

Swedish Society for Nature Conservation | Good Environmental Choice

# Cosmetics

Criteria 2018:1



# Bra Miljöval

**NOTE: This text is a translation. The original Swedish version always prevails.**

## Good Environmental Choice, ecolabelling by the Swedish Society for Nature Conservation

The Swedish Society for Nature Conservation (SSNC) is a non-profit organisation that is independent of political and religious affiliations. We are driven by an ambition to preserve the environment and protect people's health. It is partly due to us that seals, sea-eagles and peregrine falcons are no longer endangered species in Sweden. We promote biological diversity, and strive to prevent climate change, acidification, eutrophication, the spread of dangerous chemicals and much more.

However, it is not enough to protect nature in reserves or stop individual polluters. We need to reduce our total environmental impact. Companies that adapt their production methods and products to reduce the burden on the environment play a vital role in this work.

Good Environmental Choice is SSNC's own ecolabel and one of the tools we use to drive development towards a sustainable society. Good Environmental Choice places demanding environmental requirements on the products and services that it approves for labelling.

Good Environmental Choice is an example of so-called Type-I labelling: a third-party certification independent of the partners involved. Good Environmental Choice is a member of GEN (the Global Ecolabelling Network), which is an international network of environmental labelling organisations. To ensure that Good Environmental Choice meets quality assurance demands, the ecolabel has been reviewed by GENICES (the Global Ecolabelling Network's Internationally Coordinated Ecolabelling System).

Thanks to Good Environmental Choice, hundreds of products have been revised and made environmentally friendly. Labelling has led to concrete results. Thanks to Good Environmental Choice, phosphates were phased out from laundry detergents and eventually banned within the EU. Good Environmental Choice Grocery shops pushed for the first ecolabelled, mercury-free button-cell batteries and convinced producers of self-playing greetings cards to switch to such batteries for the entire Swedish market. Our ecolabel also encourages reduced consumption through labelling second-hand clothing and clothes that are redesigned.

Another example is that electricity labelled with Good Environmental Choice has established demands on water flow through hydropower plants and thereby benefited plants and animals in river environments. The ecolabel also creates incentives for improving energy efficiency and for building fish ladders around dams. Good Environmental Choice also aids consumers in choosing the transportation method that has the lowest environmental impact. Good Environmental Choice's criteria for insurances include environmental demands on the licence holders asset management.

In the eyes of the consumer, the Good Environmental Choice label is a trustworthy symbol. For the licence holder, labelling provides a competitive advantage.



Bra Miljöval

Read more about Good Environmental Choice at [www.bramiljoval.se](http://www.bramiljoval.se)  
For further information, contact the Swedish Society for Nature Conservation,  
Första Långgatan 28 B, SE 413 27 Göteborg, Sweden.  
e-mail: [gbg@naturskyddsforeningen.se](mailto:gbg@naturskyddsforeningen.se)

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## Preface

The Good Environmental Choice label for cosmetics is one of the tools used by the Swedish Society for Nature Conservation (SSNC) to promote the development of a sustainable society.

To reach the, by the Swedish parliament set environmental objective Non-toxic environment, strong measures are required, both nationally and internationally. In addition to political decisions, there is a need for innovative environmentally conscious companies, as well as consumers who make conscious decisions. The ecolabel Good Environmental Choice guides consumers and purchasers to the best environmental choices. By doing so, the label contributes toward reaching the environmental objective of a Non-toxic environment.

The aim of the ecolabel is to reduce the use of substances that are hazardous to the environment or human health and encourage the substitution to better alternatives. SSNC's policy for environmental pollutants has been the basis for the design of the criteria. As a result, substances suspected to cause cancer or affect reproductive capacity are not permitted. Chemicals should have a low toxicity to aquatic organisms and fulfil strict requirements on biodegradability. In addition, strict requirements are placed on endocrine disrupting chemicals as well as sensitising substances. In some cases, groups of structurally similar substances have been banned e.g. phthalates, parabens and cyclic siloxanes. This is because SSNC believes that they are problematic and can be replaced by substances that are not likely to cause adverse effects on health and the environment.

The requirements placed on the products' packaging are designed to minimise climate impact and promote efficient use of resources. To minimise the environmental impact of the products there are also requirements for user information and that the licence holder shall have a policy stating that they aim to increase the proportion of ingredients originating from renewable sources.

The criteria are designed to be directly applicable in public procurement, by reference to the ecolabel.

The criteria for Good Environmental Choice Cosmetics have been ratified by the secretary-general of the Swedish Society for Nature Conservation. Many licence holders, individuals and companies have contributed with valuable information and comments during their preparation, and we would like to thank them here.

*Eva Eiderström*

**Head of Good Environmental Choice**

## Purpose

- To minimise the negative impact of cosmetic products on the environment and human health
- To promote the phasing out of substances that are hazardous to the environment or human health, and to encourage the substitution to better alternatives
- To make it easy for consumers to choose products with as little negative impact on the environment and human health as possible
- To offer public procurers a tool to easily set relevant environmental and health requirements for cosmetic products

## Scope of the criteria

The Good Environmental Choice criteria apply from 2018-03-01 until the next version is introduced, no earlier than 2021-03-01.

Products covered by the Cosmetics Regulation (EC) No 1223/2009 can be labelled according to these criteria. The criteria are open to both consumer products and products for professional users. The Swedish Society for Nature Conservation reserves the right to not label product groups that are contradictory to the organisation's work and policies.

The criteria impose requirements on all ingredients. There are also requirements on the product packaging and user information. The General requirements, 1.1 – 1.22, apply to all ingredients and the final product. For each ingredient there are also additional requirements, depending on its function in the product. Some ingredients, such as surfactants and perfumes, have their own section in the criteria document. Other ingredients must meet the requirements of Other additives, requirements 11.1 – 11.13. In cases where SSNC considers it relevant to set more stringent requirements, or allow exceptions for specific product groups, such have been included in the criteria. The product groups that are subject to product-specific requirements are listed below.

### Definitions of product groups

<b>Decorative cosmetics:</b>	Products used for aesthetic purposes, such as mascara and eyeliner.
<b>Deodorants and antiperspirants:</b>	Products used in the armpit to inhibit sweating or disguise body odour.
<b>Intimate hygiene products:</b>	Products intended exclusively for use in external intimate hygiene.
<b>Lip products:</b>	Products intended for use on the lips.
<b>Oral products:</b>	Products, except for toothpaste, used in the oral cavity.
<b>Shaving products:</b>	Products used when shaving.
<b>Sunbathing products:</b>	Products used to protect the consumer from the sun's ultraviolet radiation.
<b>Toothpaste:</b>	Products used when brushing the teeth.

# 1 General requirements

- 1.1 All added ingredients must be listed in the recipe. This requirement also applies to synthetic residues, reaction products and traces present in a concentration higher than 0.01 % by weight. Where an ingredient consists of a mixture, all chemical substances in the mixture must be specified, with each substance meeting the requirements.

Ingredient refers to a pure chemical substance or a mixture of several chemical substances.

## Requirements on the product

- 1.2 The product must not contain lead, cadmium, cobalt, chromium, mercury, nickel, EDTA and its salts, cocamide DEA, nylon, polyethylene, organic halogen compounds (e.g. perfluorinated and polyfluorinated compounds), phthalates, parabens, cyclic siloxanes or the endocrine disrupting chemicals listed in Appendix 1: Endocrine disrupting chemicals.
- 1.3 The product must not contain nanomaterials. Exceptions from the requirement may be granted for individual nanomaterials if an independent party has evaluated the specific use and found that it is safe from a health and environmental perspective. Examples of independent parties are the committees Scientific Committee on Consumer Safety (SCCS) and Scientific Committee on Health, Environment and Emerging Risks (SCHEER).
- 1.4 The product must not contain microplastics.
- 1.5 The product must not contain substances that meet the criteria for PBT or vPvB substances in accordance with Annex XIII of the REACH Regulation (EC) No. 1907/2006, or substances included on the Candidate list, (<http://echa.europa.eu/en/candidate-list-table>).
- 1.6 The product must not contain any of the sensitising substances/extracts listed in the table below.

Nanomaterial refers to an insoluble or biopersistent and intentionally manufactured material with one or more external dimensions, or an internal structure, on the scale from 1 nm to 100 nm.

Microplastics refers to plastic particles in a solid form, insoluble in water, less than 5 mm in at least one dimension, and not readily biodegradable according to OECD 301, OECD 310 or an equivalent test.

Name (according to SCCS/1459/11)	CAS number
Hydroxyisohexyl 3-Cyclohexene Carboxaldehyde	31906-04-4, 51414-25-6
Atranol	526-37-4
Chloroatranol	57074-21-2
<i>Evernia furfuracea</i> Extract	90028-67-4
<i>Evernia prunastri</i> Extract	90028-68-5

## Requirements on ingredients

- 1.7** Ingredients or their known degradation products, must not be, or be suspected of being, carcinogenic according to the following classifications:  
H350, May cause cancer  
H351, Suspected of causing cancer
- 1.8** Ingredients, or their known degradation products, must not be, or be suspected of being, mutagenic according to the following classifications:  
H340, May cause genetic defects  
H341, Suspected of causing genetic defects
- 1.9** Ingredients, or their known degradation products, must not be, or be suspected of being, toxic to reproduction according to the following classifications:  
H360, May damage fertility or the unborn child  
H361, Suspected of damaging fertility or the unborn child  
H362, May cause harm to breast-fed children
- 1.10** Ingredients that are prohibited since they are specific target organ toxicants and have the classification H370, H371, H372 or H373, and where the exposure route is specified in the classification, may be approved on an individual basis. This requires that the SSNC finds the exposure route irrelevant to the particular use for which the application refers.
- 1.11** Biocides must only be used to preserve the product, including its ingredients, during storage and use.

Classification refers to harmonised classification or self-classification in accordance with the CLP Regulation (EC) No 1272/2008. Self-classification means that the manufacturing company determines if an ingredient should be assigned to one or more hazard statements in accordance with the classification system. If a hazard statement covers more than one category, e.g. H300 which covers both acute toxicity category 1 and category 2, and the criteria does not explicitly state otherwise, all categories are included. For certain hazard statements, there are subvariants, stating the specific effect and/or route of exposure, if those are known. One example is "H360Df, May damage the unborn child. Suspected of damaging fertility". Another example is "H350i, May cause cancer by inhalation". Note that if a hazard statement is prohibited, the prohibition also includes all subvariants.

A biocide is a substance that prevents the growth and harmful effects of microorganisms, fungi and pests.

## Requirements on renewable raw materials

- 1.12** If the product contains ingredients from fossil raw materials the licence holder must have a, by the management established, policy (or equivalent) with the aim to increase the proportion of renewable raw materials over time.
- 1.13** The licence holder must have knowledge of the proportion of renewable raw materials for each ingredient consisting of one or more organic substances. In addition, the licence holder must know the total share of renewable raw materials in the product and the origin of the raw materials (e.g. coconut).
- 1.14** Oils, fats and other substances extracted from the oil palm (*Elaeis guineensis*), with CAS numbers 8002-75-3 or 8023-79-8, must come from organic production.
- 1.15** Ingredients containing raw materials obtained from the oil palm (*Elaeis guineensis*), and are not covered by requirement 1.14, must be certified in accordance with RSPO Mass Balance, Segregated or Identity Preserved.

Organic production refers to production being conducted in accordance with Regulation (EC) No 834/2007, and which has been certified in accordance with it.

## Other requirements

- 1.16** In the sections where the criteria require toxicity values for acute or chronic aquatic toxicity, the result from algae, crustaceans and fish tests should be attached to the application. Acute aquatic toxicity should primarily be specified by using existing data from OECD 201 - 203 or an equivalent test.

Existing data and existing results refer to tests carried out by the manufacturing company, or by another company, authority or organisation.

For chronic aquatic toxicity OECD 201, OECD 210, OECD 211, OECD 215 or an equivalent test should be used. Secondary, *in vitro* tests, (Q)SAR or other alternative tests, validated by the European Union Reference Laboratory for alternatives to animal testing (EURL-ECVAM) or other international body should be used. As a last option, the ingredient can be assessed by using test data from structurally similar substances. If data for chronic toxicity is missing, an assessment factor should be used, as described in Appendix 2: Assessment factor.

To compensate for lack of data, an assessment factor can be applied to existing data. The more data available, the lower the assessment factor.

- 1.17** If information about bioaccumulation is required, primarily the bioconcentration factor (BCF) should be used, using existing data from OECD 305. Secondary, *in vitro* tests, (Q)SARs or other alternative tests validated by the European Union Reference Laboratory for alternatives to animal testing (EURL-ECVAM) or other international body should be used. As a last option, the partition coefficient for octanol/water ( $\log K_{ow}$ ) according to OECD 107, OECD 117 or an equivalent test should be used.
- 1.18** Chemical substances that are not harmonised classified must be self-classified. Where possible, existing results from prior classifications should be used. Otherwise, *in vitro* test methods, (Q)SAR or other alternative test methods validated by the European Union Reference Laboratory for alternatives to animal testing (EURL-ECVAM) or other international body should be used.
- 1.19** The directive on Good Laboratory Practice (2004/10/EC) must be applied whenever chemicals are tested.
- 1.20** If the SCCS recommendations are more restrictive than the requirements in this document, the SCCS recommendations must be followed. However, the SCCS "OPINION on Fragrance allergens in cosmetic products" (SCCS/1459/11) is exempt from this requirement.
- 1.21** The precautionary principle should be applied in the evaluation of the ingredients and the product.
- 1.22** When the criteria places requirements on consumer information on the packaging, such information should be in all official languages or equivalent, in the countries where the product is sold. Exceptions may be permitted provided that a large majority of the population has good knowledge of the language used to communicate the information.

The precautionary principle is enshrined in the Swedish Environmental Code and the REACH Regulation. This means that, for example, when conflicting test data exists the higher toxicity value should be applied. It also means that substances may be banned if there is reason to believe that they can cause serious harm, even though they meet the criteria in this document.

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## Reasons for requirements

[1.1] All substances added to a product must meet the specified requirements in order to protect the environment and human health. Substances present in very low concentrations can also have undesirable effects.

[1.2] These substances may cause unwanted and serious environmental and health effects. Many of them are prohibited by other requirements in the criteria document. Some of them are also prohibited under the Cosmetics Regulation (EC) No 1223/2009, but residues may be present.

[1.3] There is considerable uncertainty about the effects of nanomaterials on health and the environment. In accordance with the precautionary principle, they are not permitted.

[1.4] Microplastics have well-documented negative impacts on the aquatic environment and they are persistent.

[1.5] These substances have such properties that they can cause serious and permanent environmental and health effects.



[1.6] These sensitising substances/extracts are particularly problematic, according to the evaluation presented in SCCS/1459/11. Therefore, they must not be included in the product, regardless of concentration.

[1.7 - 1.9] Cancer, genetic damage and damage to the reproductive system are serious health effects. Since no safe levels can be determined, the requirements apply regardless of the concentration in the product.

[1.10] According to the CLP Regulation, the route of exposure must only be stated if it has been conclusively proven that the damage is not caused by some other route.

[1.11] Biocidal substances are typically associated with higher risks than other chemicals. To minimise the risks, biocidal substances are only permitted to preserve the product, including its ingredients, during storage and use.

[1.12 – 1.13] For climate reasons, it is of great importance to shift from fossil-based resources to renewable ones. For it to be possible to evaluate whether the licence holder's policy (or equivalent) has had the intended effect, it is necessary that the licence holder knows the proportion of renewable raw materials in the ingredients.

[1.14 - 1.15] Large-scale palm oil plantations are associated with serious consequences for both the people in its vicinity and the environment. While the RSPO certification has its flaws, it requires that several important basic criteria for palm oil production have been met. For certain ingredients it is possible to set stricter requirements and consequently such ingredients must come from organic production.

[1.16 – 1.18] All substances must be adequately tested in order to avoid damage to the environment.

[1.19] In order to ensure the quality of test results, any new tests must be performed in accordance with good laboratory practice.

[1.20] SCCS continuously evaluates the health effects of chemicals, which means that previously unknown risks may be revealed.

[1.21] The precautionary principle is enshrined in several different regulations and is applied in order to minimise the risk of future adverse effects on health and the environment.

[1.22] It is important that as many people as possible understand the information that the criteria demand. A country's official language (s) is the one/ones used in the country's official administration.

## 2 Surfactants

- 2.1 The surfactant must be readily biodegradable according to OECD 301, OECD 310 or an equivalent test.
- 2.2 The surfactant must be anaerobically biodegradable to 60 % according to ECETOC No 28, ISO 11734, OECD 311 or an equivalent test.
- 2.3 The surfactant must have a very low residual content of organic halogen compounds, < 100 mg/kg TOX.
- 2.4 The surfactant must have an acute aquatic toxicity where  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is > 1 mg/l.
- 2.5 The surfactant must have a chronic aquatic toxicity where  $NOEC/EC_x$  is > 0.1 mg/l.
- 2.6 The surfactant must not be hazardous to the aquatic environment according to the following classifications:
  - 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
  - H413, May cause long lasting harmful effects to aquatic life

- 2.7** The surfactant must not be acutely toxic according to the following classifications:
- H300, Fatal if swallowed
  - H310, Fatal in contact with skin
  - H330, Fatal if inhaled
  - H301, Toxic if swallowed
  - H311, Toxic in contact with skin
  - H331, Toxic if inhaled
- 2.8** The surfactant must not show specific target organ toxicity according to the following classifications:
- 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
- 2.9** The surfactant must not be sensitising according to the classifications below, or be associated with data that indicates sensitisation.
- H317, May cause an allergic skin reaction
  - H334, May cause allergy or asthma symptoms or breathing difficulties if inhaled

### Product-specific requirements

#### Toothpaste

- 2.10** Sodium lauryl sulfate (SLS) must not exceed 1.3 % by weight in the product.
- 2.11** If the toothpaste contains SLS the packaging must be clearly labelled with the phrase "Contains sodium lauryl sulfate (SLS), which can prolong the healing time of mouth ulcers (*Aphthous stomatitis*) and should be avoided when you have such".

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### Reasons for requirements

- [2.1] Substances that degrade slowly accumulate in the environment and may pose a risk in the future. Such substances can also spread over long distances.
- [2.2] Degradation in oxygen-free environment is an important characteristic for substances that accumulate in sewage sludge or sediment, otherwise there is a risk that these substances cause problems in the future.
- [2.3] Organic halogen compounds have many undesirable serious environmental and health effects.
- [2.4 - 2.5] Substances that are acutely or chronically toxic to aquatic organisms affect the aquatic ecosystem negatively.
- [2.6] To minimise the environmental risks, the substance must not be classified with any of these hazard statements.
- [2.7 – 2.9] The products should be safe to use and not pose a health risk to the user.
- [2.10 – 2.11] SLS can prolong the healing time of mouth ulcers. (*Aphthous stomatitis*), why the criteria limit the concentration and require consumer information.

## 3 Emulsifiers and emollients

- 3.1** The emulsifier/emollient must be readily biodegradable according to OECD 301, OECD 310 or an equivalent test.
- 3.2** The emulsifier/emollient must have an acute aquatic toxicity where  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is > 1 mg/l.

**3.3** The emulsifier/emollient must have a chronic aquatic toxicity where NOEC/EC<sub>x</sub> is > 0.1 mg/l.

**3.4** The emulsifier/emollient must have a bioconcentration factor (BCF) < 500. If no BCF data is available, log K<sub>ow</sub> < 4.

Exceptions may be made if any of the following requirements are met:

- a) LC<sub>50</sub>, EC<sub>50</sub> and IC<sub>50</sub> is > 100 mg/l or NOEC/EC<sub>x</sub> is > 10 mg/l.
- b) it can be shown that the emulsifier/emollient is broken down very quickly into substances whose BCF or log K<sub>ow</sub> satisfies the requirements.
- c) the emulsifier/emollient is not bioavailable (molar mass > 700 g/mol).

**3.5** The emulsifier/emollient must not be hazardous to aquatic environments according to the following classifications:

- 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
- H413, May cause long lasting harmful effects to aquatic life

**3.6** The emulsifier/emollient must not be acutely toxic according to the following classifications:

- H300, Fatal if swallowed
- H310, Fatal in contact with skin
- H330, Fatal if inhaled
- H301, Toxic if swallowed
- H311, Toxic in contact with skin
- H331, Toxic if inhaled

**3.7** The emulsifier/emollient must not show specific target organ toxicity according to the following classifications:

- 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

**3.8** The emulsifier/emollient must not be sensitising according to the classifications below, or be associated with data that indicates sensitisation.

- H317, May cause an allergic skin reaction
- H334, May cause allergy or asthma symptoms or breathing difficulties if inhaled

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## Reasons for requirements

[3.1] Substances that degrade slowly accumulate in the environment and may pose a risk in the future. Such substances can also spread over long distances.

[3.2 - 3.3] Substances that are acutely or chronically toxic to aquatic organisms affect the aquatic ecosystem negatively.

[3.4] Substances that bioaccumulate in the environment are stored in the food webs and can have adverse effects on animals and plants.

[3.5] To minimise the environmental risks, the substance must not be classified with any of these hazard statements.

[3.6 - 3.8] The products should be safe to use and not pose a health risk to the user.

## 4 Preservatives

- 4.1** The preservative must be readily biodegradable according to OECD 301, OECD 310 or an equivalent test.
- 4.2** The preservative must have an acute aquatic toxicity where  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 1$  mg/l.
- 4.3** The preservative must have a chronic aquatic toxicity where  $NOEC/EC_x$  is  $> 0.1$  mg/l.
- 4.4** The preservative must have a bioconcentration factor (BCF)  $< 500$ . If no BCF data is available,  $\log K_{ow} < 4$ .

Exceptions may be made if any of the following requirements are met:

- a)  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 100$  mg/l or  $NOEC/EC_x$  is  $> 10$  mg/l.
  - b) it can be shown that the preservative is broken down very quickly into substances whose BCF or  $\log K_{ow}$  satisfies the requirements.
  - c) the preservative is not bioavailable (molar mass  $> 700$  g/mol).
- 4.5** The preservative must not be hazardous to the aquatic environment according to the following classifications:  
 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  
 H413, May cause long lasting harmful effects to aquatic life
- 4.6** The preservative must not be acutely toxic according to the following classifications:  
 H300, Fatal if swallowed  
 H310, Fatal in contact with skin  
 H330, Fatal if inhaled  
 H301, Toxic if swallowed  
 H311, Toxic in contact with skin  
 H331, Toxic if inhaled
- 4.7** The preservative must not show specific target organ toxicity according to the following classifications:  
 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
- 4.8** The preservative must not be sensitising according to the classifications below, or be associated with data that indicates sensitisation.  
 H317, May cause an allergic skin reaction  
 H334, May cause allergy or asthma symptoms or breathing difficulties if inhaled

## Product-specific requirements

### Lip products, toothpaste and oral products

- 4.9** The preservative must be approved in accordance with Regulation (EC) No. 1333/2008 on food additives.

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### Reasons for requirements

- [4.1] Substances that degrade slowly accumulate in the environment and may pose a risk in the future. Such substances can also spread over long distances.
- [4.2 - 4.3] Substances that are acutely or chronically toxic to aquatic organisms affect the aquatic ecosystem negatively.
- [4.4] Substances that bioaccumulate in the environment are stored in the food webs and can have adverse effects on animals and plants.
- [4.5] To minimise the environmental risks, the substance must not be classified with any of these hazard statements.
- [4.6 - 4.8] The products should be safe to use and not pose a health risk to the user.
- [4.9] Food additives authorised under current EU legislation are considered to fulfil high requirements with regard to human health.

## 5 Oils, fats and waxes

- 5.1** The ingredient must be readily biodegradable according to OECD 301, OECD 310 or an equivalent test.
- 5.2** The ingredient must have an acute aquatic toxicity where  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 1$  mg/l.
- 5.3** The ingredient must have a bioconcentration factor (BCF)  $< 500$ . If no BCF data is available,  $\log K_{ow} < 4$ .

Exceptions may be made if any of the following requirements are met:

- $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 100$  mg/l.
- it can be shown that the ingredient is broken down very quickly into substances whose BCF or  $\log K_{ow}$  satisfies the requirements.
- the ingredient is not bioavailable (molar mass  $> 700$  g/mol).

- 5.4** The ingredient must not be hazardous to the aquatic environment according to the following classifications:
- 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
- 5.5** The ingredient must not be acutely toxic according to the following classifications:
- H300, Fatal if swallowed  
 H310, Fatal in contact with skin  
 H330, Fatal if inhaled  
 H301, Toxic if swallowed  
 H311, Toxic in contact with skin  
 H331, Toxic if inhaled

Oils, fats and waxes, in this context, refers to substances that are exempt from registration according to Annex V § 9 of the REACH Regulation (EC) No 1907/2006.

- 5.6** The ingredient must not show specific target organ toxicity according to the following classifications:  
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
- 5.7** The ingredient must not be classified with H334, May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- 5.8** Individual substances classified with H317, May cause an allergic skin reaction, must not exceed a concentration of 0.01 % by weight in rinse-off products and 0.001 % by weight in leave-on products. The concentration must be combined with any contributions from requirement 8.4.
- 5.9** Individual substances listed in the table below, or fragrances listed in Annex III (with reference number 67-92) to the Cosmetics Regulation (EC) No 1223/2009, must not exceed a concentration of 0.01 % by weight in rinse-off products and 0.001 % by weight in leave-on products. This requirement applies irrespective of the function of the substance in the product.

A rinse-off product is a cosmetic product that is intended to be removed after use. A leave-on product is a cosmetic product intended for prolonged contact with the skin, hair or mucous membranes.

Name	CAS number
<i>Cananga Odorata</i> and Ylang-ylang oil	83863-30-3, 8006-81-3
<i>Eugenia Carophyllus</i> Leaf/Flower oil	8000-34-8
<i>Jasminum grandiflorum/officinale</i>	84776-64-7, 90045-94-6, 8022-96-6
<i>Myroxylon Pereirae</i>	8007-00-9
<i>Santalum Album</i>	84787-70-2, 8006-87-9
Turpentine oil	8006-64-2, 9005-90-7, 8052-14-0
<i>Cinnamomum cassia</i> leaf oil/ <i>Cinnamomum zeylanicum</i> extract	84961-46-6, 8007-80-5, 84649-98-9

- 5.10** Substances defined in requirement 5.8, 5.9, 8.4 and 8.5 must not exceed a total concentration of 0.1 % by weight in rinse-off products. For leave-on products, a concentration limit of 0.01% by weight is applied.

### Product-specific requirements

#### Sunbathing products, intimate hygiene products, decorative cosmetics and products designed for or specifically intended for children under 12 years of age

- 5.11** Substances defined in requirement 5.8, 5.9, or those that are associated with data that indicates sensitisation, are not permitted.

## Reasons for requirements

[5.1-5.3] Although these substances occur naturally in the environment, they can cause adverse effects in aquatic ecosystems.

[5.4] To minimise the environmental risks, the substance must not be classified with any of these hazard statements.

[5.5 - 5.7] The products should be safe to use and not pose a health risk to the user.

[5.8 - 5.10] The most common sensitising fragrances are listed in Annex III to the Cosmetics Regulation (EC) No 1223/2009. To reduce the risk for sensitisation the use of these substances is restricted. For the same reason the use of substances classified with H317, May cause an allergic skin reaction, and substances listed in the table in requirement 5.9 is restricted.

[5.11] Sensitising substances, some of which are photosensitising, are not permitted in children's products, products used on sensitive skin, or products associated with sun exposure.

## 6 UV filters

**6.1** UV filters are only permitted in sunbathing products.

**6.2** The UV filter must meet at least one of the following requirements:

- a) readily biodegradable according to OECD 301, OECD 310 or an equivalent test, and  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 1$  mg/l or  $NOEC/EC_x$  is  $> 0.1$  mg/l
- b) inherently biodegradable according to OECD 302 or an equivalent test, and  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 10$  mg/l or  $NOEC/EC_x$  is  $> 1$  mg/l
- c)  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 100$  mg/l or  $NOEC/EC_x$  is  $> 10$  mg/l

**6.3** The UV filter must not be hazardous to the aquatic environment according to the following classifications:

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

**6.4** The UV filter must have a bioconcentration factor (BCF)  $< 500$ . If no BCF data is available,  $\log K_{ow} < 4$ .

Exceptions may be made if any of the following requirements are met:

- a)  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 100$  mg/l or  $NOEC/EC_x$  is  $> 10$  mg/l.
- b) it can be shown that the UV filter is broken down very quickly into substances whose BCF or  $\log K_{ow}$  satisfies the requirements.
- c) the UV filter is not bioavailable (molar mass  $> 700$  g/mol).

**6.5** The UV filter must not be acutely toxic according to the following classifications:

H300, Fatal if swallowed

H310, Fatal in contact with skin

H330, Fatal if inhaled

H301, Toxic if swallowed

H311, Toxic in contact with skin

H331, Toxic if inhaled

**6.6** The UV filter must not show specific target organ toxicity according to the following classifications:

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

- 6.7** The UV filter must not be sensitising according to the classifications below, or be associated with data that indicates sensitisation.  
H317, May cause an allergic skin reaction  
H334, May cause allergy or asthma symptoms or breathing difficulties if inhaled
- 6.8** Sunbathing products should be labelled with the phrase "Do not stay for long periods in the sun, even when using a sunbathing product" or similar wording.
- 6.9** Sunbathing products should follow the European Commission's recommendations on the efficacy of sunbathing products and the requirements relating thereto (2006/647/EC).
- 6.10** The expiration date of the opened sunbathing product should be indicated on the packaging.

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### Reasons for requirements

[6.1] UV filters are often problematic to the environment and the area of use is, therefore, limited to sunbathing products, where they are necessary.

[6.2 - 6.3] To minimise the environmental risks, requirements regarding biodegradability and aquatic toxicity are set. Substances classified with H400, H410 or H411 are not permitted.

[6.4] Substances that bioaccumulate in the environment are stored in the food webs and can have adverse effects on animals and plants.

[6.5 - 6.7] The products should be safe to use and not pose a health risk to the user.

[6.8] No sunbathing product provides full protection against UV radiation and prolonged exposure to the sun may, therefore, be harmful to health.

[6.9] These recommendations must be followed in order to ensure that the product protects the user according to the specified Sun Protection Factor (SPF) and that no promises of excessive protection are made.

[6.10] Leftover sunbathing products are sometimes stored from one summer to the next. For this reason consumer information about the opened product's expiration date is important to ensure full protection.

## 7 Colouring agents

- 7.1** The colouring agent must be approved as a food additive (colour) according to Regulation (EC) No 1333/2008 on food additives.
- 7.2** The colouring agent must not be classified with H317, May cause an allergic skin reaction, or be associated with data that indicates sensitisation.
- 7.3** The colouring agent must not be hazardous to the aquatic environment according to the following classifications:  
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



## Product-specific requirements

### Sunbathing products

- 7.4 Colouring agents are not permitted.

### Decorative cosmetics

- 7.5 Colouring agents, which are not approved as food additives, may be included provided that the colouring agent is readily biodegradable according to OECD 301, OECD 310 or an equivalent test, and fulfil requirements 11.6 - 11.8. The exemption does not include lip products or products designed for or specifically intended for children under 12 years of age. In these products, the colouring agent should be approved for use as a food additive according to Regulation (EC) No 1333/2008.

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## Reasons for requirements

[7.1] Colouring agents may have negative effects on health. Food colouring agents have been approved in accordance with current EU legislation on food additives and are considered to fulfil high requirements with regard to human health.

[7.2] To reduce the risk of allergies, substances classified with H317, or associated with data that indicates sensitisation, are not permitted.

[7.3] Usually, food colouring agents are not hazardous to the environment. However, there are exceptions. For this reason, substances classified with H400, H410 or H411 are not permitted.

[7.4] Sunbathing products often end up in the aquatic environment without passing through a waste water treatment plant. Colouring agents are seldom used in sunbathing products and they are not considered important for the function of the product.

[7.5] In decorative cosmetics, colouring agents are important for the function and, consequently, more substances are permitted.

## 8 Perfume and aroma

- 8.1 No more than 0.50 % by weight perfume and aroma combined is permitted in the product.
- 8.2 A declaration of all substances in the perfume and aroma that are classified with H317, May cause an allergic skin reaction, or listed in Annex III (with reference number 67-92) of the Cosmetics Regulation (EC) No 1223/2009, or listed in the table in requirement 8.5 must be attached to the application and the exact concentration must be stated. Other substances included in the perfume or aroma must be declared if they exceed 1 % by weight. For these substances, no exact concentration is required. Note that the substances listed in the table of requirement 1.6 are not permitted in the product.
- 8.3 Those substances in the perfume or aroma that are not fragrances or flavours must meet the requirements in the criteria that apply to their function.
- 8.4 Individual fragrances or flavours classified with H317, May cause an allergic skin reaction, must not exceed a concentration of 0.01 % by weight in rinse-off products and 0.001 % by weight in leave-on products. The concentration must be combined with any contributions from requirement 5.8.

A fragrance is a substance in the perfume that has been added for its scenting properties. A flavour is a substance added to the aroma for its flavouring properties.

- 8.5** Substances listed in the table below, and the ones listed in Annex III (with reference number 67-92) to the Cosmetics Regulation (EC) No 1223/2009 must not exceed a concentration of 0.01 % by weight in rinse-off products and 0.001 % by weight in leave-on products. This requirement applies irrespective of the function of the substance in the product.

Name	CAS number
<i>Cananga Odorata</i> and Ylang-ylang oil	83863-30-3, 8006-81-3
<i>Eugenia Carophyllus</i> Leaf/Flower oil	8000-34-8
<i>Jasminum grandiflorum/officinale</i>	84776-64-7, 90045-94-6, 8022-96-6
<i>Myroxylon Pereirae</i>	8007-00-9
<i>Santalum Album</i>	84787-70-2, 8006-87-9
Turpentine oil	8006-64-2, 9005-90-7, 8052-14-0
<i>Cinnamomum cassia</i> leaf oil/ <i>Cinnamomum zeylanicum</i> extract	84961-46-6, 8007-80-5, 84649-98-9

- 8.6** Substances defined in requirement 5.8, 5.9, 8.4 and 8.5 must not exceed a total concentration of 0.1 % by weight in rinse-off products. For leave-on products, a concentration limit of 0.01% by weight is applied.
- 8.7** The perfume must be used in accordance with the recommendations established by the International Fragrance Association (IFRA).
- 8.8** Nitromusk compounds and polycyclic musk compounds are not permitted.
- 8.9** The perfume or aroma must not be hazardous to the aquatic environment according to the following classifications:  
 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  
 H413, May cause long lasting harmful effects to aquatic life

The requirement (8.9) refers to the perfume or the aroma as such and not the individual substances in the perfume or aroma.

### Product-specific requirements

#### Sunbathing products, intimate hygiene products and decorative cosmetics

- 8.10** Perfumes are not permitted.

#### Lip products, toothpaste and oral products

- 8.11** Aromas must be approved as food additives (aromas) in accordance with Regulation (EC) No 1333/2008.

### **Products designed for or specifically intended for children under 12 years of age**

- 8.12** Perfumes and aromas are not permitted. Exempt from this requirement are aromas in toothpaste, which are permitted provided that they are approved for use as food additives in accordance with Regulation (EC) No 1333/2008.

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#### **Reasons for requirements**

- [8.1] Perfumes and aromas often contain substances that are sensitising and environmentally hazardous. The concentration is therefore limited in all product types.
- [8.2 - 8.3] Substances present in very low concentrations can also have undesirable effects.
- [8.4 - 8.6] These substances have been identified as sensitising substances. To reduce the risk of sensitisation, the concentration of these substances in the product is limited.
- [8.7] IFRA is a member organisation for trade organisations in the perfume industry. IFRA recommends which perfumes are suitable and the concentrations in which they can be used.
- [8.8] Nitromusk compounds and polycyclic musk compounds may pose a health risk, they have poor degradability and bioaccumulate.
- [8.9] Perfumes and aromas often contain substances that are environmentally hazardous. Although perfumes and aromas, in comparison to other chemicals, are included in relatively low concentrations, SSNC considers it important to minimise the use and dissemination of substances with these properties.
- [8.10] Perfumes often contain sensitising substances, some of which are photosensitising. For this reason, perfumes are not permitted in products used on sensitive skin or in products associated with sun exposure.
- [8.11] Aromas can have adverse health effects. Aromas approved in accordance with current EU legislation on food additives and are considered to fulfil high standards with regard to human health.
- [8.12] To avoid allergies, perfumes and aromas are not permitted in products intended for children. Toothpaste is exempt from the ban as SSNC considers aromas to be essential in children's toothpaste, in order to create products that children appreciate.

## **9 Abrasives and exfoliating additives**

- 9.1** Abrasives and exfoliating additives, except hard organic material, must meet requirements 11.1 - 11.8. Hard organic material must not be classified as hazardous to the environment according to the CLP Regulation (EC) No 1272/2008 and must meet requirements 11.6 - 11.8.

Exfoliating additives are ingredients used to physically remove dead cells from the skin surface. Hard organic material refers to renewable organic material with a hard texture, such as ground walnut shells or apricot stones.

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#### **Reasons for requirements**

- [9.1] It is logical that the same high environmental and health requirements are imposed on abrasives and exfoliating additives as on other ingredients.

## **10 Enzymes**

- 10.1** Enzymes are permitted provided they are not used in spray products and are added as liquids or encapsulated granulates. Note that products that are not sold in a spray package, but are intended for spray applications, are considered spray products.

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#### **Reasons for requirements**

- [10.1] Enzymes are usually respiratory sensitisers, and consequently, they are not permitted in spray products.

## 11 Other additives

**11.1** The ingredient must be readily biodegradable according to OECD 301, OECD 310 or an equivalent test. Ingredients that are not readily biodegradable according to definition above, but inherently biodegradable according to OECD 302 or an equivalent test, may be included in the product at a total maximum concentration of 5 % by weight, including any contribution from non-biodegradable substances in requirement 11.9 and 11.11.

**11.2** The ingredient must have an acute aquatic toxicity where  $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 1$  mg/l.

**11.3** The ingredient must have a chronic aquatic toxicity where  $NOEC/EC_x$  is  $> 0.1$  mg/l.

**11.4** The ingredient must have a bioconcentration factor (BCF)  $< 500$ . If no BCF data is available,  $\log K_{ow} < 4$ .

Exceptions may be made if any of the following requirements are met:

- $LC_{50}$ ,  $EC_{50}$  and  $IC_{50}$  is  $> 100$  mg/l or  $NOEC/EC_x$  is  $> 10$  mg/l.
- it can be shown that the ingredient is broken down very quickly into substances whose BCF or  $\log K_{ow}$  satisfies the requirements.
- the ingredient is not bioavailable (molar mass  $> 700$  g/mol).

**11.5** The ingredient must not be hazardous to the aquatic environment according to the following classifications:

- 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
- H413, May cause long lasting harmful effects to aquatic life

**11.6** The ingredient must not be acutely toxic according to the following classifications:

- H300, Fatal if swallowed
- H310, Fatal in contact with skin
- H330, Fatal if inhaled
- H301, Toxic if swallowed
- H311, Toxic in contact with skin
- H331, Toxic if inhaled

**11.7** The ingredient must not show specific target organ toxicity according to the following classifications:

- 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

**11.8** The ingredient\* must not be sensitising according to the classifications below, or be associated with data that indicates sensitisation.

- H317, May cause an allergic skin reaction
- H334, May cause allergy or asthma symptoms or breathing difficulties if inhaled

\* Tocopherol and tocopheryl acetate are excluded from this requirement.

## Product-specific requirements

### Decorative cosmetics

- 11.9** Ingredients that do not meet requirement 11.1 may be included in the product at a total maximum concentration of 5 % by weight, provided that the  $EC_{50}$  is  $> 100$  mg/l or  $NOEC/EC_x$  is  $> 10$  mg/l.

### Deodorants and antiperspirants

- 11.10** The concentration of aluminium must not exceed 0.6 % by weight.

### Shaving products and sunbathing products

- 11.11** Ingredients that do not meet requirement 11.1 may be included in the product at a total maximum concentration of 1 % by weight, provided that the  $EC_{50}$  is  $> 100$  mg/l or  $NOEC/EC_x$  is  $> 10$  mg/l.

### Toothpaste and oral products

- 11.12** Fluorine compounds are exempt from requirement 11.6. Please note that fluorinated organic compounds are not permitted according to requirement 1.2.
- 11.13** The guidelines established by the Swedish National Board of Health and Welfare (Socialstyrelsen) on fluorine content in toothpaste should be followed. Exceptions may be made if a fluorine-free toothpaste has been evaluated by an independent party and the conclusion is that it has the same protective effect as fluorine-containing toothpastes.

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## Reasons for requirements

[11.1] Substances that degrade slowly accumulate in the environment and may pose a risk in the future. Such substances can also spread over long distances.

[11.2 - 11.3] Substances that are acutely or chronically toxic to aquatic organisms affect the aquatic ecosystem negatively.

[11.4] Substances that bioaccumulate in the environment are stored in the food webs and can have adverse effects on animals and plants.

[11.5] To minimise the environmental risks, the substance must not be classified with any of these hazard statements.

[11.6 - 11.8] The products should be safe to use and not pose a health risk to the user.

[11.9, 11.1] Some substances are not readily biodegradable but necessary for the function of the product. A low concentration of such substances is acceptable.

[11.10] Correlations between the use of antiperspirant/deodorant (containing aluminium) on damaged skin and cancer have been shown in several studies. Aluminium is therefore limited to 0.6 % by weight.

[11.12 – 11.13] Fluorine has a documented positive effect on dental health. The Swedish National Board of Health and Welfare (Socialstyrelsen) recommends the use of toothpaste containing fluorine.

## 12 Material in wet wipes

- 12.1** The requirements in this section covers materials in wet wipes and equivalent articles. The wipes must consist of a maximum 50 % synthetic fibers from new raw material. Approved materials and their requirements are described in section 12.2 to 12.6. The requirements relate both to the origin of the fibre as well as the manufacturing processes. The test methods, which shall be used to verify the requirements, are given in Appendix 3: Material in wet wipes, test methods.

Licence or Material certificate for Good Environmental Choice Textiles (fibre and finishing) is approved as a certificate for the requirements in this section, except for requirement 12.3 regarding recycled raw material.

**12.2** The use of fluorinated organic compounds, substances included in Annex XIV or XVII to the REACH Regulation (EC) No 1907/2006, and substances included on the Candidate list (<http://echa.europa.eu/sv/candidate-list-table>) is not permitted in any step of the production process.

**12.3** *Cellulose* must originate from forestry with a Chain of Custody certificate. At least 30% of the raw material must arrive from FSC-certified forest. The certification must be carried out according to the FSC standard by an inspection body accredited by FSC or certified in accordance with ISO guide 65.

Waste material, such as sawdust and process waste, may also be used for pulp production. Recycled material must not be used.

Only completely chlorine-free bleaching methods are permitted. Optical brighteners may be used if they are readily biodegradable according to OECD 301, OECD 310 or an equivalent test.

Emissions to air from pulp production should on average be a maximum of:  
0.7 g of sulphur dioxide per kg of pulp and year.  
2 g of nitrogen oxides per kg of pulp and year.

The concentration, in purified effluent water, from pulp production should on average be a maximum of:  
40 g COD per kg of pulp and year.  
50 g of phosphorus per ton of pulp and year.

**12.4** *Regenerated cellulose fibres* (viscose, lyocell, modal, etc.) must meet the requirements in section 12.3 concerning the origin of the pulp and the pulp production process.

Emissions to air from production of fibres, should on average be a maximum of:  
25 g of sulphur dioxide per kg of fibre and year.

The concentration, in purified effluent water, from production of fibres should on average be a maximum of:  
0.2 g of zinc per kg of fibre and year.

Solvents used during production of regenerated fibres are excluded from requirement 12.2, but must then be recovered to at least 99%.

Regenerated fibres may be produced in a closed system, alternatively through xanthogenate-based viscose processes in a non-closed system. Potassium sulphate or sodium sulphate and hydrogen sulphide must then be recovered to at least 80%.

**12.5** *Cotton* must either:  
Be grown organically or in conversion. The certification of the cultivation method must be carried out according to IFOAM standard, by an inspection body accredited by IFOAM, or certified in accordance with ISO guide 65.

Or

Have been grown with the ambition to reduce the use of pesticides,

herbicides, chemical fertilizers and water, as well as improving the living conditions for cotton farmers in accordance with the criteria of BCI (Better Cotton Initiative), CmiA (Cotton made in Africa) or equivalent. The criteria shall be verified by an accredited organisation.

Only completely chlorine-free bleaching methods are permitted. Optical brighteners may be used if they are readily biodegradable according to OECD 301, OECD 310 or an equivalent test.

**12.6** Synthetic fibres of polyester (PET), polypropylene (PP) and Poly Lactic Acid (PLA) may be used in materials intended for wipes.

**12.6.1** Polyester (PET)

In the production of polyester, the solvents are exempt from the chemical requirements in 12.2, provided they are recovered to at least 99%.

Emissions of volatile organic compounds (VOC) during the polymerization shall, on average, not exceed 1 g/kg of produced polyester resin and year.

Antimony content in the polyester shall be a maximum of 260 mg/kg, alternatively, the extractable antimony content must not exceed 30 mg/kg.

**12.6.2** Polypropylene (PP)

For polypropylene, the average emissions should on average be a maximum of:

12 g of nitrogen oxides per kg and year.

11 g of sulphur dioxide per kg and year.

**12.6.3** Poly Lactic Acid (PLA)

Crops used as raw material must not be genetically modified (GMO). The certification of cultivation must be carried out according to IFOAM standard, by an inspection body accredited by IFOAM, or certified in accordance with ISO guide 65.

Enzymes from genetically modified microorganisms are permitted for starch extraction from crops. However, the enzymes must be free from residues of the microorganisms used in their production.

Solvents used in the production of PLA are exempt from requirements 12.2, provided they are recovered to at least 99%.

Waste water from the extraction of carbohydrates for fermentation to lactic acid and from the production of PLA shall be treated to achieve a reduction of COD/TOC of at least 85%.

Permitted copolymers are  $\epsilon$ -caprolactone (CAS 502-44-33) and polyethylene glycol (CAS 25332-68-3).

If aluminium, zinc, tin and antimony are included in the polymerization catalysts, the emissions of each metal in the treated wastewater shall, on average, not exceed 0.3 g/kg fibre and year.

Produced PLA fibre must not contain more than 4 mg/kg extractable tin or 30 mg/kg extractable antimony, respectively, from polymerization catalysts or stabilizers.

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## Reasons for requirements

- [12.1] Recycled material as well as renewable raw materials reduce the climate impact of the product.
- [12.2] These substances have such properties that they can cause serious and permanent adverse effects on the environment and health.
- [12.3] Recycled raw materials may contain substances that are hazardous to health and the environment.
- [12.3, 12.5] Chlorine compounds are often persistent and bioaccumulative, and may have endocrine disrupting properties.
- [12.3, 12.4] Emissions to air of sulphur and nitrogen contribute to acidification. Nitrogen contributes to eutrophication and to the formation of ground-level ozone.
- [12.3, 12.6.3] High chemical oxygen demand (COD) in the waste water may result in a load on the ecosystem as it leads to oxygen depletion in aquatic environments.
- [12.3] Phosphorus contributes to eutrophication.
- [12.4, 12.6.3] Zinc is classified as very toxic to aquatic organisms and may cause long-term adverse effects in aquatic environments.
- [12.4, 12.6.1, 12.6.3] Solvents with negative environmental and health properties may be necessary for some fibre production processes.
- [12.6.1] Volatile organic compounds may be both an environmental and working environment problem.
- [12.6.1] Antimony trioxide, which is commonly used as a catalyst in polyester polymerisation, is a suspected carcinogen.
- [12.6.3]  $\epsilon$ -caprolactone and polyethylene glycol are readily biodegradable and of low toxicity.
- [12.6.3] Many metals are toxic and emissions of them are, therefore, restricted.

## 13 Packaging

- 13.1** Packaging must consist of parts that are easy to take apart and each part must consist of a single type of material. Spray nozzles, pump nozzles, pressure containers, packaging for decorative cosmetics and packaging of soft plastic that consist of more than one plastic material, are exempt from this requirement.
- 13.2** Fluorinated organic compounds, substances included in Annex XIV or XVII of the REACH Regulation (EC) No 1907/2006, and substances included on the Candidate list (<http://echa.europa.eu/sv/candidate-list-table>) must not exceed 0.1% by weight in the packaging. If the packaging partly consists of recycled materials, this part of the packaging is exempt from the requirement.
- 13.3** Plastic packaging and labels must be made from polyethylene (PE), polypropylene (PP) or polyethylene terephthalate (PET). Packaging for toothpaste, deodorants and antiperspirants are exempt from this requirement, provided that the polymer and its monomers meet requirement 1.7 - 1.9 and 11.6 - 11.8, are not classified as hazardous to the environment according to the CLP Regulation (EC) No 1272/2008, and do not contain organic halogen compounds. Renewable raw materials must not come from the oil palm (*Elaeis guineensis*).

Packaging refers to the product's consumer packaging or equivalent for professional users. Transport packaging is not included.



- 13.4** Plastic packaging must be labelled in accordance with DIN 6120 or American SPI. Corks, spray nozzles, pump nozzles and packaging for decorative cosmetics are exempt from this requirement.
- 13.5** Paper and cardboard packaging, labels of paper and other materials made of paper or cardboard must be manufactured using at least 80 % wood fibers from recycled raw materials. If new raw material is used for the rest of the paper or cardboard packaging, at least 30% of this must be certified by FSC. Only completely chlorine-free bleaching methods are permitted.
- 13.6** Glass must not be used in the packaging. Packaging for decorative cosmetics is exempt from this requirement.
- 13.7** Metal must not be used in the packaging. Exempt from this requirement is pressure containers of steel or aluminium and springs in spray nozzles and pump nozzles.
- 13.8** Perfumes or other scenting substances are not permitted in the packaging.
- 13.9** Nanomaterials are not permitted in the packaging.
- 13.10** The date of manufacture of the product must be traceable in form of a date stamp, batch number or equivalent which should be stated in the application.
- 13.11** To the largest extent possible the packaging should be adapted to FTI's (The Swedish Packaging and Newspaper Collection Service) recommendations in order to facilitate recycling. The packaging must carry instructions on how it should be separated for recycling according to FTI's recommendations for labelling of the packaging. If the product is sold in other countries than Sweden, each country's recycling policies should be applied. If the packaging consists of different materials, information on how the different components should be recycled must be provided. Packaging for decorative cosmetics is exempt from this requirement. Packaging for wet wipes must carry a phrase or a symbol that makes it clear that the wipes must not be thrown in the toilet.
- 13.12** When sold to the customer, the product must consist of only one package unit. For example, a tube in a box is not permitted. Packaging for decorative cosmetics is exempt from this requirement.

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### Reasons for requirements

[13.1] Packaging that consists of parts that are easily disassembled facilitates the recycling of the constituent materials. Pump bottles facilitate proper dosage of the product and packaging of soft plastic requires less packaging material than those of hard plastic material.

[13.2] These substances have such properties that they can cause serious and permanent environmental and health effects.

[13.3] For the plastic types PE, PP and PET there are well-established systems for recycling. In addition, SSNC does not consider PE, PP and PET to be problematic based on the constituent monomers. Compared to other types of plastics (such as PVC) few additives are used. Packaging for toothpaste and deodorant and antiperspirants are difficult to create with only these types of plastics, why they are exempt from the requirement. As large scale palm oil plantations are associated with serious consequences for humans and the environment, it is important to not introduce new uses for raw materials derived from the oil palm.

[13.4] The DIN 6120 and American SPI systems facilitate the sorting of plastic materials at recycling plants.

[13.5] The use of recycled raw materials and chlorine-free bleaching methods reduce climate impact and the environmental impact from the pulp- and paper industry and logging.

[13.6] The use of glass is restricted since manufacture and transport imply extensive negative environmental impacts.

[13.7] The use of metal is restricted since especially new production of aluminium is very energy consuming.

[13.8 - 13.9] SSNC believes that perfumes and other fragrance substances, as well as nanomaterials, have no essential function in packaging. In order to avoid unnecessary environmental impact they are not permitted in the packaging.

[13.10] Manufacturing date of the product must be traceable in order to verify compliance with the current criteria.

[13.11] Recycling conserves natural resources and reduces climate impact of products. The requirement is set in order to facilitate recycling. Flushing down wet wipes may cause severe problems for wastewater treatment plants.

[13.12] The requirement is set in order to reduce the use of packaging material.

## Appendix 1: Endocrine disrupting chemicals

Ingredients must not contain any of the endocrine disrupting chemicals listed below:

### Substances included in the SIN list 2.0

Substance	CAS number
3-benzylidene camphor	15087-24-8
4-methylbenzylidene camphor	36861-47-9
4-nitrophenol	100-02-7
4,4'-dihydroxybenzophenone	611-99-4
Benzophenone-1	131-56-6
Benzophenone-2	131-55-5
Benzophenone-3	131-57-7
Butylparaben	94-26-8
Dicyclohexyl phthalate (DCHP)	84-61-7
Diethyl phthalate (DEP)	84-66-2
Dihexyl phthalate (DHP)	84-75-3
Ethylhexyl methoxycinnamate	5466-77-3
Metam natrium	137-42-8
Methyl tertiary butyl ether (MTBE)	1634-04-4
Pentachlorophenol	87-86-5
Perchloroethylene	127-18-4
Propylparaben	94-13-3
Quadrosilan	33204-76-1
Resorcinol	108-46-3
Tert-butylhydroxyanisole (BHA)	25013-16-5
Thiram	137-26-8
Zineb	12122-67-7

**Substances included in the SIN list on October 8, 2014, due to endocrine disrupting properties**

<b>Substance</b>	<b>CAS number</b>
Bisphenol S (BPS)	80-09-01
Bisphenol F (BPF)	620-92-8
Di-n-octyl phthalate (DNOP)	117-84-0
Diisodecyl phthalate (DIDP)	68515-49-1, 26761-40-0
Diundecyl phthalate (DUDP)	3648-20-2
Tribromophenol	118-79-6
Butylated hydroxytoluene (BHT)	128-37-0
Ziram	137-30-4
Carbon disulphide	75-15-0
Triphenyl phosphate	115-86-6

## Appendix 2: Assessment factor

För substances where no data is available for chronic aquatic toxicity for algae, crustaceans and fish, an assessment factor (AF) should be used. The lowest  $LC_{50}/EC_{50}/IC_{50}$  value or  $NOEC/EC_x$  value is divided by an assessment factor, which varies depending on the amount of data available.

For substances where no data is available for chronic aquatic toxicity, or where none of the requirements in the table below are met, an assessment factor of 100 must be applied to the lowest  $LC_{50}/EC_{50}/IC_{50}$  value.

For substances with existing data for chronic aquatic toxicity, a lower assessment factor may be used provided that one of the conditions in the table below is met. The assessment factor must always be applied to the lowest  $NOEC/EC_x$  value, provided that there is no  $LC_{50}/EC_{50}/IC_{50}$  value lower than the lowest  $NOEC/EC_x$  value. In that case, the lowest  $LC_{50}/EC_{50}/IC_{50}$  value must be used.

### Instructions for using assessment factor

Existing data for chronic aquatic toxicity	AF
No existing data from chronic aquatic toxicity tests.	100
One $NOEC/EC_x$ from chronic aquatic toxicity tests (fish or crustaceans), where the data is from the trophic level that has the lowest $LC_{50}/EC_{50}/IC_{50}$ value.	10
Two $NOEC/EC_x$ from chronic aquatic toxicity tests (algae, fish or crustaceans), where the data is <i>not</i> from the trophic level that has the lowest $LC_{50}/EC_{50}/IC_{50}$ value.	10
Two $NOEC/EC_x$ from chronic aquatic toxicity tests (fish or crustaceans), where the data is from the trophic level that has the lowest $LC_{50}/EC_{50}/IC_{50}$ value.	5

## Appendix 3: Material in wet wipes, test methods

Parameter	Section of the criteria/ relates to/ requirement	Test methods
Sulphur dioxide (SO <sub>2</sub> )	12.3/ air emissions from pulp production/ max. 0.7 g/kg of pulp per year	Alt.1: Automatic with SS-ISO 7935 or EPA Method 6 Alt. 2: Wet chemical with ISO 7934, ISO 11632, or EPA Method 6
	12.4/ air emissions from production of re-generated fibres/ max. 25g/kg fibre per year	
	12.6.2/ emission from production of PP/ max. 11 g/kg fibre per year	
Nitrogen oxides (NO <sub>x</sub> )	12.3/ air emissions from pulp production/ max. 2 g/kg pulp per year	Alt.1: Automatic with EPA Method 7 Alt.2: Wet chemical with ISO 11564-Cor 1 or EPA Method 7
	12.6.2/ emission from production of PP/ max. 12 g/kg fibre per year	
COD	12.3/ emission to water from pulp production/ max. 40 g/kg of pulp per year	ISO 6060
Phosphorus (P)	12.3/ emission to water from pulp production/ max. 50 g/tonne of pulp per year	SS-EN ISO 15681-1
Zinc (Zn)	12.4/ emission to water from fibre production/max 0.2 g/kg fibre per year	ISO 8288
	12.6.3/ emission to purified wastewater/ max. 0.3 g/kg fibre per year	
Aluminium (Al)	12.6.3/ emission to purified wastewater/ max. 0.3 g/kg fibre per year	ISO 8288
Tin (Sn)	12.6.3/ emission to purified wastewater/ max. 0.3 g/kg fibre per year	ISO 8288
	12.6.3/ extractable amount of tin/ max. 4 mg/kg fibre	SS-EN ISO 16711-2
Antimony (Sb)	12.6.3/ emission to purified wastewater/ max. 0.3 g/kg fibre per year	ISO 17378-1, ISO 17378-2 or an equivalent test
	12.6.1/ total amount of antimony/max 260 mg/kg	SS-EN 16711-1
	12.6.1, 12.6.3/ extractable amount of antimony/max. 30 mg/kg	Oeko-Tex® Standard 100 or SS-EN 16711-2
Volatile Organic Compounds (VOC)	12.6.1/ emission VOC to air/max. 1 g/kg resin per year	SS-EN 12619 or EPA Method 21
COD/TOC	12.6.3/ purification of wastewater/min. 85%	COD according to ISO 6060 TOC according to ISO 8245

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Swedish Society for  
Nature Conservation,  
Första Långgatan 28 B  
413 27 Göteborg

+46 (0)8 702 65 00  
[www.naturskyddsforeningen.se](http://www.naturskyddsforeningen.se)



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