

BLUE ANGEL

The German Ecolabel



Writing Utensils and Stamps

DE-UZ 200

Basic Award Criteria

Edition January 2016

Version 3

The Environmental Label is supported by the following four institutions:



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.

If you require 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

Version 1 (01/2016): First Edition, Expiry date: December 31, 2019

Version 2 (02/2017): Changes in Chapter 3.4.1

Version 3 (05/2018): Changes in Chapter 3.4.1

Table of contents

| | | |
|-------|--|----|
| 1 | Introduction..... | 5 |
| 1.1 | Preface | 5 |
| 1.2 | Background | 5 |
| 1.3 | Objective of the Blue Angel Eco-Label | 6 |
| 1.4 | Compliance with Basic Legal Provisions | 6 |
| 1.5 | Definitions..... | 7 |
| 2 | Scope | 8 |
| 3 | Requirements | 9 |
| 3.1 | Use of Resource-Conserving Materials..... | 9 |
| 3.1.1 | Detailed Description of the Material Composition of Writing Utensil or Stamp | 9 |
| 3.1.2 | Wood..... | 10 |
| 3.1.3 | Plastics | 10 |
| 3.1.4 | Paper / Paperboard..... | 11 |
| 3.1.5 | Composite Materials | 12 |
| 3.1.6 | Metals and Metallic Surface Coatings | 12 |
| 3.2 | Refillability | 13 |
| 3.3 | Quality Requirements | 13 |
| 3.3.1 | Lightfastness | 13 |
| 3.3.2 | Minimum Filling Quantities for Ballpoint Pen Ink Cartridges..... | 13 |
| 3.4 | Health and Environmental Protection Requirements | 14 |
| 3.4.1 | Exclusion of Hazardous Properties of Writing and Stamping Media | 14 |
| 3.4.2 | Preservatives..... | 16 |
| 3.4.3 | Exclusion of Further Substances..... | 16 |
| 3.4.4 | Varnishes, Adhesives, Printing Inks, Surface Coatings and Plastic Granules | 17 |
| 3.4.5 | Metals and Elements Excluded | 19 |
| 3.4.6 | Migration Limits | 19 |
| 3.5 | Sales Packaging | 20 |
| 3.6 | Outer Packaging..... | 21 |
| 4 | Applicants and Parties Involved..... | 21 |

| | | |
|------------|--|----|
| 5 | Use of the Environmental Label | 21 |
| Appendix A | Aromatic amines possibly released from azo dyes that require evidence of absence pursuant to DIN EN 71-9/10/11 | 22 |
| Appendix B | Colorants banned from use in Writing and Stamping Media..... | 23 |
| Appendix C | Extract from "Altpapier, Liste der Deutschen Standardsorten und ihre Qualitäten" | 24 |

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

The term "writing utensils" covers a wide spectrum of different products for use in office workplaces, in school and similar fields of activity. Many products, like ballpoint pens or pencils are used every day. In addition, there are writing utensils that are primarily intended for use in arts. Thus, writing utensils are a regular part of everyday life of many people.

In 2011, a total of over 500 million pencils¹, 400 million ballpoint pens² and 550 million felt pens³ were produced in Germany alone. An additional 540 million ballpoint pens⁴ and 240 million felt-tip pens⁵ were imported⁶. The exports during the same reference year amounted to 420 million ballpoint pens (corresponding to about 44 percent of the ballpoint pens traded) and 540 million felt-tip pens (approx. 65%).

Products should be designed in the most resource-efficient way possible. This particularly applies to everyday items produced in large quantities and a relatively short service life, such as writing utensils and stamps. Here, a corresponding material selection can make a valuable contribution.

One way to achieve this aim is to use recycled materials. Here, preference should be given to the use of so-called post-consumer waste from private households, agriculture, trade and industry. Such post-consumer waste constitutes by far the greatest portion of all waste. So far, however, only a small portion of this material is recycled according to the type of material. Since, from the ecological point of view, high-quality recycling according to the type of material is usually superior to all other forms of recycling the demand for the corresponding post-consumer recycling materials should be supported.

Another way of conserving resources is the use of materials based on renewable raw materials, such as wood, paper or bioplastics. In this connection, however, conflicts of objectives with other environmentally relevant aspects (e.g. sustainable management, land utilization, use of

¹ and similar pencils with a solid protective coat (GP09-329915100)

² GP09-329912103; GP09-329912105; GP09-329912107

³ GP09-329912300

⁴ WA96081010; WA96081092; WA96081099

⁵ WA96082000

⁶ The trade statistics did not show any comparative figures for encased lead pencils on the basis of piece numbers.

fertilizers) as well as social effects have to be taken into consideration in order to make sure that materials produced from renewable raw materials are also sustainable raw materials.

Further important prerequisites for a responsible use of resources are the extension of the service life of products, e.g. by refill systems, as well as a packaging that produces as little waste as possible. Here, the essential factor is not only the quantity of waste but also the qualitative composition of packaging materials. With a view to the recycling of packaging neither mixtures of materials nor compound materials should be used.

From the perspective of consumer protection it is also important that writing utensils and stamps as well as the respective writing and stamping media are, to the greatest extent possible, free from hazardous ingredients.

1.3 Objective of the Blue Angel Eco-Label

The Blue Angel eco-label for writing utensils and stamps can be used for the labelling of products that feature the following properties:

- use of resource-conserving materials for product and packaging
- service-life extension measures
- reduction or avoidance of harmful substances and mixtures in the product

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



1.4 Compliance with Basic Legal Provisions

It is a matter of course for Blue Angel eco-labelled products to comply with legal provisions of German and European chemicals legislation. This includes with regard to writing utensils and stamps, above all, the following: REACH (Regulation (EC) No 1907/2006), Gefahrstoffverordnung (Ordinance on Hazardous Substances), Biocidal Products Regulation (EU No 528/2012) as well as the CLP Regulation (Regulation (EC) No 1272/2008)⁷.

Apart from that, products designed or intended for use in play by children under 14 years of age shall comply with the provisions of the Toy Safety Directive (2009/48/EC).⁸

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 (CLP Regulation)

<http://eur-lex.europa.eu/legal-content/AUTO/?uri=CELEX:32008R1272&qid=1421661628244&rid=1>.

⁸ Directive 2009/48/EC of the European Parliament and of the Council, of 18 June 2009 on the Safety of Toys. With effect from 20 July 2011 it replaced Directive 88/378/EEC in force until that date, except for Article 2 (1) (definition of toy) and Part 3 of Annex II (Chemical Properties). Article 2 (1) of and Part 3 of Annex II to Directive 88/378/EEC were repealed with effect from 20 July 2013. The EU Directive on Toy Safety (2009/48/EC) was transposed into German law within the scope of the Produktsicherheitsgesetz (ProdSG) (Product Safety Act) by the Ordinance on the Safety of Toys of 7 July 2011, published in the Federal Law Gazette I, No. 35, of 14 July 2011, p. 1350-1357. It entered into force on 20 July 2011. Also applicable is the Lebensmittel- und Futtermittelgesetzbuch LFGB

1.5 Definitions

The following definitions shall apply within the meaning of these Basic Criteria:

- **Writing utensil:** utensil whose main function is to write, paint, draw and mark on different substrates. Possible substrates are writing papers, boards, whiteboards, flipcharts etc. The common general structure is the shape of a "pencil".
- **Stamp:** hand-operated utensil whose main function is to transfer a stamp imprint on different substrates, such as, for example, paper. Here, a built-in or separate ink pad (self-inking or manual stamping technology) or a text plate with integrated storage function (pre-ink technology) may serve as a reservoir for the stamping ink.
- **Refill:** unit used to restore the function of a writing utensil/stamp. This can be, for example, refills/leads for ballpoint pens or pencils as well as liquid writing media in cartridges, bottles or dishes as well as ink pads.
- **Barrel:** carrying part of a writing utensil which is formative for the pen and gets into direct with the skin. Pencils whose outer material is the writing medium itself (this applies, for example, to various lead pencils or many chinks) are called "non-encased".
- **Cap:** Carrying part that gets into contact with the skin. It is used to seal, for example, fibretip pens or markers.
- **Frame of a stamp:** movable carrying upper part of a stamp (exclusive of possible accessories, such as index window, separate handle parts, lock, decorative parts) that serves the main function of the product and generates, by its vertical offset a stamp imprint on a substrate, e.g. paper.
- **Stamp casing:** carrying lower part of a stamp. It mechanically controls the frame of the stamp and ensures the proper positioning of the imprint on the substrate (exclusive of possible accessories, such as positioning window, anti-slip control).
- **Ink pad casing:** outer casing of external ink pads for protecting the ink pad from contamination and drying out.
- **Sales packaging**⁹: packaging supplied as a sales unit that is usually opened by the final consumer.
- This does not include additional protective packaging for product shipment among commercial partners (outer packaging).
- **Outer packaging**¹⁰: packaging that is used as packaging additional to sales packaging and is not necessary for transfer to the final consumer for reasons of hygiene, durability or the protection of goods from damage or contamination.
- **Substance**¹¹: a substance is 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.

(Food and Feed Code). If applicable, additional EU Directives, such as Directive 2001/95/EC - General Product Safety - are also to be taken into account.

⁹ Section 3.2 Verpackungsverordnung (Packaging Ordinance)

http://www.gesetze-im-internet.de/bundesrecht/verpackv_1998/gesamt.pdf.

¹⁰ Section 3.3 Verpackungsverordnung (Packaging Ordinance)

http://www.gesetze-im-internet.de/bundesrecht/verpackv_1998/gesamt.pdf.

¹¹ REACH, Article 3 as well as CLP Regulation, Article 2.

- **Mixture**¹¹: mixtures or solutions composed of two or more substances. Possible examples within the scope of these Basic Criteria are: inks and gels, colour or graphite leads, pre-formulated pigment pastes, etc..
- **Writing or stamping medium**: solid, liquid or paste-like colorant-containing mixture that is applied by the writing utensil or stamp to the surface to be written upon or to be marked.
- **Impurity**¹²: An unintended constituent present in a 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.
- **Substances of very high concern**¹³: Substances of very high concern within the meaning of these Basic Criteria are all substances included in the Candidate List of Annex XIV to REACH in accordance with the procedure established by REACH.
- **Post-consumer material**¹⁴: material generated by households or by commercial, industrial and institutional facilities (in their role as end-users of the product) which can no longer be used for its intended purpose. Included is material recovered from the supply chain.
- **Pre-consumer material**¹⁴: material diverted from the waste stream during the manufacturing process. Excluded is the reutilization of materials, i.e., rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.
- **Bioplastics**: bioplastics are plastics that are partly or fully derived from biomass (renewable raw materials). Bioplastics can be biodegradable or durable plastics¹⁵. Examples of bioplastics are: biopolyethylene (bioPE), cellulose acetate or polylactic acid (PLA).

2 Scope

These Basic Criteria apply to all writing utensils designed for writing, drawing, painting and marking as well as to stamps designed for use in office, school or home environment for use on different substrates as well as to their refill systems. The writing utensils shall have the shape of a "pencil".¹⁶

Paint brushes designed for school, hobby and art painting shall also fall within the scope of these Basic Criteria.

Excluded from the scope of these Basic Criteria are non-encased leads (lead pencils) and all types of chalk (e.g. street painting chalks, wax chalks, graphite chalks, pastel chalks, watercolour chalks, oil chalks).

¹² Guidance for identification and naming of substances under REACH and CLP, Version 1.2, March 2012, Chapter 2.2, p. 8, http://echa.europa.eu/documents/10162/13643/substance_id_de.pdf.

¹³ REACH, Article 57 contains various properties of substances considered as Substances of Very High Concern (SVHC).

¹⁴ On the basis of DIN EN 14021.

¹⁵ Based on the definition of bio-based products pursuant to DIN EN16575:2014.

¹⁶ Moreover, the Environmental Label Jury shall be entitled to extend at any time the Scope.

Products containing polyvinyl chloride (PVC) are excluded from award of the Blue Angel eco-label.

3 Requirements

The Blue Angel eco-label (shown on page 1) may be used to label the writing utensils and stamps under paragraph 2 provided that they meet the requirements of these Basic Criteria. Refill systems to be marked with the Blue Angel eco-label shall also meet all relevant requirements.

Compliance with the requirements shall be verified in accordance with the specification relating to the individual paragraphs and documented in the Annexes to the Basic Criteria.

When filing the application, the applicant shall, in addition to the compliance verifications required, attach a **sample of the product** for which the application for the Blue Angel is filed.

3.1 Use of Resource-Conserving Materials

Unless otherwise expressly stated, the following requirements shall apply to the materials used in barrel and cap of writing utensils as well as in frame and casing of stamps and ink pads.

3.1.1 Detailed Description of the Material Composition of Writing Utensil or Stamp

Information on the use of resource-conserving materials shall be made available.

To do so, the applicant shall specify for the writing utensil or the stamp the respective proportion (percent by weight) of the following types of material in the writing utensil or stamp, respectively:

- plastics
- wood
- metals
- paper/paperboard
- other materials

If the product contains composite materials (e.g. wood-plastic composites - WPC) the different materials forming the composite materials shall be assigned to the respective mono materials (plastic, wood, ...).

The percentage data shall be accompanied by the following information on the origin:

- For plastics: proportion of post-consumer material or bioplastics
- For wood: origin FSC or PEFC certificate
- For paper / paperboard: proportion of recycled paper

Compliance Verification

The applicant shall attach to the application a material documentation as Annex 2 specifying the material used for each component of the respective writing utensil or stamp, its composition, its technical designation as well as the respective weight.

3.1.2 Wood

All wood used must come from legal sources, at least 70 percent of which must come from sustainably managed forests which are managed in a verifiably economically viable, environmentally sound and socially responsible way.

Compliance Verification

The applicant shall declare the legality of the sources of wood in accordance with Regulation (EU) No 995/2010 in Annex 1.¹⁷

To verify the use of wood from sustainable forestry one of the following procedures may be used:

- *If the applicant itself is certified under the criteria of the Forest Stewardship Council (FSC) or under those of the Programme for the Endorsement of Forest Certification Schemes (PEFC) for the chain of custody (CoC) the applicant shall present the certificate. In this case, no further compliance verifications are required to be submitted (Annex 4).*
- *If the applicant itself is not certified the latter shall present appropriate certificates made out by its raw material supplier. RAL accepts certificates from the Forest Stewardship Council (FSC) and from the PEFC (Programme for the Endorsement of Forest Certification Schemes) certifying a sustainable forest management and a chain of custody (CoC) (Annex 5). The applicant shall submit a record of the wood used specifying the percentage of the certified wood used (Annex 3).*
- *The applicant shall submit other appropriate compliance verifications according to Annex 6. The annex may be extended at the request of and after review by the German Umweltbundesamt (Federal Environmental Agency). The applicant shall submit a record of the wood used specifying the percentage of the certified wood used (Annex 3).*

Compliance with this requirement shall be verified once a year - first upon filing the application and thereafter at a time to be determined by RAL gGmbH.

3.1.3 Plastics

The plastics used must consist of:

- ≥ 80 % recycled post-consumer material or
- ≥ 60 % renewable raw materials.

Compliance Verification

- **Post-Consumer Material**

The applicant shall verify origin and composition of the recycled plastics used by means of a certificate (including report) pursuant to the EuCertPlast certification scheme (including a calculated and plausibility-checked verification of the post-consumer or pre-consumer percentage) (Annex 7).

The records and results shall be reviewed at the place of production, checked for plausibility and confirmed as a test report according to Annex 8 by an independent expert body.

The confirmation (Annex 8) to be submitted once a year shall be presented upon filing of the application and thereafter by the end of the first quarter of each following year.

An independent expert body is:

¹⁷ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:295:0023:0034:DE:PDF>.

- ♦ *an independent environmental verifier according to Section 9 Umweltauditgesetz (Environmental Audit Act) for sector 38 (recycling, waste disposal) or*
- ♦ *a publicly appointed expert according to Section 36 of the German Gewerbeordnung (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, Definition No. 20. If the environmental verifier is an organisation of environmental verifiers (that is to say, not a natural person) the organisation shall separately list the names of the persons responsible for conducting the test.*

- **Bioplastics**

The applicant shall indicate to RAL gGmbH the type and composition of the material used. Also, the applicant shall document the origin and mass percentages of the individual raw materials used. CEN/TR 16721:2014 (Annex 9) can be used as a basis for calculating the material balance.

The origin of the (plastic) granules shall be verified by means of a certificate from one of the following certification schemes (Annex 10).

- ♦ *ISCC+*¹⁸
- ♦ *RSB*¹⁹
- ♦ *Rainforest Alliance (SAN)*²⁰
- ♦ *Bonsucro*²¹
- ♦ *RedCert (in Europe only)*²²
- ♦ *Roundtable on Sustainable Palm Oil RSPO*²³
- ♦ *FSC*
- ♦ *PEFC*

Moreover, the supplier shall be required to submit a plausibility declaration showing that the certificate submitted covers the entire chain of custody via certificates from the above list. Verification by means of „Book and Claim“ certificates shall not be permitted (Annex 11).

This compliance verification shall be presented once a year - first upon filing the application, thereafter at a time to be fixed by RAL gGmbH.

3.1.4 Paper / Paperboard

The paper fibres of the products under paragraph 2 shall be made from 100 percent recycled paper. Waste paper is the generic term for papers and boards recovered in quantifiable amounts after use or processing. Appendix C lists the specification of the waste paper grades.

At least 65% waste paper of ordinary, medium and kraft waste paper grades as well as of the special grades (groups 1, 2, 4 and 5 – except for the individual grades 2.05, 2.06, 2.14, 4.07 and 5.09) shall be used, related to the total content of fibrous material.

The content of diisopropyl naphthalene (DIPN) in paper and paperboard shall be kept as low as technically possible. That is why, as matter of principle, the waste paper grades 2.05, 2.06 and 5.09 „carbonless copy papers“ may not be used. Alternatively, DIPN-containing waste paper

¹⁸ <http://www.iscc-system.org/>.

¹⁹ <http://rsb.org/>.

²⁰ <http://www.rainforest-alliance.org/de/agriculture/standards>.

²¹ <http://www.bonsucro.com/>.

²² <http://www.redcert.org/index.php?lang=de>.

²³ <http://www.rspo.org/>.

grades (2.05, 2.06 and 5.09) may be used if an efficient technical system (e.g. deinking process) exists and makes sure that the major part of DIPN is removed from the fibre cycle and the DIPN content in the finished paper does not exceed 50mg/kg.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and indicate in Annex 12 the average percentage of the used paper grades listed in groups 1, 2, 3, 4 and 5. The percentage of the individual grades 2.05, 2.06 and 5.09 shall be additionally indicated.

The correctness of the data in Annex 12 shall be confirmed in accordance with Annex 12b to the Basic Criteria

- *by a certification body accredited by Deutsche Akkreditierungsstelle (DAkkS) (national accreditation body) for ISO 14001 for the scope of paper mills (NACE 17.12) or*
- *by an environmental auditor accredited for this scope (NACE 17.12) by Deutsche Akkreditierungs- und Zulassungsgesellschaft für Umweltgutachter mbH (DAU) (German Association for Accreditation and Recognition of Environmental Auditors) in accordance with the Umweltauditgesetz (Environmental Audit Act) or*
- *by an accredited FSC certifier or*
- *by a UBA-recognised expert in the field of fibrous raw materials, waste paper grades and waste paper recycling.*

If the waste paper grades 2.05, 2.06 and 5.09 are used the applicant shall report in Annex 12 the maximum DIPN content in the finished product and present as Annex 12a a test report prepared by an independent ISO 17025 accredited testing laboratory or a chosen UBA-recognized testing laboratory, e.g. a testing laboratory in the field of paper production of Darmstadt Technical University.

The DIPN content shall be determined in accordance with DIN EN 14719 (DIPN in acetone extract).

Compliance with this requirement shall be verified once a year - first upon filing the application, thereafter at a time to be determined by RAL gGmbH.

3.1.5 Composite Materials

If composite materials composed of plastics, wood and/or paper are used the respective material fractions must meet the requirements of paras. 3.1.2,, 3.1.3 and/or 3.1.4.

Compliance Verification

The applicant shall present a description of the composition of the composite material in Annex 2 and attach the relevant compliance verifications under paras. 3.1.2, 3.1.3 and/or 3.1.4 for the respective material fractions.

3.1.6 Metals and Metallic Surface Coatings

Neither the use of aluminium nor the use of metallic surface coatings²⁴ shall be permitted.

Compliance Verification

The applicant shall document compliance with the requirement by a material documentation pursuant to para. 3.1.1 (Annex 2).

²⁴ This exclusion explicitly also refers to metallic coatings on plastic substrates.

3.2 Refillability

Writing utensils and stamps should be refillable for reasons of resource conservation. In view of this, the manufacturers of the following writing utensils shall make refill systems available:

- mechanical lead pencils (retractable pencils, fine lead pencils / clutch pencils)
- fountain pens, ballpoint pens, ink pens, gel pens
- stamps

The information on the availability of refill packs for the product shall be made clearly visible on the sales packaging and/or at the point of sale (including the Internet).

In principle, the following shall apply to refill systems:

- No special tools shall be required to change the writing medium or refill the product.
- Both the technical and the environmental and health-related quality of the writing media shall be up to the quality of the original product.

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1 and attach a sample of the refill pack upon filing the application.

3.3 Quality Requirements

3.3.1 Lightfastness

The writing media used shall meet the following lightfastness values as specified in DIN EN ISO 105-B02:

- coloured pencil leads ≥ 3
- inks, Indian inks, gels and writing pastes ≥ 3
- textliners²⁵, highlighters ≥ 1

Stamping inks must meet the standards for permanence of documents (DIN ISO 14145-2) and archival storage (DIN ISO 11798).

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and attach a test report pursuant to the test method under DIN EN ISO 105-B02 regarding the lightfastness of the writing media used (Annex 13).

A test certificate according to DIN ISO 14145-2 and DIN ISO 11798 shall be attached for stamping inks (Annex 14).

3.3.2 Minimum Filling Quantities for Ballpoint Pen Ink Cartridges

The minimum filling quantity shall comply with the following recommendations made by the German Industrieverband Schreiben, Zeichnen, Kreatives Gestalten e.V. (Industrial Association "Writing, Drawing and Creative Designing"). The filling quantities can be seen from the list below.

Table 1: Filling Quantities for Ballpoint Pen Ink Cartridges

²⁵ including permanent markers, board markers and flipchart markers

| Type of ink cartridge | Designation according to ISO 12757-1; 1998 | Minimum Filling Quantity (mg) | |
|---|--|-------------------------------|-----------------|
| | | Plastic cartridge | Metal cartridge |
| Standard cartridge for retractable ballpoint pens | A1 | 250 | 400 |
| Standard cartridge for retractable ballpoint pens | A2 | 250 | 400 |
| Cartridge for multi-colour ballpoint pens | D | - | 120 |
| Large-capacity cartridge | G1 | - | 800 |
| Large-capacity cartridge | G2 | 700 | 1000 |

Non-standardised cartridges of similar dimensions shall also meet the requirements for minimum filling quantities²⁶.

Compliance Verification

The applicant shall attach a technical documentation providing information on the filling quantity of the writing utensil (original filling) (Annex 15).

3.4 Health and Environmental Protection Requirements

The following specifies the requirements for the substances and mixtures present in the writing utensils and stamps (writing and stamping media and/or other materials).

Test reports required to verify compliance with the requirements under paragraph 3.4 shall be prepared by a testing laboratory accredited for the test method under DIN EN ISO 17025.

3.4.1 Exclusion of Hazardous Properties of Writing and Stamping Media

The writing and stamping media must not have any hazardous properties. This means they shall not be assigned any of the hazard categories listed in Annex 1 to the CLP Regulation²⁷ and they shall not be assigned any of hazard statements corresponding to the hazard categories.

Excluded are the following hazard categories or hazard (H) statements, respectively, for ready-to-use ballpoint pen pastes:

| Hazard Category | Hazard Statements | |
|-----------------------------|-------------------|--------------------------------|
| Skin irritation, Category 2 | H315 | Causes skin irritation. |
| Eye irritation, Category 2 | H319 | Causes serious eye irritation. |
| Acute toxicity 4 (oral) | H302 | Harmful if swallowed. |

²⁶ Filling Quantities of ballpoint pen cartridges, Voluntary agreement of ISZ Suppliers within the ISZ e.V. - Industrieverband Schreiben, Zeichnen, Kreatives Gestalten e.V. (Industrial Association "Writing, Drawing and Creative Designing") as of June 2010
http://ewima-isz.de/cms/upload/pdf/veroeffentlichungen/Fuellmengen_deutsch.pdf.

²⁷ See also Article 4 of the CLP Regulation.

| Hazard Category | Hazard Statements | |
|---|-------------------|--|
| Acute toxicity 4 (inhalative) | H332 | Harmful if inhaled. |
| Skin irritation, Category 2 | H317 | May cause an allergic skin reaction. |
| Serious Eye Damage / Eye Irritation, Category 1 | H318 | Causes serious eye damage. |
| Aquatic acute 1 | H400 | Very toxic to aquatic life |
| Aquatic chronic 1 | H410 | Very toxic to aquatic life with long-lasting effects |
| Aquatic chronic 2 | H411 | Toxic to aquatic life with long-lasting effects |
| Aquatic chronic 3 | H412 | Harmful to aquatic life with long lasting effects. |
| Aquatic chronic 4 | H413 | May cause long lasting harmful effects to aquatic life. |
| STOT SE 2 | H371 | May cause damage to organs. |
| STOT RE 2 | H373 | May cause damage to organs through prolonged or repeated exposure. |
| STOT SE 3 | H335 | May cause respiratory irritation. |
| STOT SE 3 | H336 | May cause drowsiness or dizziness. |

Excluded are the following hazard categories or Hazard Statements (H-Statements) for ready-to-use permanent markers and board markers:

| Hazard Category | Hazard Statements | |
|-------------------------------|-------------------|-------------------------------------|
| Skin irritation, Category 2 | H315 | Causes skin irritation. |
| Eye irritation, Category 2 | H319 | Causes serious eye irritation. |
| STOT SE 3 | H336 | May cause drowsiness or dizziness |
| Flammable liquids, Category 2 | H225 | Highly flammable liquid and vapour. |
| Flammable liquids, Category 3 | H226 | Flammable liquid and vapour. |

Moreover, the writing and stamping utensils shall not contain any substances above the threshold of 0.1 percent by weight which have been identified under REACH as Substances of Very High Concern and have been included in the list set up in accordance with REACH, Article 59, paragraph 1 (so-called Candidate List).²⁸

Compliance Verification

The applicant shall let RAL gGmbH have the trade names and the suppliers of the writing and stamping medium (or media) used as well as the formulation ingredients and their percentage in the mixture (Annex 16). If writing and stamping media require the submission of a Safety Data Sheet according to Article 31 of REACH such sheet shall be attached to the application document. Safety Data Sheets to be submitted under Regulation (EC) No 1907/2006 shall under no circumstances be older than 2 years and shall contain the labelling elements (hazard statements) required under Regulation (EC) No 1272/2008 (Annex 17).

²⁸ For the current version of the Candidate List please go the website of the European Chemicals Agency (ECHA) at <http://echa.europa.eu/de/addressing-chemicals-of-concern/authorisation/substances-of-very-high-concern-identification/candidate-list-of-substances-of-very-high-concern-for-authorisation>.

In the event of any modifications to the Candidate List that are of relevance to the writing or stamping medium concerned the applicant shall, within one month, declare the non-conformity of the final product with this criterion to RAL gGmbH.

3.4.2 Preservatives

The only substances (active substances or biocides) approved for use as preservatives are those for which an active-substance dossier on the assessment as in-can preservatives (product type 6) has been submitted within the scope of the Biocidal Products Regulation (EU No 528/2012). If, following the assessment, an inclusion of an active substance into the Union List of approved active substances for product type 6 is denied the use of these substances shall no longer be permitted.

All preservatives used shall be indicated along with the respective mass concentration in the ready-to-use writing or stamping medium.

Compliance Verification

All preservatives added to the respective writing or stamping medium shall be indicated together with their designation and (if possible) their CAS and EC number as well as with the respective mass concentration in the ready-to-use writing or stamping medium (Annex 18).

3.4.3 Exclusion of Further Substances

The following substances / substance groups must not be present in the ready-to-use writing and stamping media:

- Substances that are to be classified as volatile organic compounds – VOCs (including aromatic compounds).²⁹
Notwithstanding this, ethanol, propane-1-ol, propane-2-ol and 1-methoxy-2-propanol, propylene glycol may be used up to total content of 15 percent by weight in the ready-to-use writing and stamping medium of markers, ink pens, felt-tip pens and colour felt-tip pens.
- Notwithstanding this, ethanol, propane-1-ol, propane-2-ol and 1-methoxy-2-propanol, propylene glycol may be used in the ready-to-use writing and stamping medium of board markers and permanent markers.
- Fragrances, aromatic substances (e.g. scented oils, plant extracts).
- Azo dyes that release one of the amines listed in Annex XVII to Regulation (EC) No 1907/2006.
- Further carcinogenic or potentially sensitizing colorants pursuant to Appendix B.
- Substances and mixtures containing polycyclic aromatic hydrocarbons (PAHs) – e.g. when using carbon black).

Compliance Verification

The applicant shall declare the absence of the banned substances in Annex 1 and present the formulation of the writing / stamping medium to RAL gGmbH (Annex 16).

As regards the admissible VOCs, their mass percentage in the ready-to-use writing and stamping media shall be explicitly identified in the formulation (Annex 16).

²⁹ Definition of VOCs according to Directive 2010/75/EU: „volatile organic compound“ means any organic compound as well as the fraction of creosote, having at 293.15 K a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use.

In addition, the absence of azo dyes shall be evidenced by a test report meeting the requirements under DIN EN 71-9/10/11. Compliance shall be indirectly verified by determining the absence of the amines mentioned in Annex XVII to Regulation (EC) No 1907/2006 (Annex 19).

The absence of carcinogenic or potentially sensitizing colorants shall be additionally evidenced by a test report meeting the requirements under DIN EN 71-9/10/11 (Annex 19).

The absence of PAHs shall be additionally evidenced by a test report meeting the requirements under AfPS GS 2014:01 PAK.³⁰ Here, the requirements for Category 2 for "Materials not covered by Category 1, with foreseeable skin contact for longer than 30 seconds (long-term skin contact) or repeated short-term skin contact" in accordance with the sub-category "Toys falling within the scope of Directive 2009/48/EC" shall be met (Annex 20).

3.4.4 Varnishes, Adhesives, Printing Inks, Surface Coatings and Plastic Granules

Varnishes, adhesives, printing inks or surface coatings used in the manufacture of barrels and caps of writing utensils as well as in the manufacture of frames and casings of stamps and ink pads shall not be assigned to any of the following hazard categories listed in Annex 1 to the CLP Regulation. The same applies to plastic granules used in the manufacture of these components:

| Hazard Category | Hazard Statements | |
|--|-------------------|--|
| Carcinogenic - Category 1a, 1b and 2 | | |
| Carc. 1A, 1B | H350 | May cause cancer. |
| Carc. 1A, 1B | H350i | May cause cancer by inhalation. |
| Carc. 2 | H351 | Suspected of causing cancer. |
| Germ-cell Mutagenic - Category 1a, 1b and 2 | | |
| Muta. 1A, 1B | H340 | May cause genetic defects. |
| Muta. 2 | H341 | Suspected of causing genetic defects. |
| Reprotoxic - Category 1a, 1b and 2 | | |
| Repr. 1A, 1B | H360D | May damage the unborn child. |
| Repr. 1A, 1B | H360F | May damage fertility. |
| Repr. 1A, 1B | H360FD | May damage fertility. May damage the unborn child. |
| Repr. 1A, 1B | H360Df | May damage the unborn child. Suspected of damaging fertility. |
| Repr. 1A, 1B | H360Fd | May damage fertility. Suspected of damaging the unborn child. |
| Repr. 2 | H361f | Suspected of damaging fertility. |
| Repr. 2 | H361fd | Suspected of damaging fertility. Suspected of damaging the unborn child |

³⁰ http://www.baua.de/de/Produktsicherheit/Marktueberwachung/pdf/AfPS-GS-2014-01-PAK.pdf?_blob=publicationFile&v=4.

| Hazard Category | Hazard Statements | |
|---|-------------------|--|
| Acutely Toxic - Category 1, 2, 3 | | |
| Acute Toxicity 1, 2 (oral) | H300 | Fatal if swallowed |
| Acute Toxicity 3 (oral) | H301 | Toxic if swallowed |
| Acute Toxicity 1, 2 (dermal) | H310 | Fatal in contact with skin |
| Acute Toxicity 3 (dermal) | H311 | Toxic in contact with skin |
| Acute Toxicity 1, 2 (inhalative) | H330 | Fatal if inhaled |
| Acute Toxicity 3 (inhalative) | H331 | Toxic if inhaled |
| STOT Category 1 and 2 (repeated and one-time exposure) | | |
| STOT one-time 1 | H370 | Causes damage to organs. |
| STOT one-time 2 | H371 | May cause damage to organs. |
| STOT repeated 1 | H372 | Causes damage to organs through prolonged or repeated exposure. |
| STOT repeated 2 | H373 | May cause damage to organs through prolonged or repeated exposure. |
| Substances Hazardous to the Environment | | |
| Aquatic acute 1 | H400 | Very toxic to aquatic life |
| Aquatic chronic 1 | H410 | Very toxic to aquatic life with long-lasting effects |
| Aquatic chronic 2 | H411 | Toxic to aquatic life with long-lasting effects |
| Ozone 1 | H420 | Harms public health and the environment by destroying ozone in the upper atmosphere. |

Moreover, the mixtures mentioned herein as well as plastic granules shall not contain any substances above the threshold of 0.1 percent by weight which have been identified as substances of very high concern in accordance with the REACH Regulation and have been included in the list (so-called Candidate List) set up in accordance with REACH, Article 59, paragraph 1.³¹

Compliance Verification

The applicant shall document in the application the plastic granules used in the manufacture as well as the auxiliaries used for surface coating, printing or varnishing as well as for gluing (Annex 21). If the product is manufactured by use of plastic granules or auxiliaries requiring the submission of a Safety Data Sheet according to Regulation (EC) No. 1907/2006, Article 31,

³¹ For the current version of the Candidate List please go the website of the European Chemicals Agency (ECHA) at: <http://echa.europa.eu/de/addressing-chemicals-of-concern/authorisation/substances-of-very-high-concern-identification/candidate-list-of-substances-of-very-high-concern-for-authorisation>.

such sheet shall be attached to the application documents. Safety Data Sheets to be presented according to Regulation (EC) No 1907/2006 must under no circumstances be older than 2 years and shall include the labelling elements required under Regulation (EC) No 1272/2008 (H statements) (Annex 22). In the event of any modifications to the Candidate List that are of relevance to the writing or stamping medium concerned the applicant shall, within one month, re-declare the conformity of the final product with this criterion to RAL gGmbH.

3.4.5 Metals and Elements Excluded

The following metals and elements as well as their compounds shall neither be components of the formulations of writing and stamping media nor be used in the varnishes, adhesives, printing inks or surface coatings: cadmium, lead, chromium (VI), mercury, arsenic, barium (exception: barium sulphate), cobalt, antimony. Also excluded are selenium and its compounds.

Notwithstanding the above, the use of pigments containing the following cobalt spinels shall be permitted:

| Trade name(s) | CAS Number | Colour Index Nr. |
|---|------------|------------------|
| C.I. Pigment Blue 28, cobalt aluminate blue spinel | 1345-16-0 | C.I. 77346 |
| C.I. Pigment Blue 36, cobalt chromite blue green spinel | 68187-11-1 | C.I. 77343 |
| cobalt titanite green spinel | 68186-85-6 | C.I. 77377 |

Compliance Verification

The applicant shall submit to RAL gGmbH declarations from the respective suppliers for the writing and stamping media as well as for the auxiliaries mentioned herein stating that the products do not contain the metals and elements excluded (Annex 23).

3.4.6 Migration Limits

The following maximum admissible migration limits shall apply to writing and stamping media, barrel and cap of writing utensils as well as to frames and casings of stamps and ink pads³².

Table 2: Migration Limits for Metals and Elements ³³

| Element | mg/kg in dry, brittle, powder-like or pliable materials | mg/kg in liquid or adhesive materials | mg/kg in scraped-off materials |
|-----------|---|---|--------------------------------------|
| Aluminium | 5625 | 1406 | 70000 |
| Antimony | 45 | 11.3 | 60 |
| Arsenic | 3.8 | 0.9 | 25 |
| Barium | 4500 | 1125 | 1000 |
| Boron | 1200 | 300 | 15000 |

³² Such substances may be introduced, for example, as impurities into the media and materials.

³³ On the basis of the Toy Safety Directive (Directive 2009/45/EC) and taking into account the updated BfR opinion No 034/2012 of August 10, 2012 „Health risks through heavy metals from toys“ <http://www.bfr.bund.de/cm/343/gesundheitsliche-risiken-durch-schwermetalle-aus-spielzeug.pdf> - deviations from the limits listed in the Toy Safety Directive are highlighted.

| Element | mg/kg in dry, brittle, powder-like or pliable materials | mg/kg in liquid or adhesive materials | mg/kg in scraped-off materials |
|---------------------|---|---|--------------------------------------|
| Cadmium | 1.9 | 0.5 | 23 |
| Chromium(III) | 37.5 | 9.4 | 460 |
| Chromium(VI) | 0.02 | 0.005 | 0.2 |
| Cobalt | 10.5 | 2.6 | 130 |
| Copper | 622.5 | 156 | 7700 |
| Lead | 13.5 | 3.4 | 90 |
| Manganese | 1200 | 300 | 15000 |
| Mercury | 7.5 | 1.9 | 60 |
| Nickel | 75 | 18.8 | 930 |
| Selenium | 37.5 | 9.4 | 460 |
| Strontium | 4500 | 1125 | 56000 |
| Tin | 15000 | 3750 | 180000 |
| Organotin compounds | 0.9 | 0.2 | 12 |
| Zinc | 3750 | 938 | 46000 |

Compliance Verification

The applicant shall present one test report each for the writing media and the materials used pursuant to the test method under DIN EN ISO 71-3 to confirm compliance with the limits (Annex 24).

3.5 Sales Packaging

The following requirements shall be met:

- If paper and cardboard are used these materials shall be made of 80 percent recycled fibres. Composite materials as well as plastic or metal coatings on the papers/cardboards shall not be permitted.
- Blister packaging shall not be permitted.
- The plastics used shall consist of 50 percent by weight of post-consumer recycled materials.
- Halogenated organic plastics shall not be permitted.
- Metallic coatings on the packaging shall not be permitted.

Compliance Verification

The applicant shall give the names of the papers, cardboards and/or plastics used - and if paper, cardboard and/or plastics are used - the applicant shall document the origin of the materials by means of written declarations from the suppliers and, if applicable, by means of other compliance verifications (Annex 25).

3.6 Outer Packaging

The outer packaging of writing utensils or refills shall be made of paper and/or cardboard exclusively. It shall be made shall be made of 80 percent recycled fibres. Composite materials as well as plastic or metal coatings shall not be permitted.

Compliance Verification

The applicant shall give the names of the papers and/or cardboards used and - if paper or cardboard is used - the applicant shall document the origin of the materials by means of written declarations from the suppliers and, if applicable, by means of other compliance verifications (Annex 26).

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, 2019. They shall be extended by periods of one year each, unless terminated in writing by March 31, 2019 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/distributor)
- Brand/trade name, product description
- Distributor (label user), i.e. the above-mentioned marketing organisations.

Appendix A Aromatic amines possibly released from azo dyes that require evidence of absence pursuant to DIN EN 71-9/10/11

Table 3: Aromatic amines to be tested (according to Annex 8 „Entry 43 — Azocolorants — List of Aromatic Amines“ REACH Annex XVII)

| | CAS No | Index No | EC No | Substance Name |
|----|----------|--------------|-----------|--|
| 1 | 92-67-1 | 612-072-00-6 | 202-177-1 | <ul style="list-style-type: none"> biphenyl-4-ylamine, 4-aminobiphenyl, xenylamine |
| 2 | 92-87-5 | 612-042-00-2 | 202-199-1 | benzidine |
| 3 | 95-69-2 | | 202-441-6 | 4-chloro-o-toluidine |
| 4 | 91-59-8 | 612-022-00-3 | 202-080-4 | 2-naphthylamine |
| 5 | 97-56-3 | 611-006-00-3 | 202-591-2 | <ul style="list-style-type: none"> o-aminoazotoluene, 4-amino-2',3-dimethylazobenzene, 4-o-tolylazo-o-toluidine |
| 6 | 99-55-8 | | 202-765-8 | 5-nitro-o-toluidine |
| 7 | 106-47-8 | 612-137-00-9 | 203-401-0 | 4-chloroaniline |
| 8 | 615-05-4 | | 210-406-1 | 4-methoxy-m-phenylenediamine |
| 9 | 101-77-9 | 612-051-00-1 | 202-974-4 | <ul style="list-style-type: none"> 4,4'-methylenedianiline, 4,4'-diaminodiphenylmethane |
| 10 | 91-94-1 | 612-068-00-4 | 202-109-0 | <ul style="list-style-type: none"> 3,3'-dichlorobenzidine, 3,3'-dichlorobiphenyl-4,4'-ylenediamine |
| 11 | 119-90-4 | 612-036-00-X | 204-355-4 | 3,3'-dimethoxybenzidine, o-dianisidine |
| 12 | 119-93-7 | 612-041-00-7 | 204-358-0 | 3,3'-dimethylbenzidine, 4,4'-bi-o-toluidine |
| 13 | 838-88-0 | 612-085-00-7 | 212-658-8 | 4,4'-methylenedi-o-toluidine |
| 14 | 120-71-8 | | 204-419-1 | 6-methoxy-m-toluidine p-cresidine |
| 15 | 101-14-4 | 612-078-00-9 | 202-918-9 | <ul style="list-style-type: none"> 4,4'-methylene-bis-(2-chloro-aniline) 2,2'-dichloro-4,4'-methylenedianiline |
| 16 | 101-80-4 | | 202-977-0 | 4,4'-oxydianiline |
| 17 | 139-65-1 | | 205-370-9 | 4,4'-thiodianiline |
| 18 | 95-53-4 | 612-091-00-X | 202-429-0 | o-toluidine, 2-aminotoluene |
| 19 | 95-80-7 | 612-099-00-3 | 202-453-1 | 4-methyl-m-phenylenediamine |
| 20 | 137-17-7 | | 205-282-0 | 2,4,5-trimethylaniline |
| 21 | 90-04-0 | 612-035-00-4 | 201-963-1 | o-anisidine, 2-methoxyaniline |
| 22 | 60-09-3 | 611-008-00-4 | 200-453-6 | 4-amino-azobenzene |

For a list of azo dyes that may release such (and some other) aromatic amines, please go to: http://www.tegewa.de/uploads/media/2001_Azofarbstoffe_gemaess_TRGS_614.pdf
(Notice: The list is informative. It is not to be considered "final")

Appendix B Colorants banned from use in Writing and Stamping Media

Table 4: Non-permitted Colorants

| Colour Index Name | CAS Registry Number |
|--------------------------|----------------------------|
| Disperse Blue 1 | 2475-45-8 |
| Disperse Blue 3 | 2475-46-9 |
| Disperse Blue 106 | 12223-01-7 |
| Disperse Blue 124 | 61951-51-7 |
| Disperse Yellow 3 | 2832-40-8 |
| Disperse Orange 3 | 730-40-5 |
| Disperse Orange 37/76 | 12223-33-5 / 13301-61-6 |
| Disperse Red 1 | 2872-52-8 |
| Solvent Yellow 1 | 60-09-3 |
| Solvent Yellow 2 | 60-11-7 |
| Solvent Yellow 3 | 97-56-3 |
| Basic Red 9 | 569-61-9 |
| Basic Violet 1 | 8004-87-3 |
| Basic Violet 3 | 548-62-9 |
| Acid Red 26 | 3761-53-3 |
| Acid Violet 49 | 1694-09-3 |

Appendix C Extract from "Altpapier, Liste der Deutschen Standardsorten und ihre Qualitäten"

(Waste Paper, List of German Standard Grades and their Qualities) (as of June 2000) in accordance with DIN EN 643, as amended

A copy of the current DIN EN 643 standard (May 2014) may be obtained at cost from Beuth Verlag (Beuth Publishing House)³⁴.

- Published by:
- Bundesverband der Deutschen Entsorgungswirtschaft e.V., Köln (Association of German Disposal Management - Cologne)
 - Bundesverband Sekundärrohstoffe und Entsorgung e.V., Bonn (Association of Secondary Raw Materials and Disposal)
 - Verband Deutscher Papierfabriken, Bonn (Association of German Paper Mills)

Waste Paper Grades

| Group 1: | Ordinary Grades |
|----------|---|
| 1.01 | Mixed paper and board, unsorted, but unusable materials removed <ul style="list-style-type: none"> • Mixture of various grades of paper and board, without restriction on short fibre content. |
| 1.02 | Mixed papers and board (sorted) <ul style="list-style-type: none"> • Mixture of various qualities of paper and board, containing a maximum of 40% of newspapers and magazines. |
| 1.03 | Grey Board <ul style="list-style-type: none"> • Printed and unprinted white lined and unlined grey board or mixed board, free from corrugated material. |
| 1.04 | Supermarket corrugated paper and board <ul style="list-style-type: none"> • Used paper and board packaging, containing a minimum of 70% of corrugated board, the rest being solid board and wrapping papers. |
| 1.05 | Old corrugated containers <ul style="list-style-type: none"> • Used boxes and sheets of corrugated board of various qualities. |
| 1.06 | Unsold Magazines <ul style="list-style-type: none"> • Unsold magazines, with or without glue. |
| 1.06.01 | <ul style="list-style-type: none"> • Unsold magazines without glue |
| 1.07 | Telephone books <ul style="list-style-type: none"> • New and used telephone books, with unlimited content of pages coloured in the mass, with and without glue. Shavings allowed. |
| 1.08 | Mixed newspapers and magazines I <ul style="list-style-type: none"> • A mixture of newspapers and magazines, containing a minimum of 50% of newspapers, with or without glue. |

³⁴ Contact data of Beuth Verlag GmbH: Beuth Verlag, Am DIN-Platz, Burggrafenstraße 6, 10787 Berlin; Telephone: 030/2601-2260, Internet: www.beuth.de, e-mail: kundenservice@beuth.de.

| | |
|------|---|
| 1.09 | Mixed newspapers and magazines II <ul style="list-style-type: none"> A mixture of newspapers and magazines, containing a minimum of 60% of newspapers, with or without glue. |
| 1.10 | Mixed magazines and newspapers <ul style="list-style-type: none"> A mixture of newspapers and magazines, containing a minimum of 60% of magazines, with or without glue. |
| 1.11 | Sorted graphic paper for Deinking ³⁵ <ul style="list-style-type: none"> Sorted graphic paper from households, newspapers and magazines, each at a minimum of 40%. The percentage of non-deinkable paper and board should be reduced over time to a maximum level of 1.5%. The actual percentage is to be negotiated between buyer and seller. |

| | |
|-----------------|--|
| Group 2: | Medium Grades |
| 2.01 | Newspapers <ul style="list-style-type: none"> Newspapers containing a maximum of 5% of newspapers or advertisements coloured in the mass. |
| 2.02 | Unsold Newspapers <ul style="list-style-type: none"> Unsold daily newspapers, free from additional inserts or illustrated material coloured in the mass. |
| 2.02.01 | Unsold newspapers, no flexographic printing allowed <ul style="list-style-type: none"> Unsold daily newspapers, free from additional inserts or illustrated material coloured in the mass, strings allowed. No flexographic printed material allowed. |
| 2.03 | Lightly printed white shavings <ul style="list-style-type: none"> Lightly printed white shavings, mainly mechanical pulp-based. |
| 2.03.01 | Lightly printed white shavings without glue <ul style="list-style-type: none"> Lightly printed white shavings, mainly mechanical pulp-based paper, without glue. |
| 2.04 | Heavily printed white shavings <ul style="list-style-type: none"> Heavily printed white shavings, mainly mechanical pulp-based paper. |
| 2.04.01 | Heavily printed white shavings <ul style="list-style-type: none"> Heavily printed white shavings, mainly mechanical pulp-based paper, without glue. |
| 2.05 | Sorted office paper <ul style="list-style-type: none"> Sorted office paper. |
| 2.06 | Coloured letters <ul style="list-style-type: none"> Correspondence, in mixed papers coloured in the mass, with or without print, of printing or writing paper. Free from carbon paper and hard covers. |

³⁵ For the current special agreement on the share of contraries (Störstoffgehalt) please see the original list.

| | |
|------|---|
| 2.07 | White woodfree books <ul style="list-style-type: none"> Books, including misprints of books, without hard covers, mainly of woodfree white paper, black printed only. Containing a maximum of 10% of coated paper. |
| 2.08 | Coloured woodfree magazines <ul style="list-style-type: none"> Coated or uncoated magazines, white or coloured in the mass, free from non-flexible covers, bindings, non-dispersable inks and adhesives, poster papers, labels or label trim. May include heavily printed circulars and coloured in the mass shavings. Containing a maximum of 10% mechanical pulp based papers. |
| 2.09 | Carbonless copy paper <ul style="list-style-type: none"> Carbonless copy paper. |
| 2.10 | Bleached woodfree PE-coated board <ul style="list-style-type: none"> Bleached woodfree PE-coated board from board manufacturers and converters. |
| 2.11 | Other PE-coated board <ul style="list-style-type: none"> Other PE-coated board. May contain unbleached board and paper from board manufacturers and converters. |
| 2.12 | Mechanical pulp-based computer print-out <ul style="list-style-type: none"> Continuous computer print-out, mechanical pulp based, sorted by colours, may include recycled fibres. |

| | |
|-----------------|--|
| Group 3: | High Grades |
| 3.01 | Mixed lightly coloured printers shavings <ul style="list-style-type: none"> Mixed shavings of printing and writing papers, lightly coloured in the mass, containing a minimum of 50% of woodfree paper. |
| 3.02 | Mixed lightly coloured woodfree printer shavings <ul style="list-style-type: none"> Mixed shavings of printings and writing papers lightly coloured in the mass, containing a minimum of 90% of woodfree paper. |
| 3.03 | Woodfree binders <ul style="list-style-type: none"> White woodfree lightly printed shavings with glue, free from paper coloured in the mass. May contain a maximum of 10% of mechanical pulp based paper. |
| 3.04 | Tear white shavings <ul style="list-style-type: none"> White woodfree lightly printed shavings without glue, free from wet-strength paper and paper coloured in the mass. |
| 3.05 | White woodfree letters <ul style="list-style-type: none"> Sorted white woodfree writing papers, originating from office records, free from cash books, carbon paper and non water soluble adhesives. |
| 3.06 | White business forms <ul style="list-style-type: none"> White woodfree printed business forms. |

| | |
|---------|--|
| 3.07 | White woodfree computer print-out <ul style="list-style-type: none"> White woodfree computer print-out, free from carbonless paper and glue. |
| 3.08 | Printed bleached sulphate board <ul style="list-style-type: none"> Heavily printed sheets of bleached sulphate board, without glue, polycoated or waxed materials. |
| 3.09 | Lightly printed bleached sulphate boards <ul style="list-style-type: none"> Lightly printed sheets of bleached sulphate board, without glue, polycoated or waxed materials. |
| 3.10 | Multi printing <ul style="list-style-type: none"> Woodfree, coated, lightly printed, free from wet-strength paper or paper coloured in the mass. |
| 3.11 | White heavily printed multiply board <ul style="list-style-type: none"> New cuttings of heavily printed white multiply board, containing woodfree, mechanical or thermo-mechanical pulp plies, but without grey plies. |
| 3.12 | White lightly printed multiply board <ul style="list-style-type: none"> New cuttings of lightly printed white multiply board, containing woodfree, mechanical or thermo-mechanical pulp plies, but without grey plies. |
| 3.13 | White unprinted multiply board <ul style="list-style-type: none"> New cuttings of unprinted white multiply board, containing woodfree, mechanical or thermo-mechanical pulp plies, but without grey plies. |
| 3.14 | White newsprint <ul style="list-style-type: none"> Shavings and sheets of white unprinted newsprint, free from magazine paper. |
| 3.15 | White mechanical pulp based coated and uncoated paper <ul style="list-style-type: none"> Shavings and sheets of white unprinted coated and uncoated mechanical pulp based paper. |
| 3.15.01 | White mechanical pulp based paper containing coated paper <ul style="list-style-type: none"> Shavings and sheets of white unprinted mechanical pulp based coated paper. |
| 3.16 | White woodfree coated paper, without glue <ul style="list-style-type: none"> Shavings and sheets of white unprinted woodfree coated paper, without glue. |
| 3.17 | White shavings <ul style="list-style-type: none"> Shavings and sheets of white unprinted paper, free from newsprint and magazine paper containing a minimum of 60% of woodfree paper; may contain a maximum of 10% of coated paper. Without glue. |
| 3.18 | White woodfree shavings <ul style="list-style-type: none"> Shavings and sheets of white unprinted woodfree paper; may contain a maximum of 5% of coated paper. Without glue. |
| 3.18.01 | White woodfree uncoated shavings <ul style="list-style-type: none"> Shavings and sheets of white unprinted woodfree paper, free from coated paper. Without glue. |

| | |
|------|---|
| 3.19 | Unprinted bleached sulphate board <ul style="list-style-type: none"> Unprinted sheets of bleached sulphate board, without glue, polycoated or waxed materials. |
|------|---|

| | |
|------------------------------|--|
| Group 4: Kraft Grades | |
| 4.01 | New shavings of corrugated board <ul style="list-style-type: none"> Shavings of corrugated board, with liners of kraft or testliner. |
| 4.01.01 | Unused corrugated kraft <ul style="list-style-type: none"> Unused boxes, sheets and shavings of corrugated board, with kraft liners only, the fluting made from chemical or thermo-chemical pulp. |
| 4.01.02 | Unused corrugating material <ul style="list-style-type: none"> Unused boxes, sheets and shavings of corrugated board, with liners of kraft or testliner. |
| 4.02 | Used corrugated kraft I <ul style="list-style-type: none"> Used boxes of corrugated board, with kraft liners only, the fluting made from chemical or thermo-chemical pulp. |
| 4.03 | Used corrugated kraft II <ul style="list-style-type: none"> Used boxes of corrugated board, with liners of kraft or testliners but having at least one liner made of kraft. |
| 4.04 | Used kraft sacks <ul style="list-style-type: none"> Clean used kraft sacks. Wet-strength and non wet-strength. |
| 4.04.01 | Used kraft sacks with polycoated papers <ul style="list-style-type: none"> Clean used kraft sacks. Wet-strength and non wet-strength. May include polycoated papers. |
| 4.05 | Unused kraft sacks <ul style="list-style-type: none"> Unused kraft sacks. Wet-strength and non wet-strength. |
| 4.05.01 | Unused kraft sacks with polycoated papers <ul style="list-style-type: none"> Unused kraft sacks. Wet-strength and non wet-strength. May include polycoated papers. |
| 4.06 | Used kraft <ul style="list-style-type: none"> Used kraft paper and board of a natural or white shade. |
| 4.07 | New kraft <ul style="list-style-type: none"> Shavings and other new kraft paper and board of a natural shade. |
| 4.08 | New carrier kraft <ul style="list-style-type: none"> New carrier kraft, may include wet-strength paper. |

| | |
|--------------------------------|--|
| Group 5: Special Grades | |
| 5.01 | Mixed recovered paper and board <ul style="list-style-type: none"> Unsorted paper and board, separated at source. |

| | |
|------|---|
| 5.02 | <p>Mixed packaging</p> <ul style="list-style-type: none"> • A mixture of various qualities of used paper and board packaging, free from newspapers and magazines. |
| 5.03 | <p>Liquid board packaging</p> <ul style="list-style-type: none"> • Used liquid packaging board including used PE-coated liquid packaging board (with or without aluminium content), containing a minimum of 50% by weight of fibres, and the balance being aluminium coatings. |
| 5.04 | <p>Wrapper kraft</p> <ul style="list-style-type: none"> • Poly-lined, sprayed, or laminated used kraft. Must not contain bitumen or wax coatings. |
| 5.05 | <p>Wet labels</p> <ul style="list-style-type: none"> • Used wet labels from wet-strength papers, containing a maximum of 1% glass content, and a maximum of 50% moisture, without other unusable material. |
| 5.06 | <p>Unprinted white wet-strength woodfree papers</p> <ul style="list-style-type: none"> • Unprinted white wet-strength woodfree papers. |
| 5.07 | <p>Printed white wet-strength woodfree papers</p> <ul style="list-style-type: none"> • Printed white wet-strength woodfree papers. |