

BLUE ANGEL

The German Ecolabel



Toys

DE-UZ 207

Basic Award Criteria
Edition January 2017
Version 6

The Environmental Label is supported by the following four institutions:



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



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 - 190

E-Mail: umweltzeichen@ral.de

www.blauer-engel.de

Version 1 (01/2017): First Edition, Expiry date: December 31, 2020
Version 2 (01/2020): Prolongation without any change, until December 31, 2022
Version 3 (04/2020): Change in para. 3.5.1
Version 4 (12/2021): Prolongation without any change, until December 31, 2025
Version 5 (01/2025): Prolongation with editorial changes, Expiry date: December 31, 2026
Version 6 (01/2026): Prolongation without changes, Expiry date: December 31, 2028

Table of contents

1	Introduction.....	5
1.1	Preface	5
1.2	Background	5
1.3	Objectives of the Environmental Label	6
1.4	Definitions.....	7
2	Scope	9
3	Requirements	10
3.1	Description of the Toy	10
3.2	Compliance with Legal Standards	11
3.3	Acceptance of Test Reports.....	11
3.4	General Safety Requirements.....	11
3.5	Health and Health-related Requirements	12
3.5.1	General Exclusion of Substances for Toy Materials and Chemical Products	12
3.5.2	Specific Bans on Substances and Mixtures.....	13
3.5.2.1	All Toy Materials	13
3.5.2.2	Chemical Products	14
3.5.2.3	Mixtures as Integral Components of the Toy.....	15
3.5.2.4	Wood	15
3.5.2.5	Paper/Cardboard	17
3.5.2.6	Plastics.....	17
3.5.2.7	Leather and Skins.....	19
3.5.2.8	Textiles	20
3.5.2.9	Rubber and Elastomers.....	22
3.5.3	Periodic Tests	23
3.6	Origin-related Requirements	23
3.6.1	Origin of Wood and Wood-based Materials.....	23

3.6.2	Origin of Natural Textiles Fibres	24
3.6.3	Requirements regarding the Origin of Rubber (Natural Rubber - Caoutchouc)	25
3.6.4	Origin of Plastics from Renewable Raw Materials	25
3.6.5	Requirements regarding the Origin of Paper and Cardboard	26
3.6.6	Requirements regarding the Manufacture of the Raw Materials of Composite Materials	27
3.7	Requirements for Electric Toys	27
3.8	Requirements for Toy Manufacturing	27
3.9	Requirements regarding the Availability of Spare Parts	28
3.10	Sales (Primary) Packaging	28
3.11	Secondary Packaging	28
4	Applicants and Parties Involved	29
5	Use of the Environmental Label	29
Appendix A	Specimen Table for Describing the Toy (by way of example)	30
Appendix B	Banned Phthalates	31
Appendix C	Banned Alkylphenols and Alkylphenol Ethoxylates	32
Appendix D	Banned Perfluorinated and Polyfluorinated Compounds	33
Appendix E	Banned Azo Dyes and Primary Amines	34
Appendix F	Banned Fragrances	36
Appendix G	Preservation of Leather	40
Appendix H	Schedule of the Tests to be Submitted	43
Appendix I	Corresponds to Appendix A pursuant to DE-UZ 102	45

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

1 Introduction

1.1 Preface

In cooperation with the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, the German Environmental Agency and considering the results of the expert hearings conducted by RAL gGmbH, the Environmental Label Jury has set up these Basic Criteria for the Award of the Environmental Label. RAL gGmbH has been tasked with awarding the Environmental Label.

Upon application to RAL gGmbH and on the basis of a Contract on the Use of the Environmental Label to be concluded with RAL gGmbH, the permission to use the Environmental Label may be granted to all products, provided that they comply with the requirements as specified hereinafter.

The product must comply with all the legal requirements in the country in which it is to be marketed. The applicant shall declare that the product meets this requirement.

1.2 Background

Toys belong to a very heterogeneous product group. All products intended or designed for use in play by children under 14 years of age are generally considered as toys. Toys can be divided into various sub-groups, as for example:

- Textile toys filled with soft material, such as dolls and cuddly toys that are made of different materials (e.g. textile, plastic)
- Playing pieces, e.g. wooden playing pieces
- Electric trains, models as well as sets and kits
- Toys made of rubber or plastic.
- Parlour games, such as playing cards and board games
- Other toys (examples)
 - ♦ Puzzles
 - ♦ Musical toy instruments
 - ♦ Models with motor

The total annual sales volume of the European toy market is about 16.5 billion Euros. The sales volume of the German toy industry is about 2.7 billion Euros per year. According to the German Toy Industry Association there are almost 700 toy manufacturers in Germany. The industry is principally characterised by a high percentage of small and medium-sized enterprises. The exceptions are a few very big and globally operating firms (around 5 % of the number of firms), which do, however, divide more than 80% of the industry's total sales amongst themselves. Another important aspect is the high percentage of toy imports, especially from China. These imports account for more than 50 percent of the total toy market (in relation to the sales).

The European and German toy industries primarily conduct business in the "traditional" market segment (dolls, games, wooden toys etc.). Very often, this means the manufacture of high-quality products and the manufacturers make it their objective, among others, to take up and meet standards for environmentally and socially responsible products. In recent years, several labels have been established on the market in this connection which address individual aspects. These labels include, for example, the "Fair Trade" label or the "Spiel Gut" label. In addition, there are various labels for certain types of products, such as, GOTS or Öko Tex 100 label, that may be used for textile toys in particular. The most important feature of these labels is the exclusion of harmful substances beyond the legal requirements.

Many consumers place high demands on toys, i.e. they want them to be free from hazardous substances in particular. The existing regulatory framework of the European Toy Safety Directive defines the minimum requirements in order to control potential health risks from toys.

A recurrent problem is that time and again, toys are placed on the market that do not meet the legal standards even though it is precisely this obligation that each distributor assumes within the scope of the CE marking. However, the market players are not required to perform laboratory tests to verify the contents of pollutants. This gap can be closed within the scope of the Blue Angel or the Austrian eco-label, respectively. Here, products carrying the eco-label must be tested for compliance with the legal requirements. Moreover, recurrent testing may help limit the risk of subsequent delivery batches not complying with the requirements.

The Blue Angel and the Austrian eco-label do not only require the avoidance of chemicals that might pose a risk to human health but also substances that primarily present a risk to the environment - given that these substances are given only lower priority under the Toy Safety Directive.

Another aspect to be considered is the impact on the environment caused by the manufacture and the processing of toy materials. Here, the sustainable exploitation of natural resources is to be addressed in particular.¹ This also involves the requirement for compliance with fundamental social standards during the production of toys. A prerequisite for suppliers to be able to guarantee fair and safe working conditions, the respect of legal working hour limits and the payment of livelihood-securing wages are buyers' adequate purchasing practices. Time and cost pressure on the part of the toy manufacturers and dealers have an impact on suppliers and, thus, on the conditions of production. That is why it is imperative to develop a purchasing practice that makes sure that fair prices can be paid and delivery dates can be planned with sufficient lead time.

These Basic Criteria require compliance with basic social standards governing the manufacture of toys as well as the production of raw materials. Moreover, greater transparency on the part of the toy manufacturers regarding their suppliers shall guarantee, in the future, compliance with key working standards also at other levels of the value chain.

The combination of criteria from the fields of health protection, environmental and social standards allows the Blue Angel to cover a wide spectrum of aspects relevant to the consumer and, thereby, to provide consumers with a good orientation to help them make their buying decision.

1.3 Objectives of the Environmental Label

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

- avoidance or minimization of harmful substances in the products
- periodic reviews of compliance with these requirements
- reduction in the use of natural resources as well as reduction of negative ecological and social impact of the exploitation of the raw materials

¹ e.g. avoidance of the use of chemicals for agricultural products, avoidance of the destruction of ecologically valuable surfaces for the production of raw materials or preference of sustainable forestry

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



1.4 Definitions

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

Substances of very high concern²: within the meaning of these Basic Criteria "substances of very high concern" means all substances included in the Candidate List³ of Annex XIV to REACH in accordance with the procedure established by REACH.

Chemical product: ready-for-use substances or mixtures. Chemical products are used in the manufacture of the actual toys and parts of toys. Here, they serve, for example, as coating materials for toy materials, as adhesives or fillers.

Spare part: a spare part within the meaning of these Basic Criteria is a single piece that is required for the purpose of the game (e.g. components of a kit, playing pieces of board games or the like). Small parts, e.g. small components of playing pieces, are not considered as spare parts, since the toy can still be used as intended - even after losing the small part. Tightly jointed components that are not to be replaced shall not be considered as spare parts either.

Stuffing: material to fill soft toys with or without a dress with soft-body-surface as well as filling made of soft material where the main part of the toy can be easily compressed by hand. It does not include filling materials that are used, for example, in plastics. Such materials are considered within the scope of the "toy materials".

Mixtures⁴: mixtures or solutions composed of two or more substances.

Base material⁵: material upon which coatings may be formed or deposited.

Preservative: substance that inhibits the growth of undesirable microorganisms.

Surface treatment: the surface treatment of toys or toy materials includes manufacturing processes, such as coating, imprinting, waterproofing, impregnation, waxing as well as oiling using the appropriate chemical products.

² REACH, Article 57, Substances of very high concern - SVHC).

³ For the Candidate List please go to the European Chemicals Agency (ECHA) at:
<http://echa.europa.eu/candidate-list-table>

⁴ REACH, Article 3 as well as CLP Regulation, Article 2

⁵ Based on DIN EN 71-3

Post-Consumer Material⁶: material generated by households or by commercial, industrial and institutional facilities (in their role as end-users of the product) that can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

Pre-Consumer Material: material diverted from the waste stream during the manufacturing process. Excluded is the reutilization of materials, such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Toy⁷: products designed or intended, whether or not exclusively, for use in play by children under 14 years of age⁸.

Toy Manufacture: within the context of these Basic Criteria manufacture means the final assembly of toys from the individual toy materials or parts.

Toy material⁹: material or mixture used for the manufacture of toys or toy materials. Please note the delineation from the "chemical products".

Substance¹⁰: 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.

Coating¹¹: layer of material formed or deposited on the base material that can be removed by scraping¹².

Secondary packaging¹³: 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.

Composite packaging¹⁴: composite packaging within the meaning of this Ordinance is packaging made of different materials which cannot be separated by hand and none of which exceeds a share of 95 percent by weight.

⁶ Based on DIN EN 14021:2021-10

⁷ On the basis of Article 2 of Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys

⁸ For further information on the status of a product, i.e. whether or not a product falls under the definition of a "toy", please see the relevant Guidance Document No. 4 of the EU Commission „Guidance document on a grey zone problem: Is a specific product covered by the Toy Safety Directive 2009/48/EC or not“ at: http://ec.europa.eu/growth/sectors/toys/safety/guidance_en

⁹ Based on DIN EN 71-9

¹⁰ REACH, Article 3 as well as CLP Regulation, Article 2

¹¹ Based on DIN EN 71-3

¹² Coatings include paints, varnishes, lacquers, inks, polymeric coatings or other substances of a similar nature, no matter how they have been applied to the toy.

¹³ Law on the placing on the market, return and high-quality recycling of packaging (German Packaging Act – VerpackG), from 07/05/2017 (BGBl. I S. 2234) – VerpackG § 3 (1) No. 2

¹⁴ German Packaging Act – VerpackG § 3 (5)

Sales (or primary) packaging¹⁵: packaging that is made available as a sales unit and arises at the final consumer. Sales packaging within the meaning of the Ordinance shall also include such packaging provided by retailers, restaurants and other service providers as facilitates or supports the transfer of toys to the final consumer (service packaging) as well as disposable dishes.

Packaging¹⁶: Products manufactured from materials of any nature for the containment, protection, handling, delivery or presentation of toys which are passed on by the manufacturer to the distributor or final consumer.

2 Scope

These Basic Criteria shall apply to all toys within the scope of the Toy Safety Directive¹⁷). Excluded from the scope are:

- Experiment kits, especially
 - ♦ Chemistry kits, chemistry toys pursuant to Annex V, Toy Safety Directive
 - ♦ Electronic kits, etc.
 - ♦ Solar kits (covered by the Blue Angel for Solar-Powered Products¹⁸)
- Toys in food pursuant to Annex V to the Toy Safety Directive
- Finger paints
- Artists' colours – such products are covered by their own Basic Criteria (in Austria: ÖUZ 57¹⁹)
- Writing Utensils – such products are covered by their own Basic Criteria (in Germany: DE-UZ 200²⁰, in Austria: ÖUZ 57)
- Colouring books as well as other printed matter – such products are covered by their own Basic Criteria (e.g. DE-UZ 195²¹, in Austria: ÖUZ 24²²)

The following materials may be used:

- wood
- metals
- plastics
- paper
- textiles

¹⁵ German Packaging Act – VerpackG § 3 (1) No. 1

¹⁶ German Packaging Act – VerpackG § 3 (1)

¹⁷ Directive 2009/48/EG from the European Parliament and of the Council of 18 June 2009 on the safety of toys, Official Journal of the European Union, L 170/1, OJ. 2013 L 355 p. 92) (06/30/2009), last amended by Article 1 of Directive (EU) 2021/903 from 6/3/2021 (OJ L 197 p. 110)

<http://eur-lex.europa.eu/legal-content/DE/TXT/?qid=1503501568682&uri=CELEX:02009L0048-20170524>,

<http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32009L0048&from=de>

¹⁸ DE-UZ 116 (Solar-Powered Products) <https://www.blauer-engel.de/uz116>

¹⁹ AT UZ 57 (Office and School Supplies)

http://www.umweltzeichen.at/richtlinien/UZ57_R3.1a_B%C3%BCro_und_Schulartikel_2014.pdf

²⁰ DE-UZ 200 (Writing Utensils and Stamps)

<https://www.blauer-engel.de/uz200>

²¹ DE-UZ 195 (Printed Matter)

<https://www.blauer-engel.de/uz195>

²² AT UZ 24 (Printed Matter)

https://www.umweltzeichen.at/file/Richtlinie/UZ%2024/Long/Uz24_R7a_Druck-Recyclingpapierprodukte_2021.pdf

- rubber/elastomers
- leather
- mixtures as integral components of toys²³
- composite materials as mixtures of the above-mentioned types of materials

The content of other materials must not exceed a total of 2% (w/w).

3 Requirements

The Blue Angel eco-label (shown on page 1) can be used to label toys falling within the scope under paragraph 2, provided that they meet the requirements specified below.

Product families may be formed within the scope of the award of the Blue Angel eco-label. The relative quantities of the different toy materials may vary within a product family. Every single toy of a product family must meet all paragraphs of the following requirements.

3.1 Description of the Toy

The following information shall be compiled for each toy to be Blue Angel eco-labelled:

- Description, including illustration, of the toy concerned and its packaging. If product families are formed it shall be permitted to present the description of one representative toy. To allow RAL GmbH to successfully identify the individual toys the applicant shall provide a list specifying the individual toys that belong to a certain family.
- Indication of the total weight and the dimensions (e.g. size of the playing pieces) of the toy.
- List of all parts of the toy, specifying their weight and the weight percent (w/w) of the following toy materials:
 - ♦ wood
 - ♦ metal
 - ♦ plastics
 - ♦ where the percentage (w/w) of plastics originating from the following sources is to be indicated separately in relation to the total amount of plastics:
 - Post-production recycled materials
 - Post-consumer recycled materials
 - Bio-based plastics²⁴
 - ♦ paper
 - ♦ textiles
 - ♦ rubber/caoutchouc
 - ♦ leather
 - ♦ mixtures as integral components of toys²⁵
 - ♦ composite materials as mixture of the above-mentioned types of materials
 - ♦ other materials (to be named, including specification)

²³ e.g. fluid-filled toys or toys which, by themselves, are chemical mixtures, such as soap bubbles

²⁴ Plastics include natural polymers, such as corn starch, lignin, polylactides and, therefore, shall be declared under this category.

²⁵ e.g. fluid-filled toys or toys which, by themselves, are chemical mixtures, such as soap bubbles

- Both minimum and maximum content shall be indicated in cases where the percentage of the individual materials of the toys of a product family differs. For compliance with the requirement the respective upper threshold must be met²⁶.
- "Other materials" shall be listed starting from 1 percent (w/w) in the respective toy and they must not exceed a total of 2 % (w/w).

Compliance Verification

The applicant shall present in Annex 2 a description of the toy or the toy family specifying the toy materials and chemical products used (see specimen table in Appendix A). Also, the applicant shall name the place of manufacture of the toy in Annex 1.

If so requested by RAL gGmbH, the applicant shall present additional documents (e.g. extracts from catalogues) that will help get an idea of the toy or the family of products.

3.2 Compliance with Legal Standards

It is a matter of course for Blue Angel eco-labelled products to comply with current provisions of the relevant German and European laws.

Compliance Verification

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

3.3 Acceptance of Test Reports

RAL gGmbH will only accept test reports from testing laboratories that can prove their accreditation according to DIN EN ISO/IEC 17025 „General requirements for the competence of testing and calibration laboratories“. For this purpose, the certification document or accreditation certificate of Deutscher Akkreditierungsstelle (DAkkS) (German Accreditation Body) or another accreditation scheme registered in the multinational agreement (MLA) shall be presented. If no standardized testing methods are available the test report shall indicate that the methods used are sensitive enough to verify compliance with the limits set.

Test reports may be provided by the applicant or, alternatively, by applicant's suppliers.

Test records, such as material safety data sheets, test reports or test protocols must not be older than two years at the time of application.

3.4 General Safety Requirements

The toys must conform to the following standards to the extent they are applicable to the specific product:

- EN 71-1 Safety of Toys - Part 1: Mechanical and physical properties
- EN 71-2 Safety of Toys - Part 2: Flammability
- EN 71-8 Safety of Toys - Part 8: Activity toys for domestic use
- EN 71-14 Safety of Toys - Part 14: Trampolines for domestic use
- EN 62115 Electric toys - Safety

²⁶ That means for families where one toy has a relative content of only 3 % (w/w) while another one contains 15 % (w/w) of this material, the 15 % (w/w) will be the decisive point to answer the question, whether or not quantitative compliance verifications will be required for the material.

Compliance Verification

The applicant shall declare compliance with the respective standards in Annex 1 and attach to the application corresponding test reports prepared by an appropriately accredited testing laboratory as Annex 3.

3.5 Health and Health-related Requirements

3.5.1 General Exclusion of Substances for Toy Materials and Chemical Products

The materials and mixtures used in the manufacture of toys must not contain any substances that are classified as follows under the CLP Regulation²⁷:

Hazard Class	Hazard Category	CLP Regulation (EC) No 1272/2008
Carcinogenicity	Carc. 1A, 1B	H350 May cause cancer
Carcinogenicity	Carc. 1A, 1B	H350i May cause cancer if inhaled
Carcinogenicity	Carc. 2	H351 ²⁸ Suspected of causing cancer
Germ cell mutagenicity	Muta. 1A, 1B	H340 May cause genetic defects
Germ cell mutagenicity	Muta. 2	H341 Suspected of causing genetic defects
Reproductive toxicity	Repr. 1A, 1B	H360 May damage fertility or the unborn child
Reproductive toxicity	Repr. 2	H361 Suspected of damaging fertility or the unborn child
Acute toxicity	Acute Tox. 1, 2	H300 Fatal if swallowed.
Acute toxicity	Acute Tox. 1, 2	H310 Fatal in contact with skin.
Acute toxicity	Acute Tox. 1, 2	H330 Fatal if inhaled.
Specific target organ toxicity Repeated exposure	STOT RE 1	H372 Causes damage to organs through prolonged or repeated exposure.
Specific target organ toxicity Single exposure	STOT SE1	H370 Causes damage to organs.
Sensitization of respiratory tract or skin	Sens. Resp. 1	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Sensitization of respiratory tract or skin	Sens. Skin 1	H317 May cause an allergic skin reaction.
Environmental hazard	Aquatic Acute 1	H400 Very toxic to aquatic life.
Environmental hazard	Aquatic Chronic 1	H410 Very toxic to aquatic life with long lasting effects.
Environmental hazard	Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects
Environmental hazard	Hazardous to the ozone layer	H420 Harms public health and the environment by destroying ozone in the upper atmosphere.

This requirement shall not apply to nickel as a component of stainless steel alloys. Moreover, the materials and mixtures must not contain any substances²⁹ included into the so-called Candidate List according to Article 59 of the REACH Regulation. The Candidate List, as amended at the time of application, shall be applicable.

²⁷ Above the cut-off values for the Material Safety Data Sheet. For the cut-off values, please see the CLP Regulation, Annex 1, Part 1, Section 1.1.2.2 ff

²⁸ Except titanium dioxide, as the classification only refers to inhalable dusts.

²⁹ Above the cut-off values for the Material Safety Data Sheet

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1 making reference to Annex 2 (description of the toy).

If mandatory for the respective toy material or chemical product the applicant shall attach to the application a Material Safety Data Sheet as Annex 4.

The supplier of a substance or mixture shall, as necessary, also be authorized to directly submit this compliance verification to RAL gGmbH.

RAL gGmbH shall be informed immediately about any changes in the substance composition of the toy materials or in the chemical products used in manufacture of toys.

3.5.2 Specific Bans on Substances and Mixtures

The relevant substance bans mentioned in the following chapters shall apply to the toy materials and chemical products used in the manufacture of toys. A schedule of the tests to be submitted can be found in Appendix H.

3.5.2.1 All Toy Materials

Toy materials exceeding the maximum migration limits³⁰ for elements and compounds³¹ as shown in the table below must not be used:

Element	Migration limit		
	mg/kg in dry, brittle, dusty or pliable toy materials	mg/kg in liquid or adhesive toy materials	mg/kg in scraped toy materials
Aluminium	2 250	560	28 130
Antimony	45	11,3	560
Arsenic	3,8	0,9	47
Barium	1 500	375	18 750
Boron	1 200	300	15 000
Cadmium	1,3	0,3	17
Chromium(III)	37,5	9,4	460
Chromium(VI)	0,02	0,005	0,053
Cobalt	10,5	2,6	130
Copper	622,5	156	7 700
Lead	2,0	0,5	23
Manganese	1 200	300	15 000
Mercury	7,5	1,9	94
Nickel	75	18,8	930
Selenium	37,5	9,4	460
Strontium	4 500	1 125	56 000
Tin	15 000	3 750	180 000
Organotin	0,9	0,2	12
Zinc	3 750	938	46 000

- It shall not be permitted to apply a metallic surface coating containing lead, cadmium, chromium, nickel or their compounds to the toy materials or toy parts.

³⁰ Such substances may, for example, be present as impurities in media and materials.

³¹ On the basis of the Toy Safety Directive (Directive 2009/48/EC) and taking into account the updated BfR opinion No 034/2012 of 10 August 2012 „Health Risks through heavy metals from toys“ (BfR - Federal Institute for Risk Assessment)
<http://www.bfr.bund.de/cm/349/health-risks-through-heavy-metals-from-toys.pdf>
Values differing from those in the Toy Safety Directive are highlighted.

The following substances must not be added to any toy material:

- Fragrances according to Appendix F
- Nanosilver
- Preservatives

Notwithstanding this, exceptions exist for mixtures as integral components of the toy (see para. 3.5.2.3) and chemical products (para. 3.5.2.2).

Stuffing of any kind must not be dyed.

Compliance Verification

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

Compliance with migration limits of the elements and compounds listed shall be verified in Annex 3 by means of a test report for the toy materials and integral mixtures used in accordance with the test method pursuant to EN ISO 71-3.

3.5.2.2 Chemical Products

None of the following substances shall be contained in any chemical product used during the manufacture of the toy or toy parts:

- Fragrances according to Appendix D
- Nanosilver

Moreover, the following maximum concentration limits shall apply to the below substances/substance groups in chemical products used in the manufacture of toys:

- Phthalates according to Appendix B: 0.05 % (w/w)
- Alkylphenols (APs) and alkylphenol ethoxylates (APEOs) according to Appendix C: 0.0050 % (APs) or 0.05 % (w/w) (APEOs)
- Perfluorinated and polyfluorinated compounds (PFCs) according to Appendix D: 0.02 % (w/w) or 0.1 % (w/w) (FTOH).
- Azo dyes according to Appendix E must not be used.
- Primary aromatic amines according to Appendix E: 0.0005 % (w/w) (to prove the absence of the above-mentioned azo dyes)
- The VOC³² content of chemical products used for surface coating in the manufacture of toys and/or toy parts must not exceed 130 g/l.
 - ♦ Notwithstanding this, the maximum VOC content for chemical products used to coat wood or wood-based materials in the manufacture of toys and/or toy parts or used in printing inks shall not exceed 5 % (w/w).
 - ♦ Adhesives shall not exceed a maximum VOC content of 3 % (w/w).
 - ♦ The concentration of volatile aromatic hydrocarbons³³ in chemical products used in the production of toys and/or toy materials must not exceed 0.1 % (w/w).
 - ♦ Preservatives in chemical products used in the manufacture of toys shall comply with Appendix I (corresponds to Appendix A of DE-UZ 102).

³² According to the Directive 2004/42/EC volatile organic compounds (VOCs) are defined as organic compounds having an initial boiling point less than or equal to 250 °C measured at a standard atmospheric pressure of 101.3 kPa.

³³ VOC the molecule of which simultaneously has at least one aromatic structure, e.g. toluene

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the following test reports in Annex 3:

- To prove the absence of phthalates: test report according to EN ISO 18856 or EN 14602 or a comparable method.
- To prove the absence of alkylphenols (APs) and alkylphenol ethoxylates (APEOs): test report according to EN ISO 18254 (modified using methanol extraction) or a comparable method.
- To prove the absence of PFCs: Test report according to the draft pursuant to CEN/TS 15968 or a comparable method (methanol extraction with subsequent liquid chromatography and tandem mass spectroscopy LC/MS/MS).
- To prove the absence of primary aromatic amines: Test report according to EN 71-9 in combination with EN 71-10 and 71-11.

3.5.2.3 Mixtures as Integral Components of the Toy³⁴

- The content of isothiazolinone compounds shall not exceed the following limits:

Substance	CAS No	Maximum content
1,2-benzisothiazol-3(2H)-one	2634-33-5	< 5 mg/kg (concentration limit)
Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	< 1 mg/kg (concentration limit)
5-chloro-2-methyl-4-isothiazolin-3(2H)-one	26172-55-4	< 0.75 mg/kg (concentration limit)
2-methylisothiazolin-3(2H)-one	2682-20-4	< 0.25 mg/kg (concentration limit)

- The use of preservatives shall be restricted to those mentioned in DIN EN 71-7 Annex B. They must be declared on the packaging.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the following test reports:

- To prove the content of isothiazolinone compounds: Test reports according to DIN EN 71-10 and 11 in Annex 3.
- The applicant shall name the preservatives (or declare the absence of preservatives) in Annex 1 and document the packaging declaration in Annex 6.

3.5.2.4 Wood

Wooden toy materials must not contain any of the following substances in concentrations exceeding the threshold values specified below:

- Alkylphenols (APs) and alkylphenol ethoxylates (APEOs) according to Appendix C in concentrations above 0.0050 % (APs) or 0.05 % (w/w) (APEOs)
- Azo dyes according to Appendix E

³⁴ e.g. fluid-filled toys or toys which, by themselves, are chemical mixtures, such as soap bubbles

- Primary aromatic amines according to Appendix E in concentrations above 0.0005 % (w/w). The following shall apply from a content of 5% (w/w) of the respective material in the toy:
- Formaldehyde-glued wood-based materials must not exceed a steady-state concentration of formaldehyde of 80 µg/m³ within the scope of a test chamber analysis according to CEN/TS 16516 (or the subsequent EN).
- Compliance verifications according to EN 717-1 shall also be admissible. If testing is done according to DIN EN 717-1 a maximum of 0.03 ppm shall not be exceeded (based on the WKI calculation model for formaldehyde).
- The product shall have no more than a typical material smell. Such smell must not be unpleasant. Moreover, volatile components (e.g. solvents) must not emit technically avoidable odours.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the following test reports in Annex 3:

- *To prove the absence of alkylphenols (APs) and alkylphenol ethoxylates (APEOs): test report according to EN ISO 18254 (modified using methanol extraction) or a comparable method.*
- *To prove the absence of primary aromatic amines: Test report according to DIN EN 71-9 in combination with DIN EN 71-10 and 71-11.*

The following shall apply from a content of 5% (w/w) of the respective material in the toy:

- *Formaldehyde-glued wood-based materials: The applicant shall declare compliance with the requirement for formaldehyde in Annex 1 and present, in Annex 3, a test report prepared by a testing laboratory accredited for such testing by BAM (Bundesanstalt für Materialforschung und -prüfung - Federal Institute for Materials Research and Testing) which confirms compliance with this requirement.*
 - ♦ *Samples of wood-based materials shall be prepared in accordance with EN 717-1 (irrespective of the detection method used).*
 - ♦ *Emissions shall be measured in accordance with CEN TS 16516 in combination with the DIBt Principles for health assessment of construction products used in interiors (DIBt Deutsches Institut für Bautechnik - German Institute for Building Technology). The uniform load of the test chamber shall be 1.4 m²/m³. Alternatively, the applicant may present a test report according to EN 717-1. If so, the air exchange rate shall be set to 0.3 per hour.*
 - ♦ *The format of the test report shall be based on CEN/TS 16516 SPEC 18023 [paragraph 10], the AgBB³⁵ evaluation shall be conducted using the ADAM evaluation mask.*
 - ♦ *The wood-based materials selected for the test chamber examination shall be tested no later than 14 days after production.*

³⁵ Ausschuss zur gesundheitlichen Bewertung von Bauprodukten (AgBB) - Committee for Health-Related Evaluation of Building Products
<https://www.umweltbundesamt.de/en/topics/health/commissions-working-groups/committee-for-health-related-evaluation-of-building>

- ♦ The odour test shall be performed in accordance with ISO 16000-28³⁶ in combination with VDI 4302³⁷ and documented by a test report. During this test the odour intensity of the products shall not exceed 7 pi or "odour grade" 3, respectively (slightly unpleasant).

3.5.2.5 Paper/Cardboard

Toy materials made of paper/cardboard must not contain any of the following substances in concentrations above the threshold values specified below:

- Alkylphenols (APs) and alkylphenol ethoxylates (APEOs) according to Appendix C in concentrations exceeding 0.0050 % (APs) or 0.05 % (w/w) (APEOs).
- Perfluorinated and polyfluorinated compounds (PFCs) according to Appendix D in concentrations exceeding 0.02 % (w/w) or 0.1 % (w/w) (FTOH).
- Azo dyes according to Appendix E.
- Primary aromatic amines according to Appendix E in concentrations above 0.0005 % (w/w).

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the following test reports in Annex 3:

- *To prove the absence of alkylphenols (APs) and alkylphenol ethoxylates (APEOs): test report according to EN ISO 18254 (modified using methanol extraction) or a comparable method.*
- *To prove the absence of PFCs: Test report according to the draft pursuant to CEN/TS 15968 or a comparable method (methanol extraction with subsequent liquid chromatography and tandem mass spectroscopy LC/MS/MS).*
- To prove the absence of primary aromatic amines: Test report according to DIN EN 71-9 in combination with DIN EN 71-10 and 71-11.

3.5.2.6 Plastics

Toy materials made of plastics must not contain any of the following substances in concentrations above the threshold values specified below:

Phthalates according to Appendix B in concentrations above 0,05 % (w/w)

- Alkylphenols (APs) and alkylphenol ethoxylates (APEOs) according to Appendix C in concentrations exceeding 0.0050 % (APs) or 0.05 % (w/w) (APEOs).
- Perfluorinated and polyfluorinated compounds (PFCs) according to Appendix D in concentrations exceeding 0.02 % (w/w) or 0.1 % (w/w) (FTOH).
- Polycyclic aromatic hydrocarbons (PAHs) in concentrations above the threshold values specified in AfPS³⁸ GS 2014:01 PAK³⁹ (GS certification) for the respective category.
- The maximum concentrations of flame-retardant plasticizers listed in the table below must not be exceeded:

³⁶ Indoor air - Part 28: Determination of odour emissions from building products using test chambers (ISO 16000-28:2012)

³⁷ VDI 4302 Sensory testing of indoor air and determination of odour emissions from building products

³⁸ Product Safety Commission AfPS

³⁹ Product Safety Commission (AfPS) GS specification Testing and evaluation of polycyclic aromatic hydrocarbons (PAH) for the award of the GS mark - Specification according to § 21 para. 1 no. 3 ProdSG - AfPS GS 2019:01 PAH

Substance	CAS No	Maximum Content
TCEP	115-96-8	< 5 mg/kg (total content)
TCPP	13674-84-5	< 5 mg/kg (total content)
TDCP	13674-87-8	< 5 mg/kg (total content)
Triphenyl phosphate	115-86-6	Detection limit of the method
Tri-o-cresyl phosphate	78-30-8	Detection limit of the method
Tri-m-cresyl phosphate	563-04-2	Detection limit of the method
Tri-p-cresyl phosphate	78-32-0	Detection limit of the method

The following shall apply to specific types of plastic:

- The migration of bisphenol A from
 - ♦ polycarbonate plastic
 - ♦ epoxy resins⁴⁰
 - ♦ must not exceed 0.04 mg/L in toy materials.
- The emissions of formamide (CAS No 75-12-7) from
 - ♦ foamed plastics - the formamide content of which exceeds 200 mg/kg - must not exceed an emission limit of 20 µg/m³ after 28 days.
- PVCs must not be used as toy material. Notwithstanding this, cable jackets and electric parts may be made of PVC - whereas the ban on phthalates also applies to cable jackets (see above in this paragraph).

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the following test reports in Annex 3:

- *To prove the absence of alkylphenols (APs) and alkylphenol ethoxylates (APEOs): test report according to EN ISO 18254 (modified using methanol extraction) or a comparable method.*
- *To prove the absence of phthalates: test report according to EN ISO 18856 or EN 14602 or a comparable method.*
- *To prove the absence of PFCs: Test report according to the draft pursuant to CEN/TS 15968 or a comparable method (methanol extraction with subsequent liquid chromatography and tandem mass spectroscopy LC/MS/MS).*
- *With regard to PAHs: Test report according to „AfPS GS 2014:01 PAK“.*
- *Test report to prove the absence of flame-retardant plasticizers*
 - ♦ *Tris(2-carboxyethyl)phosphine (TCEP), (2-chloroisopropyl)phosphate (TCPP) and Tris(1,3-dichloroisopropyl)phosphate (TDCP) shall be determined by means of a method with a detection limit that is suited to review the limit specified⁴¹.*
 - ♦ *The absence of plasticizers triphenyl phosphate, tri-o-cresyl phosphate, tri-m-cresyl phosphate and tri-p-cresyl phosphate shall be verified in accordance with DIN EN 71-10 and 11.*

⁴⁰ See the explanatory guidelines to Directive 2009/48/EC on the safety of toys <https://www.wko.at/oe/handel/papier-spielwarenhandel/richtlinie-eg-ueber-die-sicherheit-von-spielzeug.pdf>

⁴¹ Here, the Toy Safety Directive leaves the choice of the method open. It only needs to be suitable for checking compliance with the relevant limit. In such cases, testing laboratories usually use suitable house methods.

- *Compliance with the migration limit for bisphenol A shall be verified by means of a test report meeting the specifications of DIN EN 71-10 and 11. Notwithstanding the migration requirements specified, migration shall be determined at 40°C and for a period of 4 hours.*
- *The applicant shall name all foam materials containing more than 200 mg/kg of formamide. The formamide content shall be determined using an appropriate method. The applicant shall verify compliance with the emission limit of 20 µg/m for these formamide-containing foams after a maximum of 28 days by means of a test report using the test method according to ISO 16000-6 and 16000-9.*

3.5.2.7 Leather and Skins

Toy materials made of leather must not contain any of the following substances in concentrations above the threshold values specified below:

- Alkylphenols (APs) and alkylphenol ethoxylates (APEOs) according to Appendix C in concentrations exceeding 0.0050 % (APs) or 0.05 % (w/w) (APEOs).
- Azo dyes according to Appendix E.
- Primary aromatic amines according to Appendix E in concentrations above 0.0005 % (w/w).

The following shall apply from a content of 5% (w/w) of the respective material in the toy:

- The use of formaldehyde or formaldehyde-releasing substances shall be prohibited in the manufacture or treatment of leather and skins.
- Only leather and skins from non-mineral or vegetable tanning processes shall be permitted as toy materials.
- Leather used in the manufacture of toys may only be treated with preservatives that meet the requirements of Appendix G.
- A chemical preservation of the finished leather, including the coatings, shall not be permitted.

Testing shall be performed on the finished leather with a moisture content of about 10 percent. It shall be repeated continuously every year and the results shall be presented to RAL gGmbH upon request. If testing reveals preservatives at levels above the maximum values specified RAL gGmbH shall be informed immediately.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the following test reports in Annex 3:

- *To prove the absence of alkylphenols (APs) and alkylphenol ethoxylates (APEOs): test report according to EN ISO 18254 (modified using methanol extraction) or a comparable method.*
- *To prove the absence of primary aromatic amines: Test report according to DIN EN 71-9 in combination with DIN EN 71-10 and 71-11.*

The following shall apply from a content of 5% (w/w) of the respective material in the toy:

- *Test report on the release of formaldehyde according to ISO 17226-1 (Leather). The amount of free and partly hydrolysable formaldehyde shall be less than 16 mg/kg.*
- *The leather manufacturer shall either declare that the leather does not undergo any preservation treatments (gapless from slaughter to the finished leather) or prove that preservation is in conformity with the framework conditions set out in Appendix G and,*

upon filing the application, present to RAL gGmbH a test report pursuant to DIN EN ISO 13365 listing the preservatives listed in Appendix G with the test methods described therein. Sampling shall be done in accordance with DIN EN ISO 2418.

3.5.2.8 Textiles

Textile toy materials must not contain any of the following substances in concentrations above the threshold values specified below:

- Alkylphenols (APs) and alkylphenol ethoxylates (APEOs) according to Appendix C in concentrations exceeding 0.0050 % (APs) or 0.05 % (w/w) (APEOs).
- Perfluorinated and polyfluorinated compounds (PFCs) according to Appendix D in concentrations exceeding 0.02 % (w/w) or 0.1 % (w/w) (FTOH).
- Azo dyes according to Appendix E.
- Primary aromatic amines according to Appendix E in concentrations above 0.0005 % (w/w).
- Polycyclic aromatic hydrocarbons (PAHs) in concentrations above the threshold values specified in AfPS⁴² GS 2014:01 (GS certification) for the respective category.
- The following maximum concentrations of flame-retardant plasticizers must not be exceeded:

Substance	CAS No	Maximum Content
TCEP	115-96-8	< 5 mg/kg (total content)
TCPP	13674-84-5	< 5 mg/kg (total content)
TDCP	13674-87-8	< 5 mg/kg (total content)
Triphenyl phosphate	115-86-6	Detection limit of the method
Tri-o-cresyl phosphate	78-30-8	Detection limit of the method
Tri-m-cresyl phosphate	563-04-2	Detection limit of the method
Tri-p-cresyl phosphate	78-32-0	Detection limit of the method

The following shall apply from a content of 5% (w/w) of the respective material in the toy:

- The use of formaldehyde or formaldehyde-releasing substances shall be prohibited in the manufacture and treatment of textiles.
- The following tensides and complexing agents must not be used in the manufacture and treatment of textiles:
 - ♦ linear alkylbenzene sulfonates (LAS)
 - ♦ bis(hydrogenated tallow alkyl) dimethylammonium chloride (DSDMAC)
 - ♦ distearyl dimethyl ammonium chloride (DSDMAC)
 - ♦ di(hardened tallow) dimethyl ammonium chloride (DHTDMAC)
 - ♦ ethylenediaminetetraacetic acid (EDTA)
 - ♦ diethylenetriaminepentaacetic acid (DTPA)
 - ♦ 4-(1,1,3,3-tetramethylbutyl)phenol
 - ♦ 1-methyl-2-pyrrolidone
 - ♦ nitrilotriacetic acid (NTA)
- The level of antimony in the polyester fibres must not exceed 260 mg/kg.

⁴² Product Safety Commission (AfPS)
GS Specification for the Testing and Assessment of Polycyclic Aromatic Hydrocarbons (PAHs) in the Awarding of the GS Mark – Specification pursuant to Section 21 (1) No. 3 of the Product Safety Act (ProdSG) – AfPS GS 2019:01 PAH
Status: 10 April 2020

- The colour fastness of the textiles used shall meet the following criteria:
 - ♦ Colour fastness to washing.
 - ♦ The colour fastness to washing and the fastness to staining shall each have a minimum rating of 3-4 under ISO 105 A03.
 - ♦ Colour fastness to (acid/alkaline) perspiration.
 - ♦ The colour fastness to (acid/alkaline) perspiration shall have a minimum rating of 3-4 under ISO 105 A03 (change of colour and staining).
 - ♦ Colour resistance to rubbing.
 - ♦ The colour fastness to rubbing (wet) shall have a minimum rating of 3-4 under ISO 105 A03. The colour fastness of the textile materials to rubbing (dry) shall have a minimum rating of 4.
 - ♦ Colour bleeding caused by saliva and sweat according to Section 64 LFGB (deutsches Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch - German Food, Commodity and Feed Act), BVL B 82.10-1 in combination with 53160, Parts 1 and 2. The textile toy materials shall be colourfast to saliva (rating 5).

These criteria shall not apply to linen goods or products that are neither dyed nor printed.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the following test reports in Annex 3:

- *To prove the absence of alkylphenols (APs) and alkylphenol ethoxylates (APEOs): test report according to EN ISO 18254 (modified using methanol extraction) or a comparable method.*
- *To prove the absence of PFCs: Test report according to the draft pursuant to CEN/TS 15968 or a comparable method (methanol extraction with subsequent liquid chromatography and tandem mass spectroscopy LC/MS/MS).*
- *To prove the absence of primary aromatic amines: Test report according to DIN EN 71-9 in combination with DIN EN 71-10 and 71-11.*
- *Test report to verify compliance with the requirements for PAHs according to „AfPS GS 2019:01 PAK“.*
- *Test report to prove the absence of flame-retardant plasticizers:*
 - ♦ *TCEP, TCPP and TDCP shall be determined by means of a method with a detection limit that is suited to review the limit specified⁴³.*
 - ♦ *The absence of plasticizers triphenyl phosphate, tri-o-cresyl phosphate, tri-m-cresyl phosphate and tri-p-cresyl phosphate shall be verified in accordance with DIN EN 71-10 and 11.*

The following shall apply from a content of 5 % (w/w) of the respective material in the toy:

- *Test report on the release of formaldehyde according to ISO 14184-1 (Textiles). The amount of free and partly hydrolysable formaldehyde shall be less than 16 mg/kg.*
- *The absence of the tensides and complexing agents listed shall be additionally verified by a declaration from the textile supplier.*

⁴³ Here, the Toy Safety Directive leaves the choice of the method open. It only needs to be suitable for checking compliance with the relevant limit. In such cases, testing laboratories usually use suitable house methods.

- *As regards the maximum antimony content in polyester fibres the applicant shall declare*
 - ♦ *either that no polyester fibres or only antimony-free polyester fibres are used and present a corresponding declaration from the supplier in Anlage 3 or,*
 - ♦ *that the requirement for the maximum antimony content is met. In this case, the applicant shall present a test report from the fibre supplier in Annex 3 which confirms compliance with this criterion. Testing shall be performed using the method of direct determination. The test shall be carried out on the raw fibre prior to any wet treatment.*
- *The applicant shall present the following test reports in Annex 3 to prove the colour fastness of the textile toy materials:*
 - ♦ *Test report using the test method EN ISO 105-C06 (single wash at temperature as marked on the product with perborate powder).*
 - ♦ *Test report using the test method EN ISO 105-E04 (acid and alkaline, comparison with multi-fibre fabric).*
 - ♦ *Test report using the test method EN ISO 105-X12*
 - ♦ *Test report based on Section 64 LFGB (deutsches Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch - German Food, Commodity and Feed Act), BVL B 82.10-1 in combination with 53160, Parts 1 and 2.*

3.5.2.9 Rubber and Elastomers

Toy material made of rubber/elastomers must not contain polycyclic aromatic hydrocarbons (PAHs) in concentrations above the threshold values specified in AfPS GS 2019:01 PAK⁴⁴ (GS certification) for the respective category.

The following shall apply from a content of 5% (w/w) of the respective material in the toy:

The migration of N-nitrosamines and nitrosatable substances from rubber and other elastomers must not exceed 0.01 mg/kg (N-nitrosamines) or 0.1 mg/kg (N-nitrosatable substances), respectively.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and present the following test reports in Annex 3:

- *Test report to verify compliance with the requirements for PAHs according to „AfPS GS 2019:01 PAK“.*

The following shall apply from a content of 5% (w/w) of the respective material in the toy:

- *Test report on the migration of N-nitrosamines and nitrosatable substances according to EN 71-12. The standard shall be modified so that a migration period of 24h is applied instead of the 4h given in the standard.*

⁴⁴ Product Safety Commission (AfPS)

GS Specification for the Testing and Evaluation of Polycyclic Aromatic Hydrocarbons (PAHs) in the Award of the GS Mark – Specification in accordance with Section 21 (1) No. 3 of the Product Safety Act (ProdSG)
– AfPS GS 2019:01 PAH
Version dated: 10 April 2020

3.5.3 Periodic Tests

To ensure a high level of protection the applicant shall perform annual product tests to document compliance with the following requirements.

- Compliance with the requirements regarding the migration of metals and elements from toy materials pursuant to para. 3.5.2.1
- Compliance with the requirements for phthalates pursuant to paras. 3.5.2.2 and 3.5.2.6
- Compliance with the requirements for alkylphenols (APs) and alkylphenol ethoxylates (APEOs) pursuant to paras. 3.5.2.2, 3.5.2.4, 3.5.2.5, 3.5.2.6, 3.5.2.7 and 3.5.2.8
- Compliance with the requirements for PAHs pursuant to paras. 3.5.2.6, 3.5.2.8 and 3.5.2.9

Requirements

The applicant shall employ an independent testing laboratory to perform the periodic tests, i.e. to take random samples of toys from the most recent production and to carry out the respective tests. The applicant shall indicate time and site of production (e.g. indication of the lot number etc.).

RAL gGmbH shall set the time for presentation of the annual compliance verifications.

Costs may arise from the testing for the compliance verifications to be submitted annually. The costs of these follow-up tests shall be borne by the applicant and shall be paid either to a third verifier or to RAL gGmbH⁴⁵.

3.6 Origin-related Requirements

3.6.1 Origin of Wood and Wood-based Materials

The following shall apply from a content of 10% (w/w) of the respective material in the toy:

It shall be ensured that all processed wood comes from legal sources.

The origin of the wood must be verifiable. The use of wood from forests of high conservation value, such as, for example, tropical or boreal primeval forests, shall be prohibited.

Moreover, 100 percent of the wood must come from forests managed in compliance with the principles of sustainable forest management, as can be proved.

In addition, at least 70 percent⁴⁶ of the total amount of wood used for wood-based materials must come from sustainably managed forests. The respective forest enterprises must work in compliance with the requirements of a high ecological and social standard and be certified accordingly.

Fundamental principles and rights at work, as specified in the current core labour standards of the International Labour Organization (ILO Core Labour Standards) must be met in the production of wood. In addition to the core labour standards, ILO Convention No 155 concerning Occupational Safety and Health and the Working Environment (1981) must be met.

⁴⁵ Where there is a revision of the Schedule of Fees the revised schedule of fees shall be effective and replace the old one.

⁴⁶ Since wood-based materials are made from mixtures of wood components, e.g. wood chips, it would be impossible to achieve a higher percentage in practice because these components may be mixed at the origin of wood.

Compliance Verification

The applicant shall specify, in Annex 1, the type of wood and provide information on the geographic origin of the wood used.

The use of wood from sustainable forestry can be verified in either of the following ways:

- *If the applicant itself is certified according to the FSC or PEFC criteria for a chain of custody (CoC) the applicant shall present the relevant certificate in Annex 5.*
- *If the applicant is not certified the latter shall submit appropriate certificates of its raw material supplier in Annex 5. RAL gGmbH accepts certificates from the Forest Stewardship Council (FSC) and PEFC (Programme for the Endorsement of Forest Certification Schemes) certifying sustainable forestry and a chain of custody (CoC).*
- *The applicant shall submit other appropriate compliance verifications according to Annex 3 to the Contract pursuant to DE-UZ 38, Edition of January 2013⁴⁷. Said annex can be extended at the request of and after review by the German Umweltbundesamt (Federal Environmental Agency).*

The applicant shall declare in Annex 1 that the above-mentioned ILO labour standards are met and submit corresponding compliance verifications as Annex 8.

If the applicant is certified under the FSC criteria the social requirements regarding the origin shall be considered met.

3.6.2 Origin of Natural Textiles Fibres

The following shall apply from a content of 10% (w/w) of the respective material in the toy: Natural textile fibres (e.g. cotton, hemp, flax, wool) must come from certified organic cultivation or certified livestock breeding, respectively, or from fibres obtained during the conversion period⁴⁸ and meet the requirements of Regulation (EC) Nr. 834/2007 (also called EU ECO Regulation) or those of the US National Organic Programmes (NOP). A tolerance of 5 percent (w/w) shall be permitted.

It must be ensured at all stages of the processing chain that certified organic fibres are not mixed with conventionally grown fibres and that certified organic fibres are not contaminated by contact with inadmissible substances. The fibres used must not come from genetically modified organisms (GMOs).

As regards the proof of origin, the cellulose for synthetic cellulose fibres must meet the same criteria as wood (cf. 3.6.1).

Fundamental principles and rights at work, as specified in the ILO Core Labour Standards and in ILO Convention No 155 must be met in the production of natural textile fibres.

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1 and present a list of all textile suppliers in Annex 7.

⁴⁷ Cf. Annex 2 to the Contract pursuant to DE-UZ 38 - Low-Emission Furniture and Slatted Frames made of Wood and Wood-Based Materials
<https://www.blauer-engel.de/uz38>

⁴⁸ "Conversion" means the transition from non-organic to organic farming within a given period of time during which the provisions concerning the organic production have been applied (Council Regulation (EC) No 834/2007 on organic production and labelling of organic products).

Fibres carrying the German organic logo (Biosiegel) or the EU organic logo („Euro Leaf“) or those marked according to the US National Organic Programme (NOP) will be accepted. Also, the applicant may submit as Annex 5 corresponding certificates from an internationally IFOAM or ISO 65 or DIN EN 45011 accredited certifier verifying compliance with recognized international and national standards of organic farming.

Labelling of products as "in conversion" shall only be possible if the provisions forming the basis of the certification of the fibre production provide for the possibility of such certification for the fibre concerned. It must, however, be separately labelled in accordance with this provision.

Where applicable, the applicant shall, at the request of RAL gGmbH, submit a part identification or transaction certificate from an accredited certification body verifying compliance with the requirement at all stages of the processing chain, including details regarding the amounts of organic fibres produced, the certification body and the certification standard.

As regards the cellulose fibres used the applicant shall (in Annex 5) present certificates documenting compliance with the criteria (cf. the requirements for compliance verification under paragraph 3.6.1).

The applicant shall declare that the above-mentioned ILO Labour Standards are met and present appropriate compliance verifications in Annex 8.

- If the textile fibres have been certified according to GOTS organic or GOTS kBA/kbT (as well as with the addition „in conversion"), NATURTEXTIL IVN ZERTIFIZIERT BEST, Naturland or Organic Content Standard OCS 100 or comparable standards the ecological and social requirements for the origin of the fibres shall be considered met.*
- If the textile fibres have been certified according to Fairtrade Certified Cotton, Fairtrade Textile Standard or Fair for Life or comparable standards the ILO standards shall be considered met.*
- Compliance with the ecological requirements shall be verified by separate certification.*

3.6.3 Requirements regarding the Origin of Rubber (Natural Rubber - Caoutchouc)

The following shall apply from a content of 10% (w/w) of the respective material in the toy:

If natural rubber is used it must be from FSC-certified or organic-certified rubber forests or plantations. The ILO Core Labour Standards and in ILO Convention No 155 must be met in the production of natural rubber.

Compliance Verification

The applicant shall present an FSC or Fair Rubber Certificate⁴⁹ in Annex 5. If organic-certified natural rubber is used the applicant shall present a corresponding certificate from an IFOAM accredited or an internationally ISO 65 or EN 45011 recognized certification body verifying compliance with recognized international or national organic farming standards.

3.6.4 Origin of Plastics from Renewable Raw Materials

The following shall apply from a content of 10% (w/w) of the respective material in the toy:

- The biomass for the primary products must not be produced in areas of high biodiversity value, such as primary forests or areas designated for the protection of rare, threatened or*

⁴⁹ www.fairrubber.org

endangered ecosystems or species. Biomass must be produced in conformity with the principles of sustainable land management.

- Fundamental principles and rights at work, as specified in the ILO Core Labour Standards as well as in ILO Convention No 155 must be met in the production of biomass.

Compliance Verification

The origin of the bio-based (plastic) granules shall be verified by a certificate from one of the following certification schemes.

- Rainforest Alliance (SAN)⁵⁰
- Bonsucro⁵¹
- RSB⁵²
- ISCC+⁵³
- REDcert EU⁵⁴
- RSPO⁵⁵
- FSC⁵⁶
- PEFC⁵⁷

Moreover, the supplier shall be required to present a plausibility declaration in Annex 5 stating that the certificate presented covers the entire chain of production via certificates from the above list. Verification of compliance through „Book and Claim“ certificates shall not be permitted.

Moreover, the applicant shall (in Annex 5) provide details of the chain of supply to confirm that the biomass is produced without the use of genetically modified organisms (GMOs).

3.6.5 Requirements regarding the Origin of Paper and Cardboard

The following shall apply from a content of 10 % (w/w) of the respective material in the toy:
Paper and cardboard used in toy manufacture must be made of 100 percent post-consumer paper and meet the Blue Angel's Award Criteria DE-UZ 14 a and b (Recycled Paper and Cardboard)

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and - if paper is used - give in Annex 1 the name of the paper and the contract No pursuant to DE-UZ 14, and - if cardboard is used - give the name of the cardboard and the contract No pursuant to DE-UZ 56. Alternatively, the applicant shall present other suitable compliance verifications as Annex 5 proving that the material requirements of DE-UZ 14 or DE-UZ 56 are met.

⁵⁰ <http://www.rainforest-alliance.org/de/agriculture/standards>

⁵¹ <http://www.bonsucro.com>

⁵² <http://www.rsb.org/>

⁵³ <http://www.iscc-system.org/>

⁵⁴ <http://www.redcert.org/index.php?lang=de>

⁵⁵ <http://www.rspo.org/>

⁵⁶ <https://fsc.org/en>

⁵⁷ <https://www.pefc.de>

3.6.6 Requirements regarding the Manufacture of the Raw Materials of Composite Materials

The following shall apply from a content of 10% (w/w) of the respective material in the toy:
In terms of composite materials the qualifying quantity refers to the respective category of toy materials. If, for example, a wood-plastic material is used the plastic component alone needs to exceed the qualifying quantity in order to trigger the corresponding requirements.
If composite materials consisting of plastics, wood and/or paper are used the respective material fractions must meet the requirements of these Basic Criteria for the respective plastic, wood and/or paper toy materials.

Compliance Verification

The applicant shall present in Annex 2 a description of the composition of the composite material and attach for the respective material fractions the corresponding compliance verifications according to paras. 3.6.1, 3.6.4 and/or 3.6.5.

3.7 Requirements for Electric Toys

The following requirements shall apply to electric toys.

- Batteries and accumulators must be replaceable and it must be possible to replace them by ordinary commercially available products. Batteries and accumulators must be replaceable by the consumer with the use of standard tools.

Compliance Verification

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

The applicant shall, in Annex 6, present corresponding product information documenting the replaceability of batteries and accumulators.

3.8 Requirements for Toy Manufacturing

Fundamental principles and rights at work, as specified in the current Core Labour Standards of the International Labour Organization (ILO Core Labour Standards) as well as in ILO Convention No 155 must be met in the manufacture of Blue Angel eco-labelled toys.

Compliance Verification

The applicant shall (in Annex 1) declare compliance with the requirements for all production sites involved in the manufacture of toys (here it is no importance whether they belong to applicant's company or to a third party commissioned by the applicant).

Compliance with the requirements regarding the labour conditions can be established by submitting one of the following verifications as Annex 8:

- *The applicant shall verify that these companies are certified according to the Codes of Conduct SA 800058 or ICTI-Class A-Seal59 or according to Fairtrade.*

⁵⁸ <http://www.sa-intl.org>

⁵⁹ <http://www.toy-icti.org>.

http://www.icti-care.org/uploadfileMgnt/01_2013913144042.01_e-recognition-to-60-hour-work-week.pdf

- *Since the ICTI Seal does not include the ILO core labour standards on freedom of association and collective bargaining the companies must state how they ensure the freedom of employees/workers to express their interests and to organise (e.g. by documenting public declarations, assembly protocols).*
- *By way of exception, the applicant shall, by mutual agreement, present to RAL gGmbH, appropriate documents from which it can be seen that compliance with the ILO requirements is ensured. This can be done by presenting a valid third-party certificate or other documents. Moreover, the applicant shall make its direct suppliers (or the direct suppliers of the production site(s)) known to RAL gGmbH in Annex 7. Moreover, the applicant shall inquire these suppliers about their status regarding the social standards and document it in Annex 8.*

3.9 Requirements regarding the Availability of Spare Parts

To make sure that loss or destruction of individual parts of toys that consist of various individual toy elements (e.g. playing pieces, components or the like) which are required for the idea of game do not cause a premature end of the use of the entire toy the availability of spare parts shall be guaranteed for a minimum of 4 years from the date of purchase.

This requirement shall also and in particular apply to the toy components of electric toys that might fail prematurely and which serve the primary purpose of the game.

The spare parts must be available in the respective shops and/or via an Internet address.

Compliance Verification

The applicant shall declare compliance with the requirements in Annex 1 and provide (in Annex 6) adequate evidence of customers' access to spare parts (e.g. by an excerpt from the corresponding obligation of the trading partners or via the respective websites).

3.10 Sales (Primary) Packaging

The following requirements must be met for sales packaging⁶⁰ made of paper and cardboard:

- Such packaging must be made of at least 80 percent (w/w) of recycled fibres.
- It must be ruled out that the primary fibre content permitted comes from high-conservation value forests, such as, for example, tropical or boreal primary forests.
- Composite packaging as well as coatings on the paper/cardboard containing plastics or metals shall not be permitted.
- Plastic windows up to a percentage of 20% (w/w) of the packaging shall be permitted.

If a plastic sales packaging is used it must be

- made of at least 50 % (w/w) of post-consumer recycled material.
- Halogenated organic plastics or metallic coatings on the packaging shall be prohibited.

3.11 Secondary Packaging

Secondary packaging must consist exclusively of paper and cardboard. Both must be manufactured of 100 % recycled fibre - a tolerance of 5 % shall be permitted.

⁶⁰ See the respective definition under "Definitions". In everyday language, this is a packaging bought by the consumer along with the product and disposed of by the consumer.

Compliance Verification

The applicant shall declare compliance with the requirement in Annex 1 and, when using paper and cardboard, provide evidence of the origin of the materials and the quality of the packaging by means of written confirmations from the suppliers and, if applicable, other compliance verifications in Annex 6.

4 Applicants and Parties Involved

Manufacturers or distributors 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, 2028.

They shall be extended by periods of one year each, unless terminated in writing by March 31, 2028 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 Specimen Table for Describing the Toy (by way of example)

Component	Toy material (Category pursuant to para. 3.1)	Base material	Function	Supplier	Relative content [% (w/w)]	Relative content minimum [% (w/w)]	Relative content maximum [% (w/w)]	Further information
Cover	Plastics (virgin plastics)	Poly-butadiene	Outside cover		20			e. g. see illustration in catalog page Nr. etc
Valve	Plastics (Post-production recycled material)	Poly-propylen	Valve		<1			
Liquid inside	Integral chemical produkt	Mixture of water and tensides	Filling		80			
Glues Excellent, Müller Ag	Chemical produkt, adhesive		Fixation of valve		n.a.			

Appendix B Banned Phthalates

Name	CAS Number
Di-methyl phthalate (DMP)	131-11-3
Di-ethyl phthalate (DEP)	84-66-2
Di-n-propyl phthalate (DPP)	131-16-8
Di-ethyl-hexyl phthalate (DEHP)	117-81-7
Di-butyl phthalate (DBP)	84-74-2
Di-iso-butyl phthalate (DIBP)	84-69-5
Di-n-pentyl phthalate (DnPP)	131-18-0
Di-iso pentyl phthalate (DIPP)	605-50-5
n-Pentyl-isopentyl phthalate	776297-69-9
Di-n-hexyl phthalate (DHP)	84-75-3
Di-iso-hexyl phthalate	71850-09-4
Di-cyclo-hexyl phthalate (DCHP)	84-61-7
Di-n-octyl phthalate (DNOP)	117-84-0
Di-iso-octyl phthalate (DIOP)	27554-26-3
Di-nonyl phthalate (DNP)	84-76-4
Di-iso-nonyl phthalate (DINP)	28553-12-0, 68515-49-1
Di-iso-decyl phthalate (DIDP)	26761-40-0, 68515-49-1
Butyl benzyl phthalate (BBP)	85-68-7
Bis- 2-methoxy-ethyl phthalate (DMEP)	117-82-8
Bis(2-propylheptyl) phthalate (DPHP)	53306-54-0
1,2-benzenedicarboxylic acid, di-C7-11-branched and linearalkyl esters (DHNUP)	68515-42-4
1,2-benzenedicarboxylic acid,di-C6-8-branched alkyl esters,C7-rich (DIHP)	71888-89-6

Appendix C Banned Alkylphenols and Alkylphenol Ethoxylates

Name	CAS Number
Nonylphenol (NP), mixed isomers	104-40-5
	84852-15-3
Octylphenol (OP), mixed isomers	140-66-9
	1806-26-4
Octylphenol ethoxylates (OPEO)	9002-93-1
Nonylphenol ethoxylates (NPEO)	68412-54-4

Appendix D Banned Perfluorinated and Polyfluorinated Compounds

Name	CAS Number
Perfluorobutane Sulfonate (PFBS)	29420-49-3
Perfluorohexane Sulfonate (PFHxS)	3871-99-6
Perfluoroheptane Sulfonate (PFHpS)	375-92-8
Perfluorooctane Sulfonate (PFOS)	56773-42-3
Perfluorodecane Sulfonate (PFDS)	126105-34-8
Perfluorooctane Sulfonamide (PFOSA) 1H,1H,2H,2H H4PFOS; 6:2	754-91-6
Perfluorobutane Acid (PFBA)	375-22-4
Perfluoropentane Acid (PFPA)	2706-90-3
Perfluorohexane Acid (PFHxA)	307-24-4
Perfluoroheptane Acid (PFHpA)	375-85-9
Perfluorooctanoic Acid (PFOA)	335-67-1
Perfluorononane Acid (PFNA)	375-95-1
Perfluorodecane Acid (PFDA)	335-76-2
Perfluoroundecanoic Acid (PFUnA)	4234-23-5
Perfluorododecanoic Acid (PFDoA)	307-55-1
Perfluorotridecanoic Acid (PFTTrA)	72629-94-8
Perfluorotetradecanoic Acid (PFTeA)	376-06-7
Perfluoro-3,7-dimethyloctanoic Acid (PF-3,7-DMOA)	172155-07-6
7H-Dodecafluoroheptane Acid (HPFHpA)	-
2H,2H-perfluorodecane Acid (H2PFDA)	-
2H,2H,3H,3H-Perfluoroundecanoic Acid (H4PFUnA)	34598-33-9
1H,1H,2H,2H-Perfluorooctylacrylate (6:2 FTA)	17527-29-6
1H,1H,2H,2H-Perfluorodecylacrylate (8:2 FTA)	27905-45-9
1H,1H,2H,2H-Perfluorododecylacrylate (10:2 FTA)	17741-60-5
1H,1H,2H,2H-Perfluoro-1-hexanol (4:2 FTOH)	2043-47-2
1H,1H,2H,2H-Perfluoro-1-oktanol (6:2 FTOH)	647-42-7
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7
1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)	865-86-1
2-(N-methylperfluoro-FASE 1 octanesulfonamido)-ethanol (MeFOSE)	2448-09-7
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (EtFOSE)	1691-99-2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2

Appendix E Banned Azo Dyes and Primary Amines

Azo Dyes

Colour Index-Name	CAS 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 Blue 35	12222-75-2
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

Primary Amines

Name	EC Number	CAS Number
2,2'-dichloro-4,4'-methylenedianiline (MOCA)	202-918-9	101-14-4
2,4,5-trimethylaniline	205-282-0	137-17-7
2-Methoxyaniline, o-Anisidine	201-963-1	90-04-0
2-naphthylamine	202-080-4	91-59-8
3,3'-dichlorobenzidine 3,3'-dichlorobiphenyl-4,4'-ylenedia- mine	202-109-0	91-94-1
3,3'-dimethoxybenzidine o-dianisidine	204-355-4	119-90-4
3,3'-dimethylbenzidine 4,4'-bi-o-toluidine	204-358-0	119-93-7
4,4'-methylenedi-o-toluidine	212-658-8	838-88-0
4,4'-oxydianiline	202-977-0	101-80-4
4,4'-thiodianiline	205-370-9	139-65-1
4,4'- Diaminodiphenylmethane (MDA)	202-974-4	101-77-9
4-Aminoazobenzene	200-453-6	60-09-3
4-chloro-o-toluidine	202-441-6	95-69-2
4-chloroaniline	203-401-0	106-47-8
4-methoxy-m-phenylenediamine	210-406-1	615-05-4
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	202-453-1	95-80-7
5-nitro-o-toluidine	202-765-8	99-55-8
6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8
Anilin	200-539-3	
Benzidine	202-199-1	92-87-5
Biphenyl-4-ylamine, 4-aminobiphenyl xenylamine	202-177-1	92-67-1

Name	EC Number	CAS Number
o-aminoazotoluene,4-amino-2',3-dimethylazobenzene,4-o-tolylazo-o-toluidine	202-591-2	97-56-3
o-toluidine,2-aminotoluene	202-429-0	95-53-4

Appendix F Banned Fragrances

INCI name (or, if none exists, perfuming name according to CosIng ⁶¹)	CAS-Nummer
2,4-dimethyl-3-cyclohexen-1-carboxaldehyde §	68039-49-6
AMBRETTOLIDE	7779-50-2
CARVACROL	499-75-2
CINNAMAL*	104-55-2
Citrus paradisi §	8016-20-4
CUMINALDEHYDE	122-03-2
CYCLOPENTADECANONE	502-72-7
DIMETHYLTETRAHYDRO BENZALDEHYDE	68737-61-1
ETHYL VANILLIN	121-32-4
HELIOTROPINE	120-57-0
ISOAMYL SALICYLATE	87-20-7
ISOLONGIFOLENEKETONE	33407-62-4
Longifolene §	475-20-7
Mentha arvensis §	68917-18-0
METHOXYCITRONELLAL	3613-30-7
METHYL CINNAMATE	103-26-4
METHYLIONANTHEME	55599-63-8
trans-trans-delta-DAMASCONE	71048-82-3
(DAMASCENONE) ROSE KETONE-4	23696-85-7
(DL)-LIMONENE*	138-86-3
1-(p-Methoxyphenyl)-1-penten-3-on	104-27-8
2,3-DIHYDRO-2,2,6-TRIMETHYLBENZALDEHYDE	116-26-7
2,4-Dihydroxy-3-methylbenzaldehyd	6248-20-0
2-Hexylidene cyclopentanone	17373-89-6
2-Methoxy-4-methylphenol	93-51-6
2-Pentylidencyclohexanon	25677-40-1
3, 6, 10-Trimethyl-3, 5, 9-undecatrien-2-on	1117-41-5
3,7-Dimethyl-2-octen-1-ol (6,7-Dihydrogeraniol)	40607-48-5
3-METHYL-5- (2,2,3-TRIMETHYL-3- CYCLOPENTENYL)PENT-4-EN-2-OL	67801-20-1
4-(p-Methoxyphenyl)-3-buten-2-on	943-88-4
4,6-Dimethyl-8-tert-butylcumarin	17874-34-9
4-Ethoxyphenol	622-62-8
4-Methoxyphenol	150-76-5
4-Methoxy-α-methyl benzenpropanal	5462-06-6
4-Phenyl-3-buten-2-on	122-57-6
4-tert-Butylphenol	98-54-4
5-Methyl-2,3-hexandion	13706-86-0
5-METHYL-α-IONONE	79-69-6
6,10-Dimethyl-3,5,9-undecatrien-2-on	141-10-6
6-Isopropyl-2-decahydronaphthalinol	34131-99-2
6-METHYL COUMARIN	92-48-8

⁶¹ CosIng Cosmetic ingredient database https://ec.europa.eu/growth/sectors/cosmetics/cosing_en

INCI name (or, if none exists, perfuming name according to CosIng⁶¹)	CAS-Nummer
7,11-Dimethyl-4,6,10-dodecatrien-3-on	26651-96-7
7-Ethoxy-4-methylcumarin	87-05-8
7-Methoxycoumarin	531-59-9
7-Methylcumarin	2445-83-2
ACETYLCEDRENE	32388-55-9
Alantwurzelöl (Inula helenium)	97676-35-2
Allyl phenoxyacetate	7493-74-5
Allylisothiocyanat	57-06-7
alpha-DAMASCONE (TMCHB)	43052-87-5/23726-94-5
alpha-ISOMETHYL IONONE*	127-51-5
alpha-PINENE and beta-PINENE	80-56-8 and 127-91-3, resp.
alpha-SANTALOL and beta-SANTALOL	115-71-9 and 77-42-9, resp.
alpha-TERPINEOL	10482-56-1/98-55-5
AMYL CINNAMAL*	122-40-7
AMYL CINNAMYL ALCOHOL*	101-85-9
AMYL SALICYLATE	2050-08-0
ANISE ALCOHOL*	105-13-5
BENZALDEHYDE	100-52-7
BENZYL ALCOHOL*	100-51-6
BENZYL BENZOATE*	120-51-4
BENZYL CINNAMATE*	103-41-3
BENZYL SALICYLATE*	118-58-1
Benzylcyanid	140-29-4
beta-CARYOPHYLLENE (ox.)	87-44-5
BUTYLPHENYL METHYLPROPIONAL *	80-54-6
CAMPHOR	76-22-2/464-49-3
CANANGA ODORATA and Ylang-ylang oil	83863-30-3; 8006-81-3
CARVONE	99-49-0/6485-40-1/2244-16-8
CEDRUS ATLANTICA BARK OIL	92201-55-3; 8000-27-9
Chenopodiumöl	8006-99-3
CINNAMOMUM CASSIA LEAF OIL CINNAMOMUM ZEYLANICUM BARK OIL	8007-80-584649-98-9
CINNAMYL ALCOHOL*	104-54-1
cis-beta-DAMASCONE	23726-92-3
CITRAL*	5392-40-5
CITRONELLOL*	106-22-9/1117-61-9/7540-51-4
CITRUS AURANTIUM AMARA FLOWER / PEEL OIL 8016-38-4; 72968-50-4	
CITRUS BERGAMIA PEEL OIL EXPRESSED	89957-91-5
CITRUS LIMONUM PEEL OIL EXPRESSED	84929-31-7
CITRUS SINENSIS (syn.: AURANTIUM DULCIS) PEEL OIL EXPRESSED	97766-30-8; 8028-48-6
Costuswurzelöl (Saussurea lappa Clarke)	8023-88-9
COUMARIN*	91-64-5
CYCLAMEN ALDEHYDE	103-95-7

INCI name (or, if none exists, perfuming name according to CosIng⁶¹)	CAS-Nummer
Cyclamenalkohol	4756-19-8
CYMBOPOGON CITRATUS / SCHOENANTHUS OILS	89998-14-1; 8007-02-1; 89998-16-3
delta-DAMASCONE	57378-68-4
Dibenzyl ether	103-50-4
Diethylmaleat	141-05-9
Dihydrocumarin	119-84-6
DIMETHYLBENZYL CARBINYL ACETATE (DMBCA)	151-05-3
Dimethylcitrat	617-54-9
Diphenylamin	122-39-4
d-Limonen	5989-27-5
Ethylacrylat	140-88-5
EUCALYPTUS SPP. LEAF OIL	92502-70-0; 8000-48-4
EUGENIA CARYOPHYLLUS LEAF / FLOWER OIL	8000-34-8
EUGENOL*	97-53-0
EVERNIA FURFURACEA EXTRACT*	90028-67-4
EVERNIA PRUNASTRI EXTRACT*	90028-68-5
FARNESOL*	4602-84-0
Ficus carica (Feigenblätter), frisch und in Zubereitungen	68916-52-9
GERANIOL*	106-24-1
HEXADECANOLACTONE	109-29-5
Hexahydrocumarin	700-82-3
HEXAMETHYLINDANOPYRAN	1222-05-5
HEXYL CINNAMAL*	101-86-0
HEXYL SALICYLATE	6259-76-3
Hydroabietylalkohol	13393-93-6
HYDROXYCITRONELLAL*	107-75-5
HYDROXYISOHEXYL 3-CYCLOHEXENE CARBOXALDEHYDE (HICC)*	31906-04-4/51414-25-6
Isocyclocitral	1335-66-6
ISOEUGENOL*	97-54-1
JASMINUM GRANDIFLORUM / OFFICINALE	84776-64-7; 90045-94-6; 8022-96-6
Jasminum Sambac Flower CERA / Extract / Water	91770-14-8
JUNIPERUS VIRGINIANA	8000-27-9; 85085-41-2
LAURUS NOBILIS	8002-41-3; 8007-48-5; 84603-73-6
LAVANDULA HYBRIDA	91722-69-9
LAVANDULA OFFICINALIS	84776-65-8
LINALOOL*	78-70-6
LINALYL ACETATE	115-95-7
MENTHA PIPERITA	8006-90-4; 84082-70-2
MENTHA SPICATA	84696-51-5
MENTHOL	1490-04-6/89-78-1/2216-51-5
METHYL 2-OCTYNOATE*	111-12-6
METHYL OCTINE CARBONATE	111-80-8
METHYL SALICYLATE	119-36-8

INCI name (or, if none exists, perfuming name according to CosIng⁶¹)	CAS-Nummer
METHYLENEDIOXYPHENYL METHYLPROPANAL	1205-17-0
Methyl-trans-2-butenolat	623-43-8
METHYLUNDECANAL	110-41-8
Moschus Ambrette (4-tert-Butyl-3-methoxy-2,6-dinitrotoluol)	83-66-9
MYRCENE	123-35-3
MYROXYLON PEREIRAE	8007-00-9;
MYRTENOL	515-00-4
NARCISSUS SPP.	diverse
NEROL	106-25-2
Nerolidol (isomer not specified)	7212-44-4
NOPYL ACETATE	128-51-8
PELARGONIUM GRAVEOLENS	90082-51-2;8000-46-2
Perillaldehyde p-Mentha-1,8-dien-7-al	2111-75-3
Perubalsam, roh (Exudation aus Myroxylon pereirae (Royle) Klotzsch)	8007-00-9
PHENYLACETALDEHYDE	122-78-1
PHYTOL	150-86-7
PINUS MUGO/PUMILA	90082-72-7/97676-05-6
p-Isobutyl- α -methyl hydrocinnamaldehyd	6658-48-6
POGOSTEMON CABLIN	8014-09-3; 84238-39-1
PROPYLIDENE PHTHALIDE	17369-59-4
p-tert. -Butyldihydrocinnamaldehyd	18127-01-0
RHODINOL	6812-78-8
ROSE FLOWER OIL (ROSA SPP.)	Diverse
SALICYLALDEHYDE	90-02-8
SANTALUM ALBUM	84787-70-2; 8006-87-9
SCLAREOL	515-03-7
TERPINEOL (mixture of isomers)	8000-41-7
Terpinolene	586-62-9
TETRAMETHYL ACETYLOCTAHYDRONAPHTHALENES	54464-57-2/54464-59-4/68155-66-8/68155-67-9
trans-2-Heptenal	18829-55-5
trans-2-Hexenal	6728-26-3
trans-2-Hexenaldiethylacetal	67746-30-9
trans-2-Hexenaldimethylacetal	18318-83-7
trans-ANETHOLE	4180-23-8
trans-ROSE KETONE-5	39872-57-6
TRIMETHYL-BENZENEPROPANOL (Majantol)	103694-68-4
TURPENTINE (oil)	8006-64-2; 9005-90-7; 8052-14-0
VANILLIN	121-33-5
VERBENA ABSOLUTE	8024-12-2
Verbenaöl (Lippia citriodora Kunth)	2237083
α -Methyl cinnamic aldehyde	101-39-3

Appendix G Preservation of Leather

1 Preservation

1.1 Admissible Biocidal Active Substances

The following biocidal active substances may be used in accordance with the DE-UZ 148 Basic Criteria to protect raw hides and tanned semi-finished products (wet blue, wet white) during storage and transportation. In doing so, the limit values listed in the table below shall be observed in the final product "leather".

Tabelle 1

Biocide	Alternative designation	EC Number	CAS Number	Limit Value I
4-chloro-3-methylphenol	p-chlorocresol, PCMC	200-431-6	59-50-7	< 300 mg/kg
2-octyl-4-isothiazolin-3-one	N-octyl-isothiazolinone, OIT	247-761-7	26530-20-1	< 100 mg/kg
2-phenylphenol	o-phenylphenol	201-993-5	90-43-7	< 500 mg/kg
2-(thiocyanato-methylthio)benzothiazole	(benzothiazole-2-ylthio)methylthiocyanate (TCMTB)	244-445-0	21564-17-0	sh. 1.2

If Limit Value I is exceeded an additional emission test shall be conducted. The following limit values (Limit Value II) shall apply if the emission test shows that the specified test chamber concentrations⁶² are not reached:

	Limit Value II	Test Chamber Concentration
• 4-chloro-3-methylphenol	< 600 mg/kg	< 12 µg/m ³
• 2-octyl-4-isothiazolin-3-one	< 250 mg/kg	< 1 µg/m ³
• 2-phenylphenol	< 1000 mg/kg	< 23 µg/m ³

1.2 2-(Thiocyanato-methylthio)benzothiazole (TCMTB)

The cumulative parameter with benzothiazole-2-thiol (MBT) as decomposition product of TCMTB shall be determined as limit value. This cumulative parameter shall not exceed the following limit value in the final product "leather":

$$\text{CTCMTB} + (1.43 \times \text{CMBT}) < 500 \text{ mg/kg}$$

⁶² The same test parameters as those described under para. 3.3.1 of the Basic Criteria shall apply. Notwithstanding this, the test shall not be stopped (emissions shall be measured on the 28th day).

Tabelle 2

Substance	Alternative Designation	EC Number	CAS Number
2-(Thiocyanato-methylthio)benzothiazole	(Benzothiazole-2-ylthio)methylthio-cyanate, TCMTB	244-445-0	21564-17-0
Benzothiazole-2-thiol	2-Mercapto-benzothiazole, MBT	205-736-8	149-30-4

1.3 Non-Approved Biocidal Active Substances

According to DE-UZ 148, all other biocidal active substances of PT 9 may not be used to protect raw hides and tanned semi-finished products (wet blue, wet white) during storage and transportation. Analytical verifications shall be provided for the active substances listed in Table 3.

Starting out from the analysis method and from the detection limit of these substances the criterion shall be considered met if the following limit values are not exceeded in the final product "leather":

Tabelle 3

Biocide	Alternative Designation	EC Number	CAS Number	Limit Value
Tri-, Tetra-, Pentachlorophenols (including salts and esters)		Various numbers	Various numbers	< 1 mg/kg ⁶³
Tri-, Tetra-, Pentabromophenols (including salts and esters)		Various numbers	Various numbers	< 1 mg/kg ²⁶
Methylene dithiocyanate	Methylene-bis-thio-cyanate, MBTC	228-652-3	6317-18-6	< 5 mg/kg
Methyl benzimidazol-2-ylcarbamate	Carbendazim	234-232-0	10605-21-7	< 5 mg/kg
Benzothiazole-2-thiol	2-Mercapto-benzothiazole, MBT	205-736-8	149-30-4	< 5 mg/kg ⁶⁴

2 Analysis Method

- For **chlorophenols, bromophenols**: DIN EN ISO 17070
- For **4-chloro-3-methylphenol, o-phenylphenol, benzothiazole-2-thiol (MBT), 2-octyl-4-isothiazolin-3-one (OIT) and (benzothiazol-2-ylthio)methyl thiocyanate (TCMTB)**: DIN EN ISO 13365
- There are no standardized analysis methods available for **methylene dithiocyanate** and **methyl benzimidazol-2-ylcarbamate**.

3 Amendments to Appendix A to the DE-UZ148 Basic Criteria for Leather

Provided that preservatives are permitted as preservatives for leather (product group 9) within the scope of the evaluation and approval process under the Biocidal Products Regulation (EU)

⁶³ Per single substance

⁶⁴ If TCMTB is used as a decomposition product MBT shall be analytically determined and comply - as a cumulative parameter with TCMTB - with the test value set out in Paragraph 1. If TCMTB is not used a test value of 5mg/kg shall apply.

528/2012 their inclusion in Table 1 of Appendix A to DE-UZ 148 will be checked by the German Umweltbundesamt (UBA) in consultation with Landesgewerbeanstalt (LGA) Bayern (Regional Trade Institute - Bavaria) and Lederfachinstitut FILK (Research Institute of Leather and Plastic Sheeting), Freiberg. Inclusion in Table 1 is limited to those preservatives of product type 9 for which a determination method for leather exists and which are not classified as a strong contact allergen (Car: A) in the BgVV List – (BgVV - Bundesinstitut für Gesundheitlichen Verbraucherschutz und Veterinärmedizin - German institute for consumer health protection and veterinary medicine). In a similar manner, additional limit values may be included or the conditions of use may be adapted to the state of the art.

If a biocidal active substance listed in Table 1 is not included in accordance with the Biocidal Products Regulation (EU) 528/2012 for product type 9 it will be deleted from Table 1 of Appendix A to DE-UZ 148.

Appendix H Schedule of the Tests to be Submitted

General:

- EN 71-1 Safety of Toys - Part 1: Mechanical and physical Properties
- EN 71-2 Safety of Toys - Part 2: Flammability

If applicable:

- EN 71-8 Safety of Toys - Part 8: Activity toys for domestic use
- EN 71-14 Safety of Toys - Part 14: Trampolines for domestic use
- EN 62115 Electric toys – Safety

	Chemical Products	Mixtures as Integral Components	Wood*	Paper*	Plastics*	Leather and Skins	Textiles	Rubber/Elastomers	Metal	Other
Migration of elements and compounds (EN 71-3)	x	x	x	x	x	x	x	x	x	x
Preservatives		x				x (if >5%)				
Alkylphenols (APs) and Alkylphenol ethoxylates (APEOs)	x		x	x	x	x	x			
Phthalates	x				x					
Perfluorinated and polyfluorinated compounds (PFCs)	x			x	x		x			
Primary aromatic amines	x		x	x		x	x			
Polycyclic aromatic hydrocarbons (PAHs) accord. to the GS certification				x	x		x	x		
Flame-retardant plasticizers					x		x			
Migration of bisphenol A					x (for polycarbonate, epoxy resins)					

Formamide emissions					x (for foamed materials)					
Colour fastness							x (if >5%)			
Formaldehyde			x (for wood-based materials if >5%)			x (if >5%)	x (if >5%)			
Odour test			x (if >5%)							
Antimony							x (if polyester and >5%)			
Migration of N-nitrosatable substances								x (if >5%)		

* If composite materials consisting of plastics, wood and/or paper are used the respective material fractions must meet the requirements of these Basic Criteria for the respective toy materials made of plastics, wood and/or paper.

Appendix I Corresponds to Appendix A pursuant to DE-UZ 102

Appendix I corresponds to Appendix A pursuant to DE-UZ 102.