

# **BLUE ANGEL**

**The German Ecolabel**



**Artists' Colours**

**DE-UZ 199**

**Basic Award Criteria**

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**Version 4**

## 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.

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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**

Artists' colours form an inherent part of art education both in and out of school. Moreover, these colours are also used in many households for decorative and creative hobby painting. This makes artists' colours part of everyday life for many people. Some 7000<sup>1</sup> tons of artists' colours are sold on the German market every year, about two-thirds of which are imported. On the other hand, there are Germany's exports of about 3500 tons per year. That means, 50 percent of the artists' colours traded remain in Germany. About 50 percent of the artists' are offered as combinations of colours, for example, as paint boxes for use in school or watercolour paint boxes.

But what is important from the perspective of health protection, are, above all, the colours themselves.

Colours are complex mixtures of substances. They can contain ingredients with hazardous properties. Artists' colours intended for use by children fall under the protection requirements of the European Toy Safety Directive. From the viewpoint of consumer protection all Blue Angel eco-labelled artists' colours should guarantee a similar level of safety. In addition, the relevant requirements will be reviewed once a year.

From the viewpoint of environmental protection artists' colours shall be made available in refillable containers in the most demand-responsive way possible, thus helping to reduce waste.

The Blue Angel eco-label is a perfect means to inform the consumer of artists' colours that stand out in the fields mentioned due to their exceptionally high quality as regards environmental and health protection.

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<sup>1</sup> Base year: 2013, Source: Dastatis/Eurostat

### 1.3 Objective of the Blue Angel Eco-Label

The Blue Angel eco-label for artists' colours can be used for the labelling of products that feature the following properties:

- Avoidance and reduction of harmful substances and mixtures
- Containers and modes of packaging that help prevent waste.

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 artists' colours, 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)<sup>2</sup>.

Apart from that, products designed or intended for use in play by children under 14 years of age shall comply with all provisions of the European Toy Safety Directive (2009/48/EC)<sup>3</sup>.

### 1.5 Definitions

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

- **Substances of very high concern<sup>4</sup>:** Substances of very high concern within the meaning of these Basic Criteria are all substances included in the Candidate List<sup>5</sup> to Annex XIV of REACH.
- **Mixture<sup>4</sup>:** mixtures or solutions composed of two or more substances.

<sup>2</sup> 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>.

<sup>3</sup> 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/EC 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 (Food and Feed Code). If applicable, additional EU Directives, such as Directive 2001/95/EC - General Product Safety - may also have to be taken into account.

<sup>4</sup> REACH Artikel 57, Substances of very high concern (SVHC).

<sup>5</sup> For the Candidate List please go to the European Chemicals Agency (ECHA): <http://echa.europa.eu/el/candidate-list-table>. For an unofficial German version please go to the German REACH-CLP Helpdesk at <http://www.reach-clp-biozid-helpdesk.de/de/Themen/Kandidatenliste/Kandidatenliste.html>.

- **Artists' colour:** Mixtures of colours that can be applied by the use of water (for art education at school and hobby painting) in accordance with the description under "Scope". This includes, for example, opaque colours, watercolours, tempera and poster colours.
- **Formulation ingredient:** a formulation ingredient within the meaning of these Basic Criteria is a substance or mixture added in the formulation / manufacture of the final product (here: the artists' colour).
- **Substance<sup>6</sup>:** 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.
- **Outer packaging<sup>7</sup>:** 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.
- **Sales packaging<sup>8</sup>:** packaging supplied as a sales unit that is usually opened by the final consumer.  
Within the meaning of these Basic Criteria this also includes units and containers used to supply artists' colours, such as bottles, dishes, tubes etc. as well as boxes for combinations of artists colours (e.g. opaque colour boxes, watercolour boxes or similar sets). This does not include additional protective packaging for product shipment among commercial partners (outer packaging).
- **Impurity<sup>9</sup>:** 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.

## 2 Scope

These Basic Criteria shall apply to the following artists' colours:

All water-thinnable colours suitable for painting and designing (primarily) on paper which are intended for use in art education and for hobby painting, as well as their refill systems.

Artists' colours can be supplied in solid, viscous or paste-like form as well as in different types of product containers, such as, for example, paint boxes, tubes, bottles as well as in dishes.<sup>10</sup>

Finger paints within the meaning of the Toy Safety Directive and pursuant to DIN EN 71-7 shall not fall within the scope of these Basic Criteria.

Artists colours and their sales packaging containing polyvinyl chloride (PVC) shall be excluded from award of the Blue Angel eco-label.

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<sup>6</sup> REACH, Article 3 as well as CLP Regulation, Article 2.

<sup>7</sup> Section 3.3 Verpackungsverordnung (Packaging Ordinance)

[http://www.gesetze-im-internet.de/bundesrecht/verpackv\\_1998/gesamt.pdf](http://www.gesetze-im-internet.de/bundesrecht/verpackv_1998/gesamt.pdf).

<sup>8</sup> On the basis of Section 3.2 Verpackungsverordnung (Packaging Ordinance) [http://www.gesetze-im-internet.de/bundesrecht/verpackv\\_1998/gesamt.pdf](http://www.gesetze-im-internet.de/bundesrecht/verpackv_1998/gesamt.pdf).

<sup>9</sup> Guidance for Identification and Naming of Substances under REACH and CLP, Version 1.2 of March 2012, Chapter 2.2, p. 8, [http://echa.europa.eu/documents/10162/13643/substance\\_id\\_de.pdf](http://echa.europa.eu/documents/10162/13643/substance_id_de.pdf).

<sup>10</sup> Moreover, the Environmental Label Jury shall be authorized to extend the Scope.

### **3 Requirements**

The Blue Angel eco-label (shown on page 1) may be used to label the artists' colours under paragraph 2, provided that they meet the requirements set forth in the paragraphs below.

Compliance with the requirements shall be verified in accordance with the specifications given in the individual paragraphs and documented in the Annexes. In this context, the applicant shall note that Safety Data Sheets according to Regulation (EC) No. 1907/2006 are to be presented. These sheets must not be older than 2 years and shall include the labelling elements required under Regulation (EC) No 1272/2008 (H statements).

#### **3.1 Substance Requirements for Artists' Colours**

The compliance verifications for the test methods mentioned in para. 3.1 shall be submitted, for the first time, upon filing the application for the Blue Angel. In addition to this, the applicant shall re-verify every year compliance with the migration limits under para. 3.1.4 for azo dyes (aromatic amines) and other carcinogenic or potentially sensitizing colorants as well as for PAHs under para. 3.1.5.

Test reports required to verify compliance with the requirements under para. 3.1 shall be prepared by a testing laboratory accredited for the test method in accordance with DIN EN ISO 17025.

All colours contained in a paint box and other combinations of several colours shall meet the relevant requirements.

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. If artists' colours are made available in combinations of colours the applicant shall also submit samples of the refill units.

##### **3.1.1 Labelling of Artists' Colours**

The artists' colours placed on the market shall not require labelling as hazardous according to the requirements of the CLP Regulation. That means they shall not be assigned to any of the hazard categories listed in Annex 1 of the above-mentioned Regulation and shall not require labelling with hazard statements.

##### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1 and, if available, submit to RAL gGmbH a current Safety Data Sheet for each colour shade of the product line for the respective artists' colour (as Annex 2).*

##### **3.1.2 Classification of Formulation Ingredients**

The artists' colours placed on the market shall not contain any formulation ingredients which are classified in accordance with Regulation (EC) No 1272/2008 into the following hazard

categories of meet the criteria for such classification<sup>11</sup>. This shall apply to all formulation ingredients exceeding the limits for consideration for classification<sup>12</sup>:

<b>Hazard Category</b>	<b>Hazard Statements</b>	
<b>Carcinogenic - Category 1a, 1b and 2</b>		
Carc. 1A, 1B	H350	May cause cancer.
Carc. 1A, 1B	H350i	May cause cancer by inhalation.
Carc. 2	H351 <sup>13</sup>	Suspected of causing cancer.
<b>Germ-cell Mutagenic - Category 1a, 1b and 2</b>		
Muta. 1A, 1B	H340	May cause genetic defects.
Muta. 2	H341	Suspected of causing genetic defects.
<b>Reprotoxic - Category 1a, 1b and 2</b>		
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
<b>Acutely toxic - Category 1, 2, 3</b>		
Acute Tox. 1, 2 (oral)	H300	Fatal if swallowed
Acute Tox. 3 (oral)	H301	Toxic if swallowed
Acute Tox. 1, 2 (dermal)	H310	Fatal in contact with skin
Acute Tox. 3 (dermal)	H311	Toxic in contact with skin
Acute Tox. 1, 2 (inhalative)	H330	Fatal if inhaled
Acute Tox. 3 (inhalative)	H331	Toxic if inhaled
<b>STOT Category 1 and 2 (repeated and one-time exposition)</b>		
STOT SE 1	H370	Causes damage to organs.
STOT SE 2	H371	May cause damage to organs.
STOT RE. 1	H372	Causes damage to organs through prolonged or repeated exposure.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
<b>Substances Hazardous to the Environment</b>		
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.

<sup>11</sup> In accordance with the information provided in Chapter 2 of the Safety Data Sheet pursuant to Regulation EC No 1907/2006.

<sup>12</sup> Consideration limits are fixed in accordance with CLP Annex I, 1.1.2 ff.

<sup>13</sup> Except titanium dioxide, because its classification only applies to inhalable powders.

This requirement shall not apply to substances or mixtures the properties of which change during processing in a way (loss of bioavailability, chemical changes) that the hazard concerned does no longer exist.

The preservatives listed in Appendix C approved under para. 3.1.6 shall be exempted from this requirement.

Moreover, artists' colours 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<sup>14</sup>) set up in accordance with REACH, Article 59, paragraph 1. In the case of product-relevant modifications to the Candidate List the applicant shall within one month declare the non-conformity of the final product with this criterion to RAL gGmbH.

### **Compliance Verification**

*All formulation ingredients which are added and/or result from an intended chemical reaction in the artists' colour used shall be identified in Annex 3 by their designation, their function in the artists' colour, the mass concentrations used and (if possible) their CAS and EC number. If the product contains formulation ingredients requiring the submission of Safety Data Sheets according to Regulation (EC) No 1907/2006 such sheets shall be attached as Annex 4 to the application documents. They shall not be older than 2 years and contain the labelling elements (hazard statements) required under Regulation (EC) No 1272/2008.*

*The applicant shall immediately inform RAL gGmbH of any modifications to the formulation and re-document compliance with the requirement.*

### **3.1.3 Metals and Elements Excluded**

The formulations of the artists' colours shall not contain as ingredients the following metals and their compounds: Cadmium, lead, chromium (VI), mercury, barium (exception: barium sulphate), cobalt, antimony. Also excluded are selenium and arsenic as well as their compounds.

Notwithstanding the above, the use of pigments containing the following cobalt spinels shall be permitted<sup>15</sup>:

<b>Trade name(s)</b>	<b>CAS Number</b>	<b>Colour Index No</b>
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

<sup>14</sup> 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>.

<sup>15</sup> Additional pigments can be added to the list following an examination by the German Federal Environmental Agency (UBA).

### **Compliance Verification**

The applicant shall submit to RAL gGmbH declarations for each colour shade of the product line and declarations from the respective suppliers for the formulation ingredients stating that the formulation does not include the metals and elements excluded (Annex 5). The applicant shall immediately inform RAL gGmbH of any modifications to the formulation.

#### **3.1.4 Migration Limits**

The artists' colours placed on the market shall not exceed the maximum admissible migration limits listed in Table 1 below. Such substances can enter the artists' colours, for example as impurities.

Table 1: Migration Limits for Artists' Colours<sup>16</sup>

<b>Element</b>	<b>mg/kg in dry, brittle, powder-like or pliable artists' colours</b>	<b>mg/kg in liquid or adhesive artists' colours</b>
Aluminium	5625	1406
Antimony	45	11.3
Arsenic	3.8	0.9
Barium	4500	1125
Boron	1200	300
Cadmium	1.9	0.5
Chromium(III)	37.5	9.4
Chromium(VI)	0.02	0.005
Cobalt	10.5	2.6
Copper	622.5	156
Lead	13.5	3.4
Manganese	1200	300
Mercury	7.5	1.9
Nickel	75	18.8
Selenic	37.5	9.4
Strontium	4500	1125
Tin	15000	3750
Organotin compounds	0.9	0.2
Zinc	3750	938

### **Compliance Verification**

The applicant shall present for each colour shade of the product line a test report pursuant to DIN EN ISO 71-3 stating compliance with the migration limits (as Annex 6).

<sup>16</sup> On the basis of the Toy Safety Directive (Directive 2009/45/EC).

### 3.1.5 Exclusion of Further Substances

The following substances / substance groups must not be used as formulation ingredients of artists' colours:

- substances that are to be classified as volatile organic compounds – VOCs (including aromatic compounds).<sup>17</sup>  
Notwithstanding this, the use of polyethylene glycol (CAS No 25322-68-3) shall be permitted up to a total content of 10 percent by weight in the ready-to-use artists' colour.
- fragrances, aromatic substances.
- azo dyes that might release one of the amines listed in Appendix A.
- additional carcinogenic or potentially sensitizing colorants pursuant to Appendix B.
- substances containing polycyclic aromatic hydrocarbons (PAHs) according to AfPS GS 2014:01 (AfPS - Committee for Product Safety) – e.g. when using carbon black.

#### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1.*

*As regards azo dyes, the applicant shall additionally verify compliance by submission of a test report that meets the requirements of DIN EN 71-9/10/11 (Annex 5). Compliance shall be indirectly verified by determining the absence of the amines listed in Appendix A.*

*As regards carcinogenic or potentially sensitizing colorants, the applicant shall additionally verify compliance by submission of a test report that meets the requirements of DIN EN 71-9/10/11 (Annex 5).*

*As regards PAHs, the applicant shall additionally verify compliance by submission of a test report that meets the requirements of AfPS GS 2014:01 PAK (Annex 6).<sup>18</sup> In this context, 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.*

### 3.1.6 Preservatives

Artists' colours shall not contain any biocides. The preservatives listed in Appendix C used as in-can preservatives in the maximum contents specified therein - related to the read-to-use colour shall be exempted. Formaldehyde-releasing preservatives shall be excluded as a matter of principle.

The only substances (active substances or biocides) approved for use 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 the active substance listed in Appendix C into the Union List of

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<sup>17</sup> 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.

<sup>18</sup> <http://www.baua.de/de/Produktsicherheit/Marktueberwachung/pdf/AfPS-GS-2014-01-PAK.pdf?blob=publicationFile&v=4>.

approved active substances for product type 6 is denied the use of these substances shall no longer be permitted.

The preservative used shall be indicated on the sales packaging accompanied by a telephone number where persons suffering from an allergy may obtain information.

### **Compliance Verification**

*All preservatives added shall be indicated within the scope of the formulation description 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 artists' colour (Annex 9).*

*The applicant shall present - attached to the application - a sample of the sales packaging providing the information required (Annex 10).*

### **3.1.7 Annual Review**

Product tests shall be conducted every year to document compliance with the following requirements:

- Compliance with the requirements for migration limits pursuant to para. 3.1.4, Table 1.
- Exclusion of azo dyes that may release aromatic amines pursuant to para. 3.1.5.
- Exclusion of carcinogenic or potentially sensitizing colorants pursuant to para. 3.1.5.
- Limitation of PAH contents pursuant to para. 3.1.5.

To do so, the applicant shall task an independent testing laboratory to take random samples of products ready for sale and to perform the appropriate tests on them.

### **Compliance Verification**

*The applicant shall submit the following compliance verifications once a year; first upon filing the application, then at a time to be determined by RAL gGmbH.*

- *A test report for the artists' colour according to the test method under DIN EN ISO 71-3 for compliance with the migration limits pursuant to para. 3.1.4, Table 1 (Annex 6).*
- *The absence of azo dyes shall be evidenced by a test report meeting the requirements under DIN EN 71-9/10/11 (Annex 7).*
- *The absence of carcinogenic or potentially sensitizing colorants shall be evidenced by a test report meeting the requirements under DIN EN 71-9/10/11 (Annex 7).*
- *The absence of PAHs shall be evidenced by a test report meeting the requirements under AfPS GS 2014:01 PAK (Annex 8).<sup>19</sup>*

*Each applicant shall pay RAL gGmbH a handling fee of € 250.00 (plus VAT) per contract on each due date for the review of the compliance verifications to be submitted every year.<sup>20</sup>*

## **3.2 Light Fastness**

Artists' colours shall have a light fastness of  $\geq 5$  in accordance with DIN EN ISO 105-B02<sup>21</sup>.

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<sup>19</sup> As of June 30, 2015. The AfPS GS 2014:01 PAK replaces the old ZEK 01.4-08 and shall be used for the testing for the GS Mark <http://www.baua.de/de/Produktsicherheit/Marktueberwachung/pdf/AfPS-GS-2014-01-PAK.pdf?blob=publicationFile&v=4>.

<sup>20</sup> If the fee schedule is modified the new fee schedule shall become effective and replace the previous one.

### **Compliance Verification**

*The applicant shall present a test report in accordance with the test method under DIN EN ISO 105-B02 verifying the light fastness of the artists' colour (Annex 11).*

### **3.3 Brushes**

Brushes marketed along with combinations of colours shall have wooden handles. The wood shall meet the requirements of para. 3.4.1.

### **3.4 Sales Packaging**

The following requirements set forth in paras. 3.4.1 – 3.4.3 shall apply not only to the materials of the sales packaging but also to the materials of the boxes containing combinations of colours as well as to refill packs.

#### **3.4.1 Wood**

If shall be ensured that all wood used comes from legal sources. Moreover, at least 70 percent of the wood used 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.<sup>22</sup>*

*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 of the Programme for the Endorsement of Forest Certification Schemes (PEFC) for the chain of custody (CoC) the applicant shall present the certificate (Annex 13). In this case, no further compliance verifications will be necessary.*
- 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 14). The applicant shall submit a record of the wood used specifying the percentage of certified wood used (Annex 12).*
- The applicant shall submit other appropriate compliance verifications according to Annex 15. 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 certified wood used (Annex 12).*

*The applicant shall present this compliance verification once a year; first upon filing the application, then at a time to be determined by RAL gGmbH.*

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<sup>21</sup> DIN EN ISO 105-B02:2014-11 Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test (ISO 105-B02:2014); German version EN ISO 105-B02:2014

<sup>22</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:295:0023:0034:DE:PDF>

### 3.4.2 Metallic Surface Coatings

The application of metallic surface coatings to the materials used shall not be permitted.

#### **Compliance Verification**

*The applicant shall declare compliance with the above requirement in Annex 1.*

### 3.4.3 Varnishes, Imprints, Surface Treatment Agents and Adhesives

If the surfaces of the materials are treated, printed or varnished or if adhesives are used in the manufacture this may only be done using products (mixtures) that are not assigned to any of the hazard categories of the CLP Regulation listed in the table below:

Hazard Category	Hazard Statements	
<b>Carcinogenic - Category 1a, 1b and 2</b>		
Carc. 1A, 1B	H350	May cause cancer.
Carc. 1A, 1B	H350i	May cause cancer by inhalation.
Carc. 2	H351 <sup>13</sup>	Suspected of causing cancer.
<b>Germ-cell Mutagenic - Category 1a, 1b and 2</b>		
Muta. 1A, 1B	H340	May cause genetic defects.
Muta. 2	H341	Suspected of causing genetic defects.
<b>Reprotoxic - Category 1a, 1b and 2</b>		
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
<b>Acutely Toxic - Category 1, 2, 3</b>		
Acute Tox. 1, 2 (oral)	H300	Fatal if swallowed
Acute Tox. 3 (oral)	H301	Toxic if swallowed
Acute Tox. 1, 2 (dermal)	H310	Fatal in contact with skin
Acute Tox. 3 (dermal)	H311	Toxic in contact with skin
Acute Tox. 1, 2 (inhalative)	H330	Fatal if inhaled
Acute Tox. 3 (inhalative)	H331	Toxic if inhaled
<b>STOT Category 1 and 2 (repeated and one-time exposition)</b>		
STOT SE 1	H370	Causes damage to organs.
STOT SE 2	H371	May cause damage to organs.
STOT RE. 1	H372	Causes damage to organs through prolonged or repeated exposure.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
<b>Substances Hazardous to the Environment</b>		
Aquatic acute 1	H400	Very toxic to aquatic life

Hazard Category	Hazard Statements	
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 varnishes, imprints, surface treatment agents and adhesives used 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. In the case of product-relevant to the Candidate List<sup>23</sup>, the applicant shall, within one month, declare the non-conformity of the final product with this criterion to RAL gGmbH.

### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1 and name the products used to RAL gGmbH (Annex 16). The applicant shall present a current Safety Data Sheets according Regulation (EC) No. 1907/2006 for products requiring a current Safety Data Sheet. These sheets shall not be older than 2 years and shall include the labelling elements required under Regulation (EC) No 1272/2008 (H statements) (Annex 17).*

### **3.5 Refill Purchase of Individual Colours**

Artists' colours forming part of a combination of colours shall be made available as individual refill units. The information on the possibility to buy individual refill units shall be made clearly visible on the sales packaging of the combination of colours.

### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1 and document the availability of refill units by means of adequate products information, e.g. excerpts from the catalogue, web pages etc. (Annex 18). A sample of the sales packaging shall be presented to RAL gGmbH (Annex 10).*

### **3.6 Outer Packaging**

The outer packaging of artists' colours, combinations of colours or their refill units shall be made of paper, paperboard and cardboard packaging only.

The minimum content of recycled fibres in an outer packaging shall be 80 percent. Composite materials or plastic or metal coatings shall not be permitted.

### **Compliance Verification**

*The applicant shall declare compliance with the requirement in Annex 1, name the papers and/or cardboards used and submit a written confirmation from the suppliers (Anlage 19).*

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<sup>23</sup> 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>.

## **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, 2021. They shall be extended by periods of one year each, unless terminated in writing by March 31, 2021 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.

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

Table 2: Amines to be tested (according to Annex 8 „Entry 43 – Azocolourants – List of Aromatic Amines“ REACH Annex XVII )

	CAS No	Index No	EC No	Substance
1	92-67-1	612-072-00-6	202-177-1	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	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	4,4'-methylenedianiline 4,4'-diaminodiphenylmethane
10	91-94-1	612-068-00-4	202-109-0	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	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 aromatic amines, please go to:

[http://www.tegewa.de/uploads/media/2001\\_Azofarbstoffe\\_gemäß\\_TRGS\\_614.pdf](http://www.tegewa.de/uploads/media/2001_Azofarbstoffe_gemäß_TRGS_614.pdf)

(Notice: The list is indicative. It is not to be considered "final")

## Appendix B Colorants banned from use in Artists' Colours

Table 3: Colorants excluded (pursuant to Table 2B DIN EN 71-9)

<b>Colour Index Name</b>	<b>CAS Registry Number</b>
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 Preservatives that may be used for In-can Preservation of Artists' Colours in accordance with para. 3.1.6

Table 4: Active substances or active substance combinations that may be used as an alternative to in-can preservation

<b>Active Substance / Active Substance Combination</b>	<b>Admissible Maximum Content in the ready-to-use Artists' Colour</b>
Titanium dioxide/silver chloride	≤ 100 ppm related to silver chloride
2-methyl-2H- isothiazol-3-one / 1,2-benzisothiazol-3(2H)-one in a ratio of 1:1	≤ 200 ppm
5-chloro-2-methyl-4-isothiazolin-3-one / 2- methyl-4-isothiazolin-3-one in a ratio of 3:1 CIT/MIT)	< 15 ppm
3-iodo-2-propynyl butylcarbamate	≤ 80 ppm
1,2- benzisothiazol-3(2H)-one (BIT)	≤ 200 ppm
2-bromo-2-nitropropane-1,3-diol(BNPD)	≤ 200 ppm
BNPD + CIT/MIT (3:1)	≤ 130 ppm + < 15 ppm
BNPD + CIT/MIT (3:1)	≤ 150 ppm + ≤ 10 ppm
BNPD + CIT/MIT (3:1)	≤ 170 ppm + ≤ 5 ppm
MIT/BIT (1:1) + CIT/MIT (3:1)	≤ 150 ppm + ≤ 12.5 ppm
MIT/BIT (1:1) + CIT/MIT (3:1)	≤ 125 ppm + < 15 ppm
1,1,2-dibromo-2,4-dicyanobutane (DBDCB)	≤ 500 ppm
BIT + CIT/MIT (3:1)	≤ 150 ppm + ≤ 12.5 ppm
BNPD + MIT/BIT (1:1)	≤ 120 ppm + ≤ 75 ppm
BNPD + BIT	≤ 100 ppm + ≤ 100 ppm
Sodium pyrithione (SPT) + BIT	≤ 50 ppm + ≤ 150 ppm
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS 2372-82-9) + MIT/BIT (1:1)	≤ 81 ppm + ≤ 150 ppm