGEDE Method 11: Deinability test (version: January 2018)
- INGEDE Method 12: Testing of adhesive applications (version: January 2013).

¹⁰ This does not apply to board and kraft paper that has been made out of unbleached recovered paper from the kraft process for classification groups 4 and 5 according to DIN EN 643.

The evaluation of the recyclability of the product is carried out in accordance with the guidelines of the EPRC using deinking scorecards for deinkability¹¹ and the removability of adhesive applications¹².

Redispersible and water-soluble adhesive applications are exempt from the test according to INGEDE Method 12.

Hot melt adhesives based on ethylene-vinyl acetate (EVA) or polyolefine (PO) must comply with the following application conditions:

- Softening temperature of the adhesive (according to R&B): ≥ 68 °C
- Thickness of the adhesive application (non-reactive adhesive): ≥ 120 μm
- Thickness of the adhesive application (reactive adhesive): ≥ 60 μm
- Horizontal expansion of the adhesive application (every direction): 1.6 mm.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1 and submit a test report from an independent testing institute for deinkability (Annex 5) and the removability of adhesive particles (Annex 6) in which compliance with the requirements is confirmed by the testing institute. The adhesive manufacturer shall declare in Annex 4 whether the adhesive application is redispersible. Further information on the deinkability and removability of the adhesives can be found in Appendix A to the Basic Award Criteria for DE-UZ 195¹³.

3.9 Fitness for use

The different finished products must be fit for use.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1. The applicant can use national or sector standards to verify the product's fitness for use.

3.10 Outlook

Any future revision of the environmental label will require verifications that renewable raw materials, which are used e.g. for the production of mineral oil-free printing inks, are obtained from responsible, GMO-free sources that are located in the local region as far as possible and have been tested by a suitable certification system. The results from a research project into coldset printing inks and from the revision of the Blue Angel environmental label for printed matter will be taken into account in this process.

In addition, the requirements for the recyclability of the products in Paragraph 3.8 will be re-examined and updated where relevant based on the revision of the EU ecolabel for "Converted Paper Products" with respect to the adoption of stricter limits for INGEDE Methods 11 and 12.

¹¹ <http://www.paperforrecycling.eu/download/178/>

¹² <http://www.paperforrecycling.eu/download/633/>

¹³ <https://produktinfo.blauer-engel.de/uploads/criteriafile/de/DE-UZ%20195-201501-de%20Kriterien.pdf>

4 Applicants and parties involved

Manufacturers or distributors of end 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 or the company's headquarters,
- Umweltbundesamt, (Federal Environmental Agency) which after the signing of the contract receives all data and documents submitted in application for the Blue Angel in order to be able to further develop the Basic Award Criteria.

The compliance verifications submitted by the applicant will be handled with complete confidentiality.

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.

Significant changes shall be submitted to RAL gGmbH. In these cases, it is possible that the applicant will be requested to resubmit the compliance verifications.

Contracts on the Use of the Environmental Label are concluded to fix the terms for the certification of products under Paragraph 2. Such contracts shall run until 31/12/2024.

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

After the expiry of the contract, the Environmental Label may neither be used for labelling nor for advertising purposes. This regulation shall not affect products being still in the market.

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

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

- Applicant (manufacturer/distributor)
- Brand/trade name, product description
- Distributor (Label User), i.e. the marketing organization.

Appendix A Statutory regulations, testing standards and other literature

The currently valid versions of the relevant regulations and standards at the time of application apply, unless reference is made to a particular version of the regulation or standard in the criteria.

- [1]** 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
- [2]** 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, as well as amending Regulation (EC) No. 1907/2006
- [3]** Commission Regulation (EU) No 1272/2013 of 6 December 2013 amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards polycyclic aromatic hydrocarbons (Text with EEA relevance)
- [4]** TRGS 905 Directory of carcinogenic, mutagenic or teratogenic substances
- [5]** DIN EN 643:2014-11 Paper and board - European list of standard grades of paper and board for recycling
- [6]** TRGS 614 Restrictions on use for azo dyes, which may release aromatic amines classified as carcinogens
- [7]** DIN EN 71-3:2019-08 Safety of toys - Part 3: Migration of certain elements
- [8]** UNE-EN ISO 536:2013 Paper and board - Determination of grammage
- [9]** ISO 2471:2008 Paper and board - Determination of opacity (paper backing) - Diffuse reflectance method
- [10]** INGEDE Method 11 Assessment of Print Product Recyclability – Deinkability Test (version: January 2018)
- [11]** INGEDE Method 12 Assessing the Recyclability of Printed Products — Testing of Fragmentation Behaviour of Adhesive Applications (version: January 2013)

Appendix B Dyes and pigments that are not permitted

In accordance with Paragraph 3.3, the azo dyes listed below may not be added.

Table 2: Azo dyes that may cleave to one of the following aromatic amines (according to Directive (EC) No. 1907/2007, Annex XVII, No. 43)

Substance	CAS no.
biphenyl-4-ylamine / 4-aminobiphenyl / xenylamine	92-67-1
benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphthylamine	91-59-8
o-aminoazotoluene / 4-amino-2',3-dimethylazobenzene / 4-o-tolylazo-o-toluidine	97-56-3
5-nitro-o-toluidine	99-55-8
4-chloroaniline	106-47-8
4-methoxy-m-phenylenediamine / 2,4-diaminoanisol	615-05-4
4,4'-methylenedianiline / 4,4'-diaminodiphenylmethane	101-77-9
3,3'-dichlorobenzidine / 3,3'-dichlorobiphenyl-4,4'-ylenediamine	91-94-1
3,3'-dimethoxybenzidine / o-dianisidine	119-90-4
3,3'-dimethylbenzidine / 4,4'-bi-o-toluidine	119-93-7
4,4'-methylendi-o-toluidine / 3,3'-dimethyl-4,4'-diaminodiphenylmethane	838-88-0
6-methoxy-m-toluidine / p-cresidine	120-71-8
4,4'-methylene-bis-(2-chloro-aniline) / 2,2'-dichloro-4,4'-methylene-dianiline	101-14-4
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
o-toluidine 2-aminotoluene	95-53-4
4-methyl-m-phenylenediamine / 2,4-diaminotoluene	95-80-7
2,4,5-trimethylaniline	137-17-7
o-anisidine / 2-methoxyaniline	90-04-0
4-aminoazobenzene	60-09-3
2,4-xylidine	95-68-1
2,6-xylidine	87-62-7
* Azo dyes that can break down into this amine are not known. Analytical proof is not required here.	