BLUE ANGEL

The German Ecolabel

Hand Dishwashing Detergents and Hard Surface Cleaners

DE-UZ 194

Basic Award Criteria

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Version 5

The Environmental Label is supported by the following four institutions:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

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

Umwelt Bundesamt

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

Jury Umweltzeichen

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

RAL gGmbH

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

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

1 Introduction

1.1 Preface

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

1.2 Background

Washing and cleaning agents are used on a daily basis for maintaining cleanliness and hygiene. Approx. 480,000 tonnes of these cleaning and care agents are sold each year in Germany, whereby dishwashing detergents account for around 260,000 tonnes.[1] All of these products contain ingredients that find their way into the wastewater system and can have a negative effect on the environment and human health. If these components cannot be completely retained or degraded in sewage treatment plants, they will enter into bodies of water and can be ingested by water organisms and, in some circumstances, enriched. Furthermore, washing and cleaning agents can negatively affect human health when substances hazardous to health such as fragrance allergens and preservatives are used.[1]

An important component of cleaning agents are surfactants. These can be manufactured based on petrochemicals and/or renewable raw materials. The use of sustainably produced raw materials makes a significant contribution to sustainable development. In order to ensure this is the case, the cultivation of the plants is subject to ecological, social and economic requirements. Criteria for sustainable cultivation are currently being discussed in different initiatives and reliable certification systems for recording and labelling this type of cultivation are being developed or are establishing themselves on the market.
The separation and traceability of the raw materials (segregation) is currently only possible to a very limited extent in the case of palm (kernel) oil for the manufacturing of surfactants. An interim solution that currently exists is the possibility of verifying sustainable cultivation using the mass balance of raw materials. In this process, the end product does not necessarily contain the certified palm (kernel) oil.
However, it is important to ensure in the longer term that certified palm (kernel) oil is exclusively used in the product and other natural resources e.g. other oil plants or raw materials for the manufacture of citric acid or bioalcohol are integrated into the certification system. In future updates to the environmental label criteria, the further development of these certification systems for sustainable cultivation will be taken into account.

[1] www.umweltbundesamt.de/themen/chemikalien/wasch-reinigungsmittel/umweltbewusst-waschen-reinigen

1.2.1 Overview of possible future requirements

The following points will be taken into account, where possible, in future revisions of these Basic Award Criteria:

- Inclusion of other renewable raw materials in the requirements for sustainable cultivation;
- The general biodegradability of all substances;
- Requirements for the use of recycled materials in the packaging and for the handling of residual cleaning agents in recycling
- Checking the tests for the product's fitness for use to assess their practical relevance and comparability

1.3 Objective of the environmental label

The following criteria are designed to promote the use of those cleaning agents that in the interests of the environment, climate and nature conservation have been produced in such a way that they have the least possible impact on the environment and human health during their production, use and disposal. In addition, they should also help to reduce and prevent the risks posed to the environment and human health through the use of hazardous substances and to minimise packaging waste. Furthermore, information should be provided that enables consumers to use the product both efficiently and with the least possible impact on the environment.

Preserving natural resources is also an important focus of this environmental label. Cleaning agents with the Blue Angel ecolabel should thus make a contribution to the protection of the environment through the use of renewable raw materials in their production that have been cultivated under sustainable conditions or which support sustainable cultivation.

1.4 Definitions

For the purpose of their use in these Basic Award Criteria, the following definitions are valid:

- **Substance[2]:** means 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.
- **Impurity[3]:** An unintended constituent present in a substance as manufactured. It may originate from the starting materials or be the result of secondary or incomplete reactions during the manufacturing process. While it is present in the final substance it was not intentionally added.
- **Mixture:** Mix, mixture or solution composed of two or more substances.
- **End product:** Within the scope of these Basic Award Criteria, the end product describes the cleaning agent offered for sale on the market that should be labelled with the Blue Angel ecolabel.
- **Microplastic**: Plastic particles with a size of ≤ 5 mm.
- **Plastic:** A macromolecular substance with a water solubility < 1 mg/L, obtained through:
  a) a polymerisation process such as e.g. polyaddition or polycondensation or a similar process using monomers or other starting substances; or

[2] REACH, Article 3, and CLP Regulation, Article 2

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

b) chemical modification of natural or synthetic micromolecules; or
c) microbial fermentation.

- **Nanomaterial**: means a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm - 100 nm.[4]
- **All-purpose cleaner:** A cleaning agent that according to its advertised purpose is designed for the normal cleaning of floors, walls, ceilings, glass surfaces and other non-textile surfaces exclusively in indoor areas and which is diluted in water prior to use. All-purpose cleaners include floor cleaners that according to their advertised purpose can be used for the upkeep and cleaning of different types of floor coverings (e.g. ceramic tiles, plastic, linoleum, wood).
- **Glass cleaner:** A cleaning agent that is used in a concentrated form or diluted with water for the normal cleaning of windows, panes, mirrors or other glass surfaces.
- **Sanitary cleaner:** A cleaning agent that is designed for the normal removal of dirt and/or sediments in sanitary systems such as in laundry rooms, toilets, bathrooms and showers. Sanitary cleaners include the subgroups: acidic toilet cleaners and bathroom cleaners.
- **Acidic toilet cleaner:** A liquid sanitary cleaner that is used in a concentrated form for the removal of limescale.
- **Bathroom cleaner:** A liquid sanitary cleaner that is used in a concentrated form or diluted with water for the removal of limescale and calcium deposits.
- **Kitchen cleaner:** A liquid or solid sanitary cleaner that is used in a concentrated form or diluted with water for the normal removal of grease, dirt and/or residues, also through scrubbing, on kitchen surfaces such as e.g. worktops, hobs, kitchen sinks and the surfaces on kitchen appliances.
- **Hand dishwashing detergent:** A cleaning agent that is designed for washing dishes, drinking glasses, earthenware, cutlery, pots, pans and other kitchen utensils.
- **Sales packaging (in the context of these Basic Award Criteria):** All of the packaging contained in one sales unit (primary packaging = direct contact with the contents and, if relevant, a secondary packaging) as it is offered to the end user or consumer at a retail outlet in its smallest sales unit.
- **Transport packaging:** Transport packaging or delivery packaging is packaging that facilitates the transport of goods, protects the goods against damage during transport or which is used for reasons of safety of the transport.
- **Identity preserved:** Palm (kernel) oil from a specific production location that is sourced from sustainable plantations is kept separate from other palm oils along the whole supply chain.
- **Segregation:** Palm (kernel) oil from different production locations that is sourced from sustainable plantations is kept separate from other non-certified palm oils along the whole supply chain.
- **Mass balance:** In the mass balance model, sustainable palm oil from certified plantations is mixed with conventional, non-certified palm oil in the value added chain. In this process, the proportion of the certified goods is checked and verified so that no more of the end product is labelled as being certified than the amount of certified palm oil before the mixing process. The certified palm oil is recorded and monitored administratively as it is transferred.

[4] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:275:0038:0040:DE:PDF

The mass balance option thus enables sustainable goods to be verified at every stage of the product chain, without having to establish an additional infrastructure for a parallel supply chain. Due to the fact that the certified and conventional goods are not physically separated, it enables the mass balance goods to be traded within the supply chain really easily. This option is especially relevant for the use of palm kernel oil and its derivatives.

- **Book & claim**: Sustainable plantations are promoted though the sale of certificates. Companies purchase these certificates via a trading platform (e.g. RSPO Credits) based on the quantity of oil required for the production of surfactants.

2 Scope

These Basic Award Criteria are valid for the following types of products:

a) All-purpose cleaner;
b) Glass cleaner;
c) Sanitary cleaner;
d) Kitchen cleaner;
e) Hand dishwashing detergent;
f) Products from the product categories listed above that are designed for commercial/industrial maintenance and cleaning.

Excluded from the scope of these Basic Award Criteria are:

- Products that consist exclusively of water.
- Products containing microorgansims that have been intentionally added by the manufacturer.
- All-purpose cleaners sold as ready-to-use (RTU) products.
- Cleaning agents that according to their advertised purpose are designed for special cleaning purposes or are exclusively suitable for special materials. Products designed for special cleaning purposes include e.g. disinfectant cleaners, drain cleaners, polishing agents, basic cleaners, intensive cleaners, floor care products without a cleaning effect (e.g. floor wax), oven cleaners or grill cleaners, descalers, additives for toilet cisterns, toilet tabs, toilet blocks or toilet rim hangers. If according to the advertised purpose it is possible to carry out both a normal cleaning and also a special cleaning process, it is not permitted for the special cleaning process to be the primary use.
- All cleaning agents that according to their advertised purpose are exclusively suitable for textile surfaces (e.g. carpet cleaners, cleaners for upholstered furniture). If the product is advertised for use with both textile and non-textile surfaces, it is not permitted for the cleaning of textile surfaces to be the primary use.
- All cleaning agents that are exclusively or partially advertised for use on the exterior of buildings or vehicles e.g. façade cleaners, car cleaners (exterior of the car), patio cleaners or boat cleaners (does not apply to glass cleaners).
- Sprays that contain propellant gas.

3 Requirements

The end products named under Paragraph 2 can be labelled with the environmental label illustrated on the first page of these Basic Award Criteria if they fulfil the following requirements.

If the applicant is required to submit declarations, documentation, analysis reports or other documentation in order to verify compliance with the criteria, these can come from the applicant and/or his/her suppliers and/or their suppliers, etc.
The substance requirements defined by Regulation (EC) No. 648/2004 (Detergents Regulation, DetVO)[5] on detergents and the CLP Regulation (Regulation (EC) No. 1272/2008)[6] are observed.

3.1 Assessment and testing requirements

Paragraph 3.5 refers to the "Detergent Ingredient Database" (DID list 2016), which contains the most widely used substances in detergent formulations. The data found in this list shall be used for deriving the calculations for the Critical Dilution Volume (CDV) and for assessing the biodegradability of the substances. In the case of those substances not found on the DID list, guidance is given on how to calculate or extrapolate the relevant data. The DID lists are published as annexes.
In certain cases, RAL gGmbH can request additional verification and carry out independent tests.

3.1.1 Measurement thresholds

Every substance that exceeds a concentration of 0.010% by mass in the final formulation must comply with these Basic Award Criteria. This also applies to the raw materials used in the product, any listed additives and impurities.
In the case of substances dealt with by the following criteria, a deviating measurement threshold of 0.0010% by mass in the final formulation applies:

- 3.4 Biodegradability
- 3.5 Toxicity to aquatic organisms
- 3.7 Exclusion of substances
- 3.8 Requirements for specific substances

There is no lower measurement threshold for colouring agents.

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[5] Regulation (EC) No. 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents

[6] Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
Regulation (EU) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 concerning the classification, labelling and packaging of substances and mixtures

Table 1: Overview of the measurement thresholds for the requirement criteria

Chapter	Criterion	Measurement threshold in percent by mass [% (w/w)]
3.2	Renewable raw materials in **surfactants**	≥ 0.010
3.3	Requirements for renewable raw materials in the production of **surfactants**	≥ 0.010
3.4.1	Biodegradability of **surfactants**	≥ 0.010
3.4.2	Biodegradability of organic substances	≥ 0.0010 (Colouring agents: no lower limit)
3.5	Toxicity to aquatic organisms	≥ 0.0010 (Colouring agents: no lower limit)
3.6 a)	General exclusion of substances with certain properties – a) Substances of very high concern (SVHC)	≥ 0.010 (Colouring agents: no lower limit)
3.6 b)	General exclusion of substances with certain properties – b) Substances classified with the H-phrases listed in accordance with Regulation (EC) No 1272/2008	≥ 0.010 (Colouring agents: no lower limit)
3.7	Exclusion of substances	≥ 0.0010
3.8.1	Requirements for specific substances – **biocides**	≥ 0.0010
3.8.2	Requirements for specific substances – **fragrances**	≥ 0.0010
3.8.3	Requirements for specific substances – **colouring agents**	no lower limit
3.8.4	Requirements for specific substances – **VOC**	≥ 0.0010
3.8.5	Requirements for specific substances – **phosphorous**	≥ 0.0010
3.8.6	Requirements for specific substances – **enzymes**	≥ 0.0010

3.1.2 Reference dosage

In the case of hand dishwashing detergents, the dosage of the end product in grams that is recommended by the manufacturer for the preparation of 1 litre of dishwashing water for the cleaning of normally soiled dishes is taken as the reference dosage for the calculations used to document compliance with the criteria for the environmental label.

In the case of all-purpose cleaners, the dosage of the end product in grams that is recommended by the manufacturer for the preparation of 1 litre of cleaning water for the cleaning of normally soiled surfaces is taken as the reference dosage for the calculations used to document compliance with the criteria for the environmental label.

In the case of ready-to-use kitchen, glass and sanitary cleaners, 1000 grams of the end product used for cleaning (=cleaning solution) is taken in each case as the reference dosage for the calculations used to document compliance with the criteria for the environmental label.

In the case of concentrated kitchen, glass and sanitary cleaners, the dosage of the end product in grams that is recommended by the manufacturer for the preparation of 1 litre of cleaning water for the cleaning of normally soiled surfaces is taken as the reference dosage for the calculations used to document compliance with the criteria for the environmental label.

3.1.3 Testing institutions

The tests to be submitted to verify compliance with the requirements, with the exception of the tests for the product's fitness for use, shall be carried out by testing institutions that fulfil the following requirements:

- The tests comply with the requirements of Good Laboratory Practice (Annex 1 of German Chemicals Act (ChemG)) or
- The testing institution has been notified or accredited according to DIN EN 17025 and these tests form part of this accreditation in terms of the fields being tested and the processes and specifications used.

Compliance verification

Verification of compliance is to be provided in the form of certification in accordance with Article 19b of the German Chemicals Act (ChemG) and a written declaration from the testing institution that the test was carried out according to the principles of Good Laboratory Practice or through submission of the accreditation certificate from Germany's National Accreditation Body (DAKKS) or another national accreditation system that has been included in the Multilateral Agreement (MLA).

3.2 Renewable raw materials in surfactants

The proportion of renewable carbon in the total carbon in the surfactant system must be at least 50%.

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1. The proportion of renewable carbon is calculated based on the organic carbon (Annex 2) and verified with a

declaration by the surfactant manufacturer. The calculation shall be based on the annual production volume. (see Appendix A)

3.3 Requirements for renewable raw materials produced from palm oil and palm kernel oil

If raw materials produced from palm oil and palm kernel oil are used, the sustainable cultivation of the oil plants on certified plantations must be verified.

The renewable raw materials for all of the ingredients added to the product that are produced from palm oil and/palm kernel oil must be sourced from plantations cultivated under sustainable conditions. Raw materials produced from palm (kernel) oil must be certified at least in accordance with the "mass balance" model.

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
In the case of RSPO certification, the manufacturing company must verify their membership of the RSPO (in the case of first-time applications, to be applied for after the issuing of the contract).
A supply chain audit via a corresponding certificate shall be submitted to RAL gGmbH at the latest after the Blue Angel ecolabel has been used for the first 15 months and then annually. Verification via the Book & Claim system is not sufficient.
The following certification systems are recognised: RSPO (Roundtable on Sustainable Palmoil), ISCC+ (International Sustainability & Carbon Certification) or RSB (Roundtable on Sustainable Biomaterial).[7] *(Appendix A)*

3.4 Biodegradability

3.4.1 Biodegradability of surfactants

All of the surfactants contained in the end product must be readily biodegradable[8] under aerobic conditions and biodegradable under anaerobic conditions.

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
The precise formulation of the end product shall be submitted to RAL gGmbH together with an explanation of the function of every individual substance in Annex 2. Part A of the DID list indicates whether a certain surfactant is aerobically or anaerobically biodegradable (those surfactants with an "R" in the column for aerobic biodegradability are readily biodegradable, while those surfactants with a "Y" in the column for anaerobic biodegradability are biodegradable under anaerobic conditions). The list is not comprehensive, but guidance is given in Part B of the list concerning the determination of the relevant calculation parameters for substances not present on the DID list. For those surfactants which are not included in Part A of the DID list or those surfactants classified with an "O" in the column for anaerobic biodegradability, relevant

[7] It is possible that other certification systems will be accepted after they have been investigated by the Federal Environmental Agency.
[8] According to the regulations in EU Regulation No. 648/2004/EC

information from literature or other sources or corresponding test results shall be submitted to verify that these surfactants are biodegradable under anaerobic conditions.
The reference test for anaerobic degradability shall be the OECD test 311, the ISO standard 11734, the ECETOC test No. 28 (June 1988) or an equivalent test method, with the requirement of 60 % ultimate degradability under anaerobic conditions. In order to verify at least 60% ultimate degradability under anaerobic conditions, test processes can also be used that simulate the conditions in a corresponding anaerobic environment.

3.4.2 Biodegradability of organic substances

The content of aerobically not readily biodegradable (aNBO) and anaerobically non-biodegradable (anNBO) organic substances in the product must not exceed the following limits for the reference dosage.

Type of product	**aNBO**	**anNBO**
Hand dishwashing detergents	0.030 g/l dishwashing water	0.080 g/l dishwashing water
All-purpose cleaner	0.200 g/l cleaning water	0.500 g/l cleaning water
Kitchen cleaner	0.200 g/1000 g cleaning solution	0.500 g/1000 g cleaning solution
Toilet cleaner	5.000 g/1000 g cleaning solution	35.000 g/1000 g cleaning solution
Bathroom cleaner	0.200 g/1000 g cleaning solution	0.500 g/1000 g cleaning solution
Glass cleaner	0.200 g/1000 g cleaning solution	0.500 g/1000 g cleaning solution

Compliance verification:

The applicant shall confirm compliance with the requirement in Annex 1.
In order to calculate the aNBO and anNBO values, there is an Excel file available for this purpose on the Blue Angel website (Annex 2).
The DID list is authoritative here. In the case of ingredients not included in Part A of the DID list, relevant information from literature or other sources or corresponding test results shall be submitted to verify that these ingredients are biodegradable under aerobic and anaerobic conditions (as described in Part B of this list).

3.5 Toxicity to aquatic organisms

The critical dilution volume toxicity ($CDV_{chronic}$) is calculated for each substance (i) using the following equation:

$$CDV_{chronisch} = \sum_{i=1}^{n} CDV_{(i)} = CDV_{(1)} + CDV_{(2)} + \ldots + CDV_{(n)}$$

with

$$CDV_{(i)} = \frac{Weight_{(i)} \cdot DF_{(i)} \cdot 1000}{TF_{chronisch(i)}}$$

where the weight(i) of the substance (in grams) is the dosage recommended by the manufacturer for 1 litre of dishwashing water or cleaning water or 1000 grams of the cleaning solution for glass, kitchen and sanitary cleaners.

DF(i) is the degradation factor and $TF_{chronic}$(i) is the value for the chronic toxicity of the substance (in milligrams/litre).

The parameters DF and $TF_{chronic}$ shall be taken from Part A of the Detergent Ingredient Database (DID list) (Appendix). If the substance in question is not included in Part A of the DID list, the applicant shall estimate the values in accordance with the approach stated in Part B of the DID list (Appendix). The sum of $CDV_{chronic}$ for the individual substances gives the $CDV_{chronic}$ for the end product.

The $CDV_{chronic}$ must not exceed the following limits for the reference dosage:

Type of product	**Maximum permissible $CDV_{chronic}$**
Hand dishwashing detergents	2,500 l/l dishwashing water
All-purpose cleaner	18,000 l/l cleaning water
Kitchen cleaner	600,000 l/1000g cleaning solution
Toilet cleaner	600,000 l/1000g cleaning solution
Bathroom cleaner	45,000 l/1000g cleaning solution
Glass cleaner	48,000 l/1000g cleaning solution

Compliance verification
The applicant shall confirm compliance with the requirement in Annex 1.
The precise formulation of the end product, together with the individual details of the calculation of the $CDV_{chronic}$ demonstrating compliance with this criterion, shall be submitted to RAL gGmbH in Annex 2.

3.6 General exclusion of substances with certain properties

The use of the following substances is not permitted in order to protect the environment and human health. In the case of mixtures e.g. fragrances where it is not possible to obtain information about the individual substances, the classification rules for mixtures shall be applied.

a) Substances of very high concern (SVHC)
It is prohibited to use substances in end products labelled with the Blue Angel ecolabel that have been identified in accordance with Article 57 of Regulation (EC) No. 1907/2006 and listed in accordance with Article 59 of the same regulation on the list of candidates[9] for inclusion on the Annex of substances subject to authorisation. Impurities in substances added to the end product that correspond to the above named criteria are not permitted. The label holder is obligated to take into account current developments on the list of candidates.

[9] http://echa.europa.eu/web/guest/candidate-list-table

b) Substances which according to the criteria of Regulation (EC) No 1272/2008[10] are assigned the following H Phrases named in Table 2 or which meet the criteria for such classification.

Table 2: Restrictive hazard classifications and their assignment to the categories

EC Regulation 1272/2008 (CLP Regulation)	**Wording**
Toxic substances	
H300	Fatal if swallowed
H301	Toxic if swallowed
H304	May be fatal if swallowed and enters airways
H310	Fatal in contact with skin
H311	Toxic in contact with skin
H330	Fatal if inhaled
H331	Toxic if inhaled
EUH070	Toxic by eye contact
H370	Causes damage to organs
H371	May cause damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
Carcinogenic, mutagenic and reprotoxic substances	
H340	May cause genetic defects
H341	Suspected of causing genetic defects
H350	May cause cancer
H350i	May cause cancer if inhaled
H351	Suspected of causing cancer
H360F	May damage fertility
H360D	May damage the unborn child
H360FD	May damage fertility May damage the unborn child
H360Fd	May damage fertility Suspected of damaging the unborn child
H360Df	May damage the unborn child

[10] Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, as well as amending Regulation (EC) No. 1907/2006 (GHS Regulation). The GHS Regulation (Global Harmonization System) that came into force on 20 January 2009, replaces the old Directives 67/548/EEC (Dangerous Substances Directive) and 1999/45/EC (Dangerous Preparations Directive). According to the said regulation, substances are classified, labelled and packed until 1 December 2010 according to Directive 67/548/EEC while mixtures (formerly preparations) are classified, labelled and packed until 1 June 2015 according to Directive 1999/45/EC. Thereafter, the GHS Regulation shall be applied. The new indications of danger (H Phrases) as well as the hitherto applicable risk phrases (R Phrases) shall be indicated for substances until 1 June 2015.

EC Regulation 1272/2008 (CLP Regulation)	Wording
	Suspected of damaging fertility
H361f	Suspected of damaging fertility
H361d	Suspected of damaging the unborn child
H361fd	Suspected of damaging fertility Suspected of damaging the unborn child
H362	May cause harm to breast fed children
Water-hazardous substances	
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long-lasting effects
H411	Toxic to aquatic life with long-lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life
Other Health and Environmental Effects	
H420	Hazardous to the ozone layer
Sensitizing substances	
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317	May cause an allergic skin reaction

The use of substances or mixtures which upon processing change their properties (e.g. become no longer bioavailable, undergo chemical modification) in a way that the identified hazard no longer applies are exempted from the above requirement.

Deviations: The following substances or mixtures are specifically exempted from the above requirement:

EC Regulation 1272/2008 (CLP Regulation)	**Wording**
Surfactant (*)	H400 Very toxic to aquatic life
	H412 Harmful to aquatic organisms with long lasting effects
Enzymes (**)	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
	H317 May cause an allergic skin reaction
NTA as an impurity in MGDA and GLDA(***)	H351 Suspected of causing cancer

(*) This is also valid for impurities from the starting substances.
(**) Including stabilisers and other auxiliary substances in the preparations.
(***) In concentrations lower than 0.2 % in the raw material as long as the total concentration in the end product is lower than 0.10 %.

Compliance verification

The applicant shall declare compliance with the requirements in Annex 1.
In the event of changes to the list of candidates, the applicant shall inform RAL gGmbH within one month in the event that the end product does not comply with this criterion.
The applicant shall submit the exact formulation of the end product in Annex 2. The applicant shall verify that the substances contained in the end product comply with this criterion by providing information that fulfils at least those requirements according to Annex VII of Regulation (EC) No. 1907/2006. Such information shall be specific to the particular form of the substance, including nanoforms, used in the end product. For that purpose, the applicant shall submit a declaration of compliance with this criterion, together with information on the type (IUPAC nomenclature and CAS number) and content (% by mass) of all substances added to the product and the related safety data sheets in accordance with Annex II to Regulation (EC) No 1907/2006 for the end product, as well as for all substances or mixtures listed in the formulation(s). Concentration limits shall be specified in the safety data sheets in accordance with Article 31 of Regulation (EC) No. 1907/2006. The safety data sheets may not be older than two years. The manufacturer shall verify that he/she has requested that the suppliers of primary/intermediate products submit information on the content of substances up to 0.010 % by mass.

3.7 Exclusion of substances

The following substances are not permitted in the end product, either as part of the formulation or as part of any preparation included in the formulation:

- Alkyl phenol ethoxylates (APEOs) and derivatives thereof
- EDTA (ethylenediaminetetraacetic acid) and its salts
- DTPA (diethylenetriaminepentaacetic acid) and its salts
- Inorganic phosphate(*) (e.g. monophosphoric, diphosphoric, triphosphoric and polyphosphoric acids and their salts)
- Alkyl phosphonic acid derivatives (e.g. ATMP, HEDP, DTPMP) and their salts

- Reactive chlorine compounds (e.g. hypochlorite)
- Borate and perborate
- Perfluorinated organic compounds
- Halogenated hydrocarbons
- Aromatic hydrocarbons
- Triclosan
- 3-Jod-2-propinylbutylcarbamate
- Glutaraldehyde
- Quaternary organic ammonium compounds that are not readily biodegradable
- Formaldehyde and formaldehyde releasers(**), e.g. (INCI designations):
  - 2-Bromo-2-Nitropropane-1,3-Diol
  - 5-bromo-5-nitro-1,3-dioxane
  - Diazolidinyl Urea
  - Sodium Hydroxymethylglycinate
  - Dimethylol Glycol
  - Dimethylol Urea
  - DMDM-Hydantoin
  - Quaternium-15
  - Tetramethylolglycoluril
- Nitromusks and polycyclic musks including e.g.:
  - Musk xylene: 5-tert-butyl-2,4,6-trinitro-m-xylene,
  - Musk ambrette: 4-tert–butyl-3-methoxy-2,6-dinitrotoluene,
  - Moskene: 1,1,3,3,5-Pentamethyl-4,6-dinitroindan,
  - Musk tibetine: 1-tert-butyl-3,4,5-trimethyl-2,6-dinitrobenzene,
  - Musk ketone: 4'-tert-Butyl-2',6'-dimethyl-3',5'-dinitroacetaphenol,
  - HHCB (1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta(g)-2-benzopyran),
  - AHTN (6-acetyl-1,1,2,4,4,7-hexamethyltetrali)
- Nanosilver
- Hydroxyisohexyl 3-cyclohexene carboxaldehyde (HICC)
- Atranol
- Chloratranol
- Rhodamine B
- Microplastics

(*) Except for impurities or stabilisers with concentrations lower than 1.0% in the raw material and a total concentration in the end product lower than 0.010 %.

(**) Except for impurities of formaldehyde in surfactants based on polyalkoxy compounds up to a concentration of 0.010 % by mass in the ingredient

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
The applicant shall submit a declaration, which is also supported by declarations from the manufacturers of the substances, that the listed substances are not contained in the end product.
In the event that quaternary ammonium salts have been added to the product, the applicant shall submit documentation demonstrating their biodegradability.

3.8 Requirements for specific substances

These special requirements for specific substances are valid in addition to the general requirements for substances.

3.8.1 Biocides

a) The end product may only include biocides in order to preserve the product and in the appropriate dosage for this purpose. This does not refer to surfactants, which may also have biocidal properties.

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
The applicant shall submit the safety data sheets for every preservative added to the product, as well as information about the exact concentrations of these substances in the end product. The manufacturer or supplier of the preservatives shall submit information about the dosage required to preserve the end product.

b) It is prohibited to claim or suggest on the packaging or by any other means that the product has an antimicrobial action.

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
The applicant shall submit the texts and layouts used for each individual type of packaging and/or a sample copy of each individual type of packaging to RAL gGmbH.

c) Biocides, either as part of the formulation or as part of any mixture included in the formulation, that are used to preserve the end product are permitted, but only if their log Pow (octanol-water partition coefficient) is < 3.0 or their experimentally determined bioconcentration factor (BCF) is < 100.

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
The applicant shall submit the log Pow or BCF value for the biocides (Annex 2).

d) Isothiazolinone
2-methyl-4-isothiazolin-3-one (MIT) and 5-chlor-2-methyl-4-isothiazolin-3-one/2-methyl-4-isothiazolin-3-one (CIT/MIT) may only be added up to the maximum permitted limits stated in Annex V (List of preservatives allowed in cosmetic products) of Regulation (EC) No. 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products.
- 5-chlor-2-methyl-4-isothiazolin-3-one/2-methyl-4-isothiazolin-3-one: 0.0015 % by mass.
- 2-methyl-4-isothiazolin-3-one: 0.0015 % by mass.

If the permissible value according to Annex V of Regulation (EC) No. 1223/2009 at the time of application is lower, this lower value applies.
The content of 1,2-benzisothiazol-3(2H)-one (BIT) must not exceed the following content in the product:

- 1,2-benzisothiazol-3(2H)-one: 0.0050 % by mass

Compliance verification

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

3.8.2 Fragrances

a) All of the substances added to the end product as fragrances must have been manufactured and/or handled in accordance with the code of practice of the International Fragrance Association (IFRA)[11].
b) Fragrances that are subject to labelling as detergents in accordance with Annex VII of Regulation (EC) No. 648/2004 and which are not already excluded by criteria 3.6, as well as (other) fragrances classified as H317 (May cause an allergic skin reaction) and/or H334 (May cause allergy or asthma symptoms or breathing difficulties if inhaled) must not be present in the end product in concentrations ≥ 0.010 % (≥ 100 ppm) per substance.
c) Products specially designed for or advertised as being suitable for allergy sufferers and commercial hand dishwashing detergents are not permitted to contain any fragrances.

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
The applicant shall submit a declaration of compliance with every requirement. For criterion (b), the applicant shall submit a declaration about compliance with this criterion with information about the amount of fragrances contained in the end product. In addition, the applicant shall also submit a declaration from the fragrance manufacturer specifying the content of each of the substances contained in the fragrance which are listed in Annex III of Regulation (EC) No. 1223/2009[12], as well as the content of (other) substances which have been assigned the risk phrases H317 and/or H334.

3.8.3 Colouring agents

The end product must not contain any colouring agents that are bioaccumulating.
A colouring agent is considered to be non-bioaccumulating if it has a bioconcentration factor (BCF) < 100 or a log Pow < 3.0. If the values for both the BCF and the log Pow are available, the highest measurement for the BCF is valid. If using colouring agents that have been approved for use in foodstuffs, no documentation about the bioconcentration factor needs to be submitted.

Compliance verification

The applicant shall submit a signed declaration of conformity and, if relevant, supplier declarations or safety data sheets about all colouring agents added to the product and the values for their BCF or log Pow or documentation that verifies that the colouring agent is approved for use in foodstuffs.

[11] The code of practice is available on the IFRA website: http://www.ifraorg.org.
[12] OJ L 342 from 22/12/2009

3.8.4 Volatile organic compounds

The total concentration of volatile organic compounds (VOC) with a boiling point below 150 °C must not exceed the following proportions by mass.

Type of product	VOC limit in grams per 1000 grams
Hand dishwashing detergents	0.20g/l dishwashing water
All-purpose cleaner	2.0g/l cleaning water
Kitchen cleaner	60.0g/1000g cleaning solution
Toilet cleaner	60.0g/1000g cleaning solution
Bathroom cleaner	60.0g/1000g cleaning solution
Glass cleaner	100.0g/1000g cleaning solution

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
The calculation of the total concentration of VOCS is carried out according to Annex 2.

3.8.5 Phosphorous

The total phosphorous content (P) of elemental phosphorous must not exceed the following values for the reference dosage.

Type of product	Phosphorous content
Hand dishwashing detergents	0.02 g/l dishwashing water
All-purpose cleaner	0.02 g/l cleaning water
Kitchen cleaner	1.00 g/1000g cleaning solution
Toilet cleaner	1.00 g/1000g cleaning solution
Bathroom cleaner	1.00 g/1000g cleaning solution
Glass cleaner	0.00 g/1000g cleaning solution

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1. In order to calculate the total phosphorous content (P), there is an Excel file available for this purpose on the Blue Angel website (Annex 2).

3.8.6 Enzymes

It is only permitted to add encapsulated enzymes (solid) and enzymes in liquid form or as a suspension.

Compliance verification:

The applicant shall submit a signed declaration of conformity and, if relevant, supplier declarations or safety data sheets for the enzymes added to the product.

3.9 Labelling of the end product

a) It is not permitted for the end product to be assigned a H phrase named in Table 2 of Paragraph 3.6 b) in accordance with the CLP Regulation (1272/2008/EC)[13].
b) In addition, the end product must not be classified as a "corrosive" mixture according to H314: Causes severe skin burns and eye damage or as a skin corrosion/irritation mixture in categories 1A, 1B, 1C according to Regulation (EC) No. 1272/2008.

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
In addition, the applicant shall submit the exact formulation of the end product in Annex 2, as well as the product label and safety data sheet for the end product.

3.10 Dosage requirements

The maximum dosage for normally soiled dishes stated for hand dishwashing detergents must not exceed 0.8 ml/litre.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit a product label.

3.11 Fitness for use

The end product must be fit for use and meet the requirements of the consumer. To ensure that this is the case, the tests for assessing the product's fitness for use described in Appendixes B and C shall be carried out.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit the test results in accordance with the guidelines stated in Appendixes B and C to verify compliance.

3.12 Packaging requirements

a) The weight utility ratio (WUR) of the primary packaging must not exceed the following values:

Type of product	**WUR**
Hand dishwashing detergents	0.6g/l dishwashing water
All-purpose cleaner	1.2g/l cleaning water
Kitchen cleaner	150g/l end product
Concentrated kitchen cleaner for dilution	1.2 g/l cleaning solution
Toilet cleaner	150g/l end product
Bathroom cleaner, ready-to-use	150g/l end product

[13] Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, as well as amending Regulation (EC) No. 1907/2006 (CLP Regulation)

Type of product	WUR
Concentrated bathroom cleaner for dilution	1.2 g/l cleaning solution
Glass cleaner, ready-to-use	150g/l end product
Concentrated glass cleaner for dilution	1.2 g/l cleaning solution

Primary packagings consisting of more than 80% renewable materials are exempt from this requirement.

Undiluted products in packaging designed for the sole purpose of refilling trigger sprays shall meet the packaging requirements for RTU products.

The WUR is only calculated for the primary packaging (including caps, stoppers and hand pumps/spraying devices and label) based on the following formula:

$$WUR = \Sigma((W_i + U_i) / (D_i * R_i))$$

Key for the calculation formula:

- W_i: the weight [g] of the primary packaging (i);
- U_i: the weight [g] of non-recycled materials in the primary packaging (i). $U_i = W_i$, unless the applicant can verify a different number;
- D_i: the number of reference doses in the primary packaging (i). In the case of ready-to-use products, D_i = product volume (in litres);
- R_i: recycling figure. $R_i = 1$ (if the packaging is not reused for the same purpose) or $R_i = 2$ (if the applicant can verify that the packaging components are used for the same purpose and he/she sells refill packs).

b) Packagings, sleeves, labels or closures made of halogenated polymers e.g. PVC are not permitted.

c) Paper/cardboard used in the sales packaging must be manufactured using at least 80% recycled materials. In the case of secondary packaging that also serves as transport packaging, the proportion of recycled materials must be at least 70%. Packaging materials are considered recycled if product waste (post-consumer waste) has been subjected to a material recycling process.

d) Products offered as trigger sprays:
Trigger spray bottles must be refillable and recyclable.

e) Recycling-oriented design
Plastic packaging must be designed for the purpose of easy recycling i.e. where possible no potentially hazardous materials and incompatible materials should be used that are known to hinder the separation or recycling of the materials or reduce the quality of the recycled materials. No individual or combination of materials or components listed in Table 3 may be contained in the labels or sleeves, closures and, if relevant, barrier coatings. Pump mechanisms (including in sprays) are exempt from this requirement.

Table 3: Materials and components that are excluded from use as a packaging component:

Packaging component	Excluded materials and components (*)
All components	• Components in the EuPIA list (exclusion list for printing inks and related products)
Label or sleeve	• PS label or PS sleeve in combination with a PP, HDPE or PET bottle • A PETG or PETC label or a PETG sleeve or PETC sleeve in combination with a PET bottle • Other plastic materials for sleeves/labels with a density > 1 g/cm^3 in combination with a PET bottle • Other plastic materials for sleeves/labels with a density < 1 g/cm^3 in combination with a PP or HDPE bottle • Labels or sleeves that are metallised or labels or sleeves that are welded without a seam to a packaging body (in mould labelling) with PET bottles • Non water-soluble adhesives in combination with moisture-resistant labels with a PE or PP bottle, non-soluble adhesive (in water or alkaline at 80°C) for PET bottles
Closures	• A PS closure in combination with a PP, HDPE or PET bottle • PETG closures and/or PETG closure material and other plastic closure components with a density of above 1 g/cm^3 in combination with a PET bottle • Closures made of metal, glass, EVA • Closures made of silicone. Exempted are silicone closures with a density < 1 g/cm^3 in combination with a PET bottle and silicone closures with a density > 1g/cm^3 in combination with a PP or HDPE bottle • Silicon components with PE and PP bottles • Components made out of foamed elastomers with a PE and PP bottle • Elastomer components with a density > 1 g/cm^3 with a PET bottle • Metallic foils or seals which remain fixed to the bottle or its closure after the product has been opened
(*) EVA — Ethylene vinyl acetate, EVOH — Ethylene vinyl alcohol, HDPE — High-density polyethylene, PET — Polyethylene terephtalate, PETG — Polyethylene terephthalate glycol-modified, PETC — Crystalline polyethylene terephthalate, PP — Polypropylene, PS — Polystyrene, PVC — Polyvinyl chloride Please note: the combinations PP and HDPE and also PE and LLDPE, LDPE or HDPE are permitted.	

Compliance verification

The applicant shall confirm compliance with the requirement in Annex 1.
The applicant shall submit a calculation of the WUR for the end product in Annex 2.

3.13 Consumer information

3.13.1 Advertising claims

If the product is classified and labelled as hazardous to human health according to Regulation (EC) No. 1272/2008, advertising claims such as "less environmentally damaging", "less hazardous to water", "less hazardous substances" or comparable statements which could be considered to play down the risks are prohibited.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit a product label to RAL gGmbH.

3.13.2 Dosage instructions

a) Hard surface cleaners

For all-purpose cleaners and dilutable kitchen, bathroom and glass cleaners, an exact dosage recommendation shall appear on the packaging in a font size of at least 2 millimetres and against a visible background. For all-purpose cleaners, the dosage recommendation must include at least doses for "lightly soiled" and "normally soiled" surfaces.
In addition, a suitable dosing system (e.g. in the form of a cap that can be used as a dosing aid) must be supplied for all-purpose cleaners.
The following text (or an equivalent text) shall appear on the packaging:

"Proper dosage saves costs and minimises environmental impacts."

b) Hand dishwashing detergents

The end product must carry the following instructions on the packaging:

- "Do not rinse under running water but immerse the dishes and use the recommended dosage."
- The recommended dosage shall appear on the packaging in a font size of at least 2 millimetres and against a visible background. The dosage shall be stated in millilitres (or teaspoons) per 5 litres of dishwashing water for "lightly soiled" and "normally soiled" dishes.
- Information on the approximate number of dishwashing cycles that is possible with one bottle in the case of normally soiled dishes. This number can be calculated by dividing the total volume of the end product by the dosage required for 5 litres of dishwashing water for normally soiled dishes.

In addition, a suitable dosing system (e.g. in the form of a push-pull closure) must be supplied for hand dishwashing detergents.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit a product label to RAL gGmbH.

3.13.3 Information on the packaging

a) The type of enzyme contained in the product must be stated on the packaging.
b) The primary packaging must contain information on reuse, recycling and the proper disposal of the packaging.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit a product label to RAL gGmbH.

3.13.4 Safety Instructions

The following safety advice (or an equivalent text) shall appear on all-purpose, sanitary, kitchen and glass cleaners, as well as hand dishwashing detergents, in both text form and with an equivalent pictogram:

- "Keep away from children!"
- "Do not mix different cleaners!"
- "Avoid inhaling sprayed product" (only for end products that are packaged as sprays).

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit a product label to RAL gGmbH.

3.14 Training of commercial/industrial users

In the case of cleaning agents that will be used by commercial/industrial users, the manufacturer, distributor or a third party must offer training or training materials for cleaning personnel. This must provide step by step explanations of how to properly dilute, use and dispose of the product, as well as instructions on using associated equipment.

Compliance verification

The applicant shall declare compliance with the requirement in Annex 1 and submit a sample of the training material to RAL gGmbH that includes a detailed description of how to properly dilute, use and dispose of the product, as well as instructions on using associated equipment or a description of the training course.

4 Applicants and parties involved

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

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 June 30, 2023.
They shall be extended by periods of one year each, unless terminated in writing by December 31, 2022 or March 31 of the respective year of extension.
After the expiry of the contract, the Environmental Label may neither be used for labelling nor for advertising purposes. This regulation shall not affect products being still in the market.

The applicant (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 organizations.

The Contract on the Use of the Environmental Label shall specify:
- Applicant (manufacturer/distributor)
- Brand/trade name, product description
- Distributor (Label User), i.e. the marketing organization.

Appendix A Renewable raw materials in surfactants

The proportion of renewable carbon in the total carbon in the surfactant system must be at least 50%.

A declaration from the manufacturer or supplier of the surfactant shall be enclosed with the application as verification for every surfactant (or surfactant raw material) added to the product. (Declaration from the raw material manufacturer).

In Section 16 of the declaration, the manufacturer or supplier of the surfactant shall certify the proportion of renewable carbon in the total carbon for the surfactant or surfactant raw material. In Annex 2 (Excel file), this value shall be entered in the sheet "Result-3" in column E for every surfactant or surfactant raw material added to the product (value between 0 and 100). The subsequent calculation is carried out in Annex 2 as follows:

For every surfactant/surfactant raw material added to the product:

$G_{(i)}$ = Proportional weight of the surfactant/surfactant raw material i (column C)

$R_{(i)}$ = Proportion of renewable carbon in the total carbon for the surfactant or surfactant raw material i (column E)

The proportion of renewable carbon in the total carbon in the surfactant system (value in cell F62) is calculated using the following formula:

$$\frac{\sum G_{(i)} \times R_{(i)}}{G_{(i)}}$$

If the surfactant system in the formulation changes during the term of the contract, an amended Annex 2 and a declaration from the new manufacturer of the surfactant shall be submitted. In the annual production volume, the proportion of renewable carbon in the total carbon in the surfactant system must be at least 50%.

P_1 = Production volume in the calendar year with the "old" surfactant system

P_2 = Production volume in the calendar year with the "new" surfactant system

R_1 = Proportion of renewable carbon in the total carbon in the "old" surfactant system

R_2 = Proportion of renewable carbon in the total carbon in the "new" surfactant system

R_J = Average yearly proportion of renewable carbon in the total carbon (must be ≤50%)

$R_J = ((P_1 \times R_1) + (P_2 \times R_2)) / (P_1 + P_2)$

Requirements for renewable raw materials produced from palm oil and palm kernel oil

If surfactants produced from palm oil and palm kernel oil are used, the sustainable cultivation of the oil plants on certified plantations must be verified.

In section 16 of the "Declaration from the raw material manufacturer", the manufacturer or supplier shall confirm whether the raw material contains palm/palm kernel oil.
If raw materials produced from palm oil and palm kernel oil have been added to the product, this shall be stated in Annex 2 (Excel file) in the sheet "Ingoing substances" in column P.

In the case of RSPO "Mass Balance", "Segregation" or "Identity Preserved" certification, the manufacturing company must verify their membership of the RSPO (in the case of first-time applications, to be applied for after the issuing of the contract). Normally, the manufacturing company will either be a "Supply Chain Associate" (purchasing less than 500 tonnes of palm oil products) or an "Ordinary Member" (purchasing more than 500 tonnes of palm oil products). A list of RSPO members is published here: https://www.rspo.org/members/all

The following shall be submitted to RAL gGmbH at the latest after the Blue Angel ecolabel has been used for the first 15 months and then annually: RSPO membership number and proofs of purchase (delivery notes/invoices) for the corresponding raw materials. The documents must state the RSPO certificate number for the raw material manufacturer.
To verify that sufficient raw materials have been purchased, the annual production volume (for the formulation included in the application) must be stated in the sheet "Results-2" of the Excel table and the form of verification "Delivery notes/invoices (segregated or MB)" must be selected in column E. For raw materials produced from palm oil and palm kernel oil, the amount of the raw material required can then be calculated for a defined period. If multiple products are certified with the Blue Angel ecolabel, the calculations must be carried out for all products and the results (for identical raw materials) added together.

Alternatively, a supply chain audit can be carried out. This must be verified by submitting a corresponding certificate and the audit report. The audit must be carried out by a certification body accredited by the RSPO: https://www.rspo.org/certification/bodies/page/
A supply chain audit is obligatory:
- for ordinary RSPO members
- if using "MB claim transfer cross referencing"
- if products are produced by contract manufacturers who are not RSPO members themselves and are bound to the applicant via "outsourcing agreements".

Verification via the Book & Claim system (RSPO credits) is not sufficient.

Appendix B Fitness for use of hard surface cleaners

1 Test Scope

The product must be fit for use and meet the requirements of the consumer.

- For **all-purpose cleaners**, the effective removal of grease must be verified.
- For **all-purpose cleaners in the pH range 5.5-8 ("neutral cleaners")**, their streak-free finish and gentle treatment of the material must additionally be verified.
- For **kitchen cleaners**, the effective removal of grease and gentle treatment of the material must be verified. If the information provided on the label additionally claims that the product removes lime soaps and limescale, the corresponding effect must be verified.
- For **glass cleaners**, a streak-free finish and slight grease removal must be verified.
- For **bathroom cleaners**, the removal of lime soaps and limescale must be verified.
- For **acidic toilet cleaners**, the removal of limescale deposits must be verified.

The effectiveness of the products shall be tested using

- a suitable and verifiable laboratory test or
- a suitable and verifiable consumer test.

In both cases, the completion and documentation of the test are subject to concrete conditions that are explained in the following regulatory framework: "Framework for testing the performance of all-purpose cleaners, window cleaners and sanitary cleaners". The laboratory examinations are specified as follows:

2 Reference products

The reference product used shall be a product that ranks amongst the 4 leading products on the market in Germany. The selected product must be justified (e.g. with a GFK report). The following reference products can be used **without** the need for justification for **non-commercial/industrial** products:

For removal of grease by **all-purpose cleaners:**

- Der General "Bergfrühling" (other fragrances permitted)
- Meister Proper "Allzweckreiniger"
- denkmit "Allzweckreiniger"
- Ajax "Fresh Fragrance" (other fragrances permitted)

For removal of grease by **"neutral cleaners":**

- Frosch Neutralreiniger
- Der General sensitiv "Aloe Vera" (other fragrances permitted)

For removal of grease by **kitchen cleaners:**

- Der General "Küchenkraft"
- Meister Proper "Express Power Fettschmutzreiniger"

For liquid **scouring cream** and **solid scouring pastes:**

- Viss Scheuermilch
- Frosch Scheuermilch

For solid products (pastes), the correct ratio of paste/water shall be determined based on the information provided on the label and a corresponding mixture is then tested in comparison to this scouring cream.

For glass cleaners:

- Sidolin "Streifenfrei"
- Ajax Glasreiniger

For **commercial/industrial all-purpose cleaners, kitchen cleaners or glass cleaners**, a different reference product can also be used as an alternative where the scope of application, the dilution and the pH value according to the information provided on the label is as identical as possible. Examples:
A "gentle-acting floor cleaner" compared to a "gentle-acting floor cleaner"
A "surfactant-free maintenance cleaner" compared to a "surfactant-free maintenance cleaner"

The selection of the relevant market-leading product is to be justified (e.g. with GFK figures).
Products with the same scope of application from the following companies can be used as a reference product **without** the need for justification:

- BUZIL-WERK Wagner GmbH & Co
- Diversey
- DR.SCHNELL GmbH & Co. KGaA
- Ecolab Deutschland GmbH
- Johannes Kiehl KG
- tana-Chemie GmbH

For **acidic toilet cleaners**, the cleaning effect must correspond at least to that achieved by the no-name reference product, which is described in the following IKW performance test "Recommendation for the quality assessment of acidic toilet cleaners" (SÖFW Journal, 126th Year, 11, P. 50-56, 2000).

For **bathroom cleaners**, the cleaning effect must correspond at least to that achieved by the no-name reference product listed in table 1 in the "Framework for testing performance of hard surface cleaning products".

3 Test conditions (laboratory tests):

Ready-to-use products are tested in their ready-to-use condition.
Undiluted products should be tested in a diluted state, using the highest recommended dilution for normal soil removal. Recommended dilutions for heavy soiling or minor soiling are not tested. For all-purpose cleaners, if the following test of the removal of grease does not provide sufficient information on the comparative cleaning performance (as both test product and reference product do not show adequate performance), the test should be carried out in the undiluted state.

For the laboratory tests, the removal of grease by **all-purpose cleaners** is to be tested based on the "Recommendation for the Quality Assessment of the Product Performance of All-Purpose Cleaners 2014 (SÖFW Journal | 141 | 4-2015)". Performance tests carried out in accordance with the "Qualitätsnormen für Fußbodenpflege- und reinigungsmittel" (SÖFW | 371 | 10-1986); ("IPP-Gardner Test") (Quality standards for floor care and cleaning products) will also be accepted.
In order to verify a sufficient level of quality in the test to assess the fitness for use of all-purpose cleaners (effective removal of grease), the testing laboratory shall document the required number of strokes in the results section of the test report in accordance with the IKW "Recommendation for the Quality Assessment of the Product Performance of All-Purpose Cleaners 2014 (SÖFW Journal | 141 | 4-2015)" using the IKW test soil with the IKW reference cleaner (dosage: 5 ml undiluted) for achieving cleaning value 2:
Reference number of strokes: The IKW reference cleaner is set as standard to at least 8 strokes (ideally 10-25 strokes) for cleaning value 2.

For the laboratory tests, the removal of grease by **kitchen cleaners** is to be tested based on the "IKW Recommendation on for the Quality Assessment of the Product Performance of Degreasing Power Cleaners (2017)". (SÖFW Journal 7|8 2018).

For the laboratory tests, the gentle treatment of the material by **kitchen cleaners** is to be tested based on the "IKW Recommendation on for the Quality Assessment of the Product Performance of Degreasing Power Cleaners (2017)". After 7 and 14 days, the test product must achieve at least the rating 2 on all materials mentioned in the publication.

For the laboratory tests, the streak-free finish and gentle treatment of the material by **neutral cleaners** is to be tested based on the "Recommendation for the Quality Assessment of the Product Performance of All-Purpose Cleaners 2014 (SÖFW-Journal | 141 | 4-2015)". After 7 and 14 days, the test product must achieve at least the rating 2.

Laboratory tests for limescale removal by **acidic toilet cleaners** must follow the "Recommendation for the Quality Assessment of Acidic Toilet Cleaners (June 1999)".

Laboratory tests for limescale removal by **bathroom cleaners and kitchen cleaners (if claimed on the label)** must follow the "Recommendation for the Quality Assessment of Bathroom Cleaners (SÖFW Journal | 129 | 3-2003), Section 3.1.2" with further comments:

1) RTU bathroom cleaners that are exclusively used in undiluted form must verify their ability to remove limescale in comparison to the reference product (without Rheozan) (horizontally and vertically) OR verify their ability to remove limescale in comparison to the reference product (with Rheozan) (horizontally and vertically)
2) Dilutable bathroom cleaners (this also includes e.g. vinegar-based cleaners) that are exclusively used in diluted form are tested in a diluted state. (However, the reference product is not diluted!). The product's ability to remove limescale must be verified horizontally or vertically in comparison to the reference product (without Rheozan).
3) In the case of bathroom cleaners (this also includes e.g. vinegar-based cleaners) that can be used in undiluted and diluted form, the test conditions are dependent on the precise instructions provided on the product label. If the product should be applied in undiluted form for normally (or normally to heavily) soiled surfaces and in diluted form for lightly soiled surfaces, the test must be carried out using the undiluted product. The test must be carried out using the undiluted product on one surface in accordance with section "3.1.3 bathroom cleaner concentrates" from the "Recommendation for the Quality Assessment of Bathroom Cleaners (SÖFW Journal | 129 | 3-2003)". A reference product with or without Rheozan can be used. If the product should only be applied in undiluted form for stubborn/heavily soiled surfaces and in diluted form for normally soiled surfaces, the test must be carried out using the diluted product in accordance with Point 2). Tests carried out in accordance with Point 1) will also be recognised.

The removal of lime soap must be tested according to the "Recommendation for the Quality Assessment of Bathroom Cleaners (SÖFW Journal | 129 | 3-2003), section 3.2".
For limescale removal following rules it is sufficient if the test product achieves the cleaning performance of the reference product either vertically or horizontally (for concentrated bathroom cleaners).:

Laboratory tests for the streak-free finish and the slight removal of grease by **glass cleaners** must follow the IKW test for glass cleaners (not yet published). Until publication, test laboratory-internal test regulations can be used.

Summary:

Cleaner	Required fitness for use	Test method	Dilution test product	Reference product
All-purpose cleaner, undiluted	Grease removal	in (1)	diluted (2)	see above
All-purpose cleaner, undiluted (neutral cleaner)*	Streak-free finish	in (1)	diluted	see above
	Gentle treatment of the material	in (1)	undiluted	without (3)
Kitchen cleaner, Ready-to-use	Grease removal	in (4)	undiluted	see above
	Gentle treatment of the material			without (11)
Kitchen cleaner, undiluted	Grease removal	in (4)	undiluted	see above
	Gentle treatment of the material			without (11)
Concentrated glass cleaner for dilution	Streak-free finish	in (5)	diluted	see above
	Slight removal of grease	in (5)		
Glass cleaner, ready-to-use	Streak-free finish	in (5)	undiluted	see above
	Slight grease removal	in (5)		
Acidic toilet cleaner	Ability to remove limescale	IKW test in (6); Limescale removal index ≥ 1.0	undiluted	Standard toilet cleaner in (6)
Bathroom cleaner ready-to-use Kitchen cleaner, ready-to-use (10)	Ability to remove limescale [12]	IKW test in (7), section 3.1.2	undiluted	in (9)
	Lime soap removal	IKW test in (7)	undiluted	in (9)
Concentrated bathroom cleaner or Kitchen cleaner (10) for dilution	Ability to remove limescale [12]	IKW test in (7), section 3.1.2. (8)	diluted	in (9)
	Lime soap removal	IKW test in (7)	diluted	in (9)

* additional

(1): Recommendation for the Quality Assessment of the Product Performance of All-Purpose Cleaners (SÖFW Journal | 141 | 4-2015), a performance test carried out in accordance with the "Qualitätsnormen für Fußbodenpflege- und reinigungsmittel" (SÖFW | 371 | 10-1986); ("IPP-Gardner Test") (Quality standards for floor care and cleaning products) will also be accepted

(2): Only if sufficient comparative cleaning performance detectable, otherwise undiluted.

(3): After 7 and 14 days, the test product must achieve at least the rating 2.

(4): IKW Recommendation on for the Quality Assessment of the Product Performance of Degreasing Power Cleaners (2017). (SÖFW Journal 7|8 2018).

(5): IKW test, not yet published. Until publication: Testing laboratory-internal test methods

(6): Recommendations for the quality assessment of acidic toilet cleaners (June 1999)

(7): Recommendation for the Quality Assessment of Bathroom Cleaners (SÖFW-Journal | 129 | 3-2003)

(8): Test product must be better than reference product vertically or horizontally

(9): see table 1 in the "Framework for testing performance of hard surface cleaning products"

(10): only if claimed on the label

(11): After 7 and 14 days, the test product must achieve at least the rating 2 on all materials mentioned in the publication.

(12): see Summary bathroom cleaner / limescale removal

Summary bathroom cleaner / limescale removal:

	Form of application for **normally** soiled surfaces according to the label	Reference product	Test	Notes
RTU bathroom cleaner (exclusively) **Application as sanitary cleaner, RTU**	RTU	See Table 1 in "Framework for testing performance of hard surface cleaning products" **with Rheozan or without Rheozan**	IKW test in (7), section 3.1.2 (horizontally and vertically)	**New:** It is now possible to use a reference product with or without Rheozan. The reference product must be identical for both the horizontal and vertical test.
Bathroom cleaner, undiluted (exclusively) **Application as Sanitary cleaner, undiluted**	Diluted	See Table 1 in "Framework for testing performance of hard surface cleaning products" **without Rheozan**	IKW test in (7), section 3.1.2 (horizontally **or** vertically)	The reference product is **not** diluted.
Bathroom cleaner, undiluted and in RTU form **Application as Sanitary cleaner, undiluted**	Diluted	See Table 1 in "Framework for testing performance of hard surface cleaning products" **without Rheozan**	IKW test in (7), section 3.1.2 (horizontally **or** vertically)	The reference product is **not** diluted.
Bathroom cleaner, undiluted and in RTU form **Application as sanitary cleaner, RTU**	RTU	See Table 1 in "Framework for testing performance of hard surface cleaning products" **with Rheozan or without Rheozan**	IKW test in (7), section 3.1.2 (horizontally and vertically) **OR** IKW test in (7), section 3.1.3 on one surface	**New**: It is now possible to use a reference product with or without Rheozan. The reference product must be identical for both the horizontal and vertical test. **New**: A test according to section 3.1.3 is also possible.

Appendix C Fitness for use of hand dishwashing detergents

The product must be fit for use and meet the requirements of the consumer.
The cleaning effect and cleaning capacity must correspond at least to those achieved by the no-name reference product indicated below.
The cleaning effect and cleaning capacity must be tested within the scope of a suitable and justifiable performance test in the laboratory, whereby the completion and documentation of the test are subject to concrete conditions that are explained in the following document: "Framework for Testing the Performance of Hand Dishwashing Detergents".
The product described in the IKW performance test "Recommendation for the quality assessment of the cleaning performance of hand dishwashing detergents" (SÖFW Journal, 128, 5-2002 P. 11-15)." shall be used as the no-name reference product, whereby a dose of 4 ml of the reference product shall be used for every 5 litres of water.
As verification of sufficient quality in the test of the hand dishwashing detergent's fitness for use, the testing laboratory or manufacturer laboratory shall document the following mean values from 5 dishwashing tests in the results section of the test report that were carried out with the IKW reference hand dishwashing detergent (dosage 4 ml/5 litres of dishwashing water) using the reference number of plates for soil 1 and 2 as required in the IKW "Recommendation for the quality assessment of the cleaning performance of hand dishwashing detergents" (SÖFW Journal, 128, 5-2002 page 15):

- Indicative value for soil 1: 11-15 plates, range +/- 10 %
- Indicative value for soil 2: 15-20 plates, range +/- 10 %