Nordic Ecolabelling for
Industrial cleaning and degreasing agents

Version 4.0 • date – date

Consultation

Nordic Ecolabelling

Contents

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In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Nordic Swan Ecolabel. These organisations/companies operate the Nordic Ecolabelling system on behalf of their own country's government. For more information, see the websites:

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1 Environmental communication guideline for Nordic Swan Ecolabel industrial cleaning and degreasing agents

Nordic Swan Ecolabel industrial cleaning and degreasing agents meet ambitious environmental requirements from a holistic life cycle perspective. This means that they are amongst the environmentally best in their category.

Nordic Swan Ecolabel industrial cleaning and degreasing agents:

- Effectively remove oil, grease and dirt.
- Meet strict environmental requirements for chemicals, focusing on ecotoxicity and degradability.
- Contain no substances classified as carcinogenic, mutagenic or harmful to reproduction.
- Contain no aromatic solvents.
- Meet strict limits on volatile organic compounds (VOC) to minimise the contribution to ground-level ozone formation.

The overall environmental impact in the lifecycle of this product group and Nordic Swan Ecolabel identification of where ecolabelling can have the greatest effect is described in “Environmental impact of industrial cleaning and degreasing agents”.

2 What can carry the Nordic Swan Ecolabel?

Product group definition

Products that are primarily intended to remove soiling such as oil residues, wax, grease, dust and other types of dirt from surfaces, machine parts, tools and pipe systems made of materials like steel, aluminium, concrete and plastic can be Nordic Swan Ecolabelled. The products must be exclusively intended for professional use within industrial settings.

The areas of use may vary, including:

- Degreasing floors and walls in production facilities
- Cleaning and degreasing metal parts in industry, including machinery, machine parts, and production equipment
- Special façade and surface cleaning, such as graffiti removal
- Cleaning and degreasing floors, decks, and oily/greasy equipment offshore (e.g., on oil platforms)
- Cleaning decks, tanks, and cargo holds on ships
- Cleaning water cooling systems and water treatment plants
- Cleaning pipe systems (CIP; clean in place)
- Cleaning agents for cleaning of liquid damaged electronics

The criteria do not cover care products for vehicles (except for graffiti removers), cleaning agents for use in the food industry or universal and sanitary cleaning agents, since there are separate criteria for these product types.

Additionally, products containing microorganisms, water treatment chemicals, and products intended for the pharmaceutical industry are not eligible for the Nordic Swan Ecolabel.

Furthermore, disinfectant products are excluded from carrying the Nordic Swan Ecolabel due to restrictions imposed by the Biocidal Products Regulation (EU) 528/2012.

2.1 Justification of the product group definition

For a description of the product group definition, see “What can carry the Nordic Swan Ecolabel”.

Further background for the product group definition

The criteria for industrial cleaning and degreasing agents previously applied only to products intended for indoor use. Since generation 3 of the criteria, the product group encompasses industrial cleaning and degreasing agents for both indoor and outdoor use within industrial settings. This broader scope allows for a wide variety of products to qualify for the Nordic Swan Ecolabel. The range includes for example, cleaning pipe systems (CIP; clean in place), alkaline micro-emulsions, component cleaning agents, and deep cleaning agents designed for tasks such as cleaning oily surfaces, engines, machinery, workshop floors, tanks and cargo holds on ships.

Despite the varied applications, the primary function of industrial cleaning and degreasing agents remains consistent: To remove soiling such as oil residues, wax, grease, dust and other types of dirt from surfaces, machine parts, tools and pipe systems made of materials like steel, aluminium, concrete and plastic. The products must be exclusively intended for professional use.

In terms of façade cleaning, products to specialized services like graffiti removal are included in this product group, while products to ordinary routine façade cleaning is covered under PG 026 Cleaning products.

All types of graffiti removers are included in this product group, including those for vehicles such as trains and other rail transport.

3 How to read this criteria document

Each requirement is marked with the letter O (obligatory requirement) and a number. All requirements must be fulfilled to be awarded a licence.

The text describes how the applicant shall demonstrate fulfilment of each requirement. There is an icon in the text to make this clearer. This icon is:

 Upload

All information submitted to Nordic Ecolabelling is treated confidentially. Suppliers can send documentation directly to Nordic Ecolabelling, and this will also be treated confidentially.

4 Summary

The product group comprises products that are primarily intended to remove soiling such as oil residues, wax, grease, dust and other types of dirt from surfaces, machine parts, tools and pipe systems made of materials like steel, aluminium, concrete and plastic. This allows for a wide variety of products to qualify for the Nordic Swan Ecolabel. For example, cleaning pipe systems, alkaline micro-emulsions, component cleaning agents, and deep cleaning agents designed for tasks such as cleaning oily surfaces, engines, machinery, workshop floors, tanks and cargo holds on ships.

The relevant environmental impacts found in the life cycle of industrial cleaning and degreasing agents are the following: Degradability and toxicity to aquatic organisms, exposure of chemicals harmful to health, emission of VOC, eutrophication from phosphorous compounds, user information, dosing and performance and packaging. The criteria contain requirements in those areas.

The most important changes from the previous generation of the criteria are:

- The new EUH hazard classes for endocrine disruptors, PBT/vPvB, and PMT/vPvM are added to the prohibited classifications, both for products and ingoing substances.
- The list of substances that are excluded from use in products is extended, including microplastics.
- The requirements for potential or identified endocrine disruptors, nanomaterials/-particles and PBT and PvBv substances are updated.
- The definition of VOC is updated according to the Industrial Emissions Directive (IED) 2010/75/EU.
- Surfactants classified as H411 and H412 are no longer exempted from the requirement on long-term environmental effects. In addition, the unit has changed from % in product to grams/litre in-use solution, the requirement is set per product type and the multiplying factor M, for H410 as stated in CLP, is included in the calculation.
- The limit values for CDV have been tightened up and hydrochloric acid is removed.
- A new requirement has been introduced for primary packaging up to 20 litres concerning the packaging’s recyclability.

5 Requirements and justification of these

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the Nordic Swan Ecolabelled product. Impurities are not regarded as ingoing substances and are exempt from the requirements. Ingoing substances and impurities are defined below, unless stated otherwise in the requirements.

- Ingoing substances: all substances in the Nordic Swan Ecolabelled product regardless of amount, including additives (e.g., preservatives and stabilizers) in the raw materials. Substances known to be released from ingoing substances

(e.g., formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
- Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials, that remain in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0.0100 w%).
- Impurities in the raw materials exceeding concentrations of 10 000 ppm (1.0000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.

Examples of impurities are residues of the following: residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.

5.1 General requirement area

O1 Description of the product

The applicant must provide the following information about the product.

- Description of the product and its area of use.
- A complete recipe for the product. The recipe must, if possible, include for each ingoing substance:
    - Trade name
    - Chemical name
    - Amount (both with and without solvents, e.g., water)
    - CAS No. and/or EC number
    - DID number for substances that can be placed in the DID-list 2023 or later versions*
    - Function

If a raw material consists of several substances, data for all ingoing substances is to be stated in the recipe.

* DID-list: “Detergents Ingredients Database” list, see Appendix 3 for a detailed description.

☐ Label and description of the product and its area of use.

☐ Appendix 1 or equivalent declaration completed and signed.

☐ Complete recipe in line with the requirement. Nordic Ecolabelling’s calculation sheet for Industrial cleaning and degreasing agents can be used. It is available from Nordic Ecolabelling’s websites.

☐ Safety data sheet for each raw material in line with prevailing legislation in the country of application, e.g., Annex II to REACH (Regulation 1907/2006/E2EC).

Background to requirement O1 Description of the product

A description of the product and its area of use is required to assess whether the product falls within the product group definition. Nordic Ecolabelling needs to know the complete formulation, with all ingoing raw materials. This is necessary to control the individual requirements below and make the calculations necessary in respect of each requirement.

The requirement is unchanged compared to generation 3 of the criteria.

O2 Classification of the product

The product must not be classified with the hazard codes listed in the table below, in accordance with CLP Regulation 1272/2008.

Table 1 Classification of the product

Hazard class	Hazard class and category	Hazard code
Carcinogenicity*	Carc. 1A or 1B Carc. 2	H350 H351
Germ cell mutagenicity*	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity*	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362
Respiratory or skin sensitisation	Resp. Sens. 1, 1A or 1B Skin Sens. 1, 1A or 1B	H334 H317
Acute toxicity	Acute Tox. 1 or 2 Acute Tox. 1 or 2 Acute Tox. 1 or 2 Acute Tox. 3 Acute Tox. 3 Acute Tox. 3 Acute Tox. 4 Acute Tox. 4 Acute Tox. 4	H300 H310 H330 H301 H311 H331 H302 H312 H332
Hazardous to aquatic environment	Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2 Aquatic Chronic 3 Aquatic Chronic 4	H400 H410 H411 H412 H413
Hazardous to the ozone layer	Ozone	H420
Specific target organ toxicity, singel or repeated exposure	STOT SE 1 STOT SE 2 STOT RE 1 STOT RE 2	H370 H371 H372 H373
Aspiration hazard	Asp. Tox. 1	H304
Flammable aerosols	Flam. Aer. 1	H222
Flammable liquids	Flam. Liq. 1	H224
Endocrine disruption for human health	ED HH 1 ED HH 2	EUH380 EUH381
Endocrine disruption for the environment	ED ENV 1 ED ENV 2	EUH430 EUH431
Persistent, Bioaccumulative and Toxic properties Very Persistent, Very Bioaccumulative properties	PBT vPvB	EUH440 EUH441
Persistent, Mobile, and Toxic properties Very Persistent, Very Mobile properties	PMT vPvM	EUH450 EUH451

* Including all combinations of stated exposure routes and stated specific effect. For example, H350 also covers classification H350i.

- Safety data sheet for the product in line with prevailing European legislation (Annex II to REACH Regulation, 1907/2006/EC).
- Appendix 1 or equivalent declaration completed and signed.

Background to requirement O2 Classification of the product

Nordic Ecolabelling sets requirements regarding environmental and health classifications of the product to ensure that products that are toxic or harmful to the environment and/or human health cannot be awarded the Nordic Swan Ecolabel. The list includes classifications that are standard to include in all product groups if we do not get information that they are irrelevant, as we apply the precautionary principle.

An analysis of the classification of industrial cleaning and degreasing agents that are not Nordic Swan Ecolabelled reveals that several products are classified as hazardous to aquatic environment. This underscores the importance and potential of the classification requirement.

The requirement has changed compared to generation 3 of the criteria regarding the following: The Nordic Swan Ecolabel has included the new CLP classifications to align with the European Green Deal's goal of a toxic-free environment. This inclusion reflects the need to establish hazard identification for endocrine disruptors and addresses criteria for environmental toxicity, persistency, mobility and bioaccumulation. By incorporating these classifications, Nordic Swan Ecolabel ensures that the criteria relate to up-to-date scientific understanding and regulatory compliance. Additionally, the inclusion of PMT and vPvM substances is crucial due to their persistence, mobility and potential impact on water quality. The Nordic Swan Ecolabel aims for comprehensive hazard identification and protection of the environment and human health.

O3 Classification of ingoing substances

Ingoing substances must not be classified with the hazard codes listed in the table below, in accordance with CLP Regulation 1272/2008.

Table 2 Classification of ingoing substances

Hazard class	Hazard class and category	Hazard code
Carcinogenicity*	Carc. 1A or 1B Carc. 2	H350 H351**
Germ cell mutagenicity*	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity*	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362
Respiratory or skin sensitisation***	Resp. Sens. 1, 1A or 1B Skin Sens. 1, 1A or 1B	H334 H317
Endocrine disruption for human health****	ED HH 1 ED HH 2	EUH380 EUH381

Endocrine disruption for the environment****	ED ENV 1 ED ENV 2	EUH430 EUH431
Persistent, Bioaccumulative and Toxic properties**** Very Persistent, Very Bioaccumulative properties****	PBT vPvB	EUH440 EUH441
Persistent, Mobile, and Toxic properties Very Persistent, Very Mobile properties	PMT vPvM	EUH450 EUH451

* Including all combinations of stated exposure routes and stated specific effect. For example, H350 also covers classification H350i.

** Complexing agents of the MGDA and GLDA type may contain NTA impurities in the raw material in concentrations of less than 0.2% if the concentration of NTA in the product is below 0.1%.

*** Enzymes that are in liquid form or in solid form as granulates (including stabilisers in the enzyme raw material) and preservatives <0.01% by weight in the final product may be classified as H334 or H317. See requirement O5 (Preservatives) and requirement O9 (Excluded substances) for further requirements concerning preservatives.

**** See also O9 Excluded substances for additional requirements for potential or identified endocrine disruptors and PBT/vPvB substances.

- Safety data sheet for all ingoing substances in line with prevailing European legislation (Annex II to REACH Regulation, 1907/2006/EC).
- Appendix 1 or equivalent declaration completed and signed.
- Appendix 2 or equivalent declaration completed and signed by all raw material manufacturers/suppliers.

Background to requirement O3 Classification of ingoing substances

Excluding carcinogenic, mutagenic, reproduction toxic (CMR) and sensitizing substances is an important parameter from a health perspective.

Complexing agents of the MGDA and GLDA type may contain NTA impurities in the raw material. NTA as an impurity in complexing agents is therefore, exempted from the requirement, but with the restriction that the concentration must be less than 0.2% in the raw material and less than 0.1% in the product which is best practice in the industry.

Preservatives and enzymes that are in liquid form or in solid form as granulates (including stabilisers and preservatives in the enzyme raw material) may be classified as H334 or H317.

Preservatives are necessary to ensure the quality and shelf life of liquid products with a neutral pH. Requirement O2 (Classification of the product) limits the concentration of Category 1A sensitizing substances to 100 ppm and Category 1 and 1B sensitizing substances to 1000 ppm. Due to the restrictions set by requirement O2 (Classification of the product), O5 (Preservatives), and the Biocidal Products Regulation, very few preservatives meet both legislative and ecolabelling criteria. As a result, small quantities of sensitising preservatives are therefore permitted.

The rationale for exempting enzymes is that they can improve product efficacy, and enzymes in liquid form or solid granulate form are not expected to cause allergies in the user as the ingredients of the enzyme are included in the product and do not exist as “free dust”.

The requirement has changed compared to generation 3 of the criteria regarding the following: The Nordic Swan Ecolabel has included the new CLP classifications to align with the European Green Deal's goal of a toxic-free environment. This inclusion reflects the need to establish hazard identification for endocrine disruptors and addresses criteria for environmental toxicity, persistency, mobility and bioaccumulation. By incorporating these classifications, Nordic Swan Ecolabel ensures that the criteria relate to up-to-date scientific understanding and regulatory compliance. Additionally, the inclusion of PMT and vPvM substances is crucial due to their persistence, mobility and potential impact on water quality. The Nordic Swan Ecolabel aims for comprehensive hazard identification and protection of the environment and human health.

O4 Surfactants

All surfactants* must be readily biodegradable according to Test No. 301 A–F or Test No. 310 in OECD Guidelines for the Testing of Chemicals or other equivalent test methods evaluated by an independent body and controlled by Nordic Ecolabelling.

For products intended for offshore use, where there is a risk of direct release into the ocean, the surfactants must also be readily biodegradable in accordance with Test No. 306 in OECD Guidelines for the Testing of Chemicals or other equivalent test methods evaluated by an independent body and controlled by Nordic Ecolabelling.

All surfactants must be anaerobically biodegradable in accordance with ISO 11734, ECETOC No 28, Test No. 311 in OECD Guidelines for the Testing of Chemicals or equivalent testing methods evaluated by an independent body and controlled by Nordic Ecolabelling.

** Any organic substance, which has surface-active properties, and which consists of one or more hydrophilic and one or more hydrophobic groups of such a nature and size that it is capable of reducing the surface tension of water.*

- Reference to the DID list dated 2023 or later versions. For substances not on the DID list, or where data on the DID list is missing, the associated documentation must be submitted. See Appendix 3 for test requirements.

Background to requirement O4 Surfactants

Surfactants are used in large quantities in industrial cleaning and degreasing agents, making the products functional and effective. Many surfactants are hazardous to aquatic organisms. The Detergent Regulation[1] generally requires that all surfactants must be readily biodegradable. If a substance does not meet this requirement and is intended solely for professional use, an exemption can be requested, allowing the substances to only be potentially biodegradable. The requirement for anaerobic biodegradability is considered a baseline, in line with the position of Nordic Ecolabelling, which asserts that environmentally harmful substances should be capable of degrading regardless of the environment they end up in. This is deemed relevant as surfactants have been found in sludge intended for use as fertilizer on land. The presence of these substances suggests that degradation in sludge or

[1] Regulation (EC) No 648/2004, 2004.

soil is not guaranteed, even though they may be biodegradable in aerobic aquatic environments. Since these criteria apply only to professional use and an exemption from the Detergent Regulation can be requested for such products, it is relevant to require both aerobic and anaerobic biodegradability for surfactants.

The requirement excludes linear alkylbenzene sulphonates (LAS) as they are not anaerobically biodegradable.

According to a specific Norwegian regulation[2], substances in products intended for offshore use must be tested in accordance with Test No. 306 in OECD Guidelines for the Testing of Chemicals, a test designed for saltwater environments.

The requirement is unchanged compared with generation 3 of the criteria.

O5 Preservatives

Preservatives may only be added to liquid products. All preservatives in the product must not be bioaccumulative in line with the testing methods in Appendix 3 having a BCF (Bioconcentration Factor) less than 500 or log Kow (octanol-water partition coefficient) less than 4. See also O9 Excluded substances for additional requirements.

- Appendix 1 or equivalent declaration completed and signed.
- Appendix 2 or equivalent declaration completed and signed by all relevant raw material manufacturers/suppliers.

Background to requirement O5 Preservatives

Preservatives are typically harmful to aquatic organisms and can cause sensitivity and allergic reactions. Many products within this category do not need preservatives because they are acidic or basic. Still, preservatives are added to neutral, liquid products to prevent the growth of bacteria. Preservatives are essential for extending the shelf life of these products.

Preservatives may be included in both the final product and the ingoing substances, provided they are not bioaccumulative.

The requirement has changed since generation 3 of the criteria, and a Challenge test is no longer required. This is line with the Nordic Ecolabelling policy on preservatives.

O6 Organic colorants

All organic colorants in the product or the ingoing substances must not be bioaccumulative in line with the testing methods in Appendix 3 having a BCF (Bioconcentration Factor) less than 500 or log Kow (octanol-water partition coefficient) less than 4. Alternatively, the colorant must be approved for use in food.

- Appendix 1 or equivalent declaration completed and signed.
- Appendix 2 or equivalent declaration completed and signed by all relevant raw material manufacturers/suppliers.

[2] Harmonised Offshore Chemical Notification Format OSPAR Recommendation 2010/13 (Update 2023), Supplementary guideline for the Norwegian sector.

Background to requirement O6 Colorants

In professional products, colorants may be used for colour coding to ensure the correct application of the products, in other words for safety reasons. Although colorants are used in very small amounts, they often possess undesirable environmental properties, such as being non-readily degradable. Therefore, Nordic Ecolabelling allows colorants that are considered non-bioaccumulative.

When colourants are approved for use in food, their safety is evaluated by the European Food Safety Authority (EFSA). The evaluation discusses absorption, distribution, metabolism, and excretion (ADME) in line with various animal tests. Based on the ADME study and other toxicity data, such as gene toxicity or sensitisation, EFSA establish ADI (Acceptable Daily Intake) values for the colorants approved for use in food. Nordic Ecolabelling relies on the EFSA's evaluation that it is likely that highly bioaccumulating colours will not be approved for use in food. Therefore, based on our own study described above where log Kow or BCF values were lacking, we also accept E-numbers as documentation of low bioaccumulation potential.

O7 Volatile organic compounds (VOC)

Solvent-based products

Only organic solvents and volatile organic compounds* with a vapour pressure < 2.5 kPa at 20°C may be used.

The product label or accompanying product sheet must include health and safety instructions emphasizing the importance of ventilation during use of the product.

Other products

VOC content must not exceed 1% by weight in the in-use solution at the maximum recommended dosage.

Please note that requirement O2 (Classification of the product) prohibits products classified as environmentally harmful, requirement O9 (Excluded substances) prohibits halogenated and aromatic solvents and requirement O11 (Biodegradability) limits the quantity of aerobically and anaerobically non-biodegradable substances.

* An organic compound with a vapor pressure of 0.01 kPa or more at 293.15 K (20°C)[3].

- ☐ Appendix 1 or equivalent declaration completed and signed.
- ☐ Appendix 2 or equivalent declaration completed and signed by all relevant raw material manufacturers/suppliers.
- ☐ Solvent-based products: Documentation showing the vapour pressure of all solvents.
- ☐ Solvent-based products: Copy of label and/or product sheet showing the health and safety instructions emphasizing the importance of ventilation during use of the product.
- ☐ Other products: Calculation of the VOC content of the product.

[3] Industrial Emissions Directive (IED) 2010/75/EU.

Background to requirement O7 Volatile organic compounds (VOC)

Volatile organic compounds (VOCs) are of particular concern due to their inherent properties. They can be absorbed through the lungs and skin, potentially causing damage to various organs. Prolonged exposure to certain organic solvents may result in chronic damage to the brain and nervous system, while others have been linked to cancer and reproductive harm. Additionally, solvents can cause headaches, eye irritation, and respiratory issues. VOCs also contribute to ground-level ozone formation and are often slow to degrade in ecosystems, leading to long-term environmental impacts.

Many industrial cleaning and degreasing agents, particularly those designed to remove heavily oiled dirt from surfaces, contain volatile organic compounds. Nordic Ecolabelling consistently aims to limit the content of VOCs, while recognizing that these compounds sometimes play a crucial role in ensuring product effectiveness.

Based on Nordic Ecolabelling's experience, solvent-based products demonstrate varying properties, with some presenting more significant health and environmental risks than others. Many solvent-based products on the market contain aromatic hydrocarbons or are classified as environmentally hazardous. Nordic Ecolabelling aims to encourage the use of safer solvents and therefore sets specific requirements for solvent-based products. Organic solvents with a vapor pressure exceeding 2.5 kPa at 20°C are entirely prohibited. The limit of 2.5 kPa at 20°C was determined by examining the vapor pressure and aromatic content of over 30 cleaning agents based on organic solvents used in the graphics industry. Of these agents, only four meet the requirements for both vapor pressure (< 2.5 kPa) and aromatic content. To reduce the exposure of the products, the product label or accompanying product sheet must include health and safety instructions emphasizing the importance of ventilation during use of the product. In addition, products classified as environmentally harmful are prohibited by requirement O2 (Classification of the product), halogenated and aromatic solvents are prohibited by requirement O9 (Excluded substances) and requirement O11 (Biodegradability) limits the quantity of aerobically and anaerobically non-biodegradable substances.

In other products the VOC content must not exceed 1% by weight in the in-use solution at the maximum recommended dosage.

The division between solvent based and other products

A solvent-based product uses a liquid organic solvent to carry its active ingredients. The solvent helps dissolve or spread these ingredients evenly, making them work effectively. Once applied, the solvent usually evaporates, leaving the active ingredients on the surface.

In other products water acts as a carrier for VOCs by dissolving or dispersing these ingredients in a water-based solution.

The requirement has changed since generation 3 of the criteria to update the definition of VOC in accordance with the Industrial Emissions Directive (IED) 2010/75/EU.

O8 Phosphorus

Phosphorus is not permitted in products intended for outdoor use. An exception is made for products for use offshore*, which may contain up to 0.5 g of phosphorus per litre in-use solution.

For indoor-use products, phosphorus content must not exceed 0.5 g per litre in-use solution.

* Products intended for offshore use that are approved in the green or yellow category under the HOCNF (Harmonised Offshore Chemicals Notification Format), but not products for use in coastal areas, watercourses, or lakes, including freshwater and brackish regions such as the Baltic Sea.

Be aware of national legislation on phosphorus where the product will be sold/marketed. In Norway, phosphorus is regulated in sections 2-12 in Regulation on Detergents and Cleaning Products.

Please note that aminopolyphosphonates must not be present in the product according to requirement O9 (Excluded substances).

- Appendix 1 or equivalent declaration completed and signed.
- Appendix 2 or equivalent declaration completed and signed by all raw material manufacturers/suppliers.
- Calculation of the added amount of phosphorus, calculated as elementary phosphorus (P), per litre in-use solution.

For offshore products that contain phosphorus:

- Documentation showing that the product is approved in the green or yellow category under the HOCNF (Harmonised Offshore Chemicals Notification Format).
- A description of how it is ensured that the product is not used in coastal areas, watercourses, or lakes, including freshwater and brackish regions such as the Baltic Sea.
- Description of the product, e.g., label or other documentation clearly indicating the area of use and that the product must not be used in coastal areas, watercourses, or lakes, including freshwater and brackish regions such as the Baltic Sea.

Background to requirement O8 Phosphorus

Phosphorus and nitrogen are the primary nutrients driving eutrophication. This process depletes oxygen in lakes, oceans, and watercourses, leading to the formation of dead zones. In addition, phosphorus is a non-renewable resource facing continuously rising demand, and it can only be sourced from phosphorite, which is found in only a few countries—many of which have unstable regimes. Aside from Morocco, several of these countries are already nearing depletion of extractable phosphorus[4].

Phosphate, a chemical form of the element phosphorus, acts as a complexing agent for lime and serves as an auxiliary chemical for surfactants. Phosphonates are a group of phosphorus compounds known for their excellent complexing properties.

[4] Når det er tomt her - er verden ille ute | DN (Accessed on 25 October 2024).

Phosphorus is not permitted in products intended for outdoor use, as these products may be carried directly into the water recipient rather than reaching a wastewater treatment plant. An exception to this requirement applies to products used offshore, where a limited amount of phosphorus is allowed. International regulations established by the IMO (International Maritime Organization) govern the discharge of tank wash water in coastal areas, among other things. In international waters, the presence of phosphates in cleaning products is permitted and accepted. However, the conditions and risks of eutrophication differ in these areas compared to coastal areas, watercourses, and lakes. Therefore, products intended for use in these areas must not contain phosphorus.

For indoor-use products, the use of phosphorus is allowed in limited quantities.

Phosphonates are persistent and neither aerobically nor anaerobically degradable. Therefore, the restrictions on phosphorus content also apply to phosphorus originating from phosphonates.

The requirement is unchanged compared to criteria generation 3.

O9 Excluded substances

The following substances or substance groups must not be present as ingoing substances in the product.

- Alkylphenols (AP) (e.g. butylated hydroxy anisole (BHA, CAS No. 25013-16-5), alkylphenol ethoxylates (APEO), and other alkylphenol derivates (APD)
- Aminopolyphosphonates
- Benzalkonium chloride (CAS No. 63449-41-2)
- Bisphenols and bisphenol derivatives belonging to the group of 34 substances that have been identified by ECHA for further EU regulatory risk management that are known or potential endocrine disruptors for the environment of for human health, or that can be identified as toxic for reproduction: 201-245-8 (BPA), 201-025-1 (BPB), 401-720-1 (4,4'-Isobutylethylidenediphenol), 216-036-7 (BPAF) and its 8 salts (278-305-5; 425-060-9; 443-330-4; 468-740-0; 469-080-6; 479-100-5; 943-265-6; 947-368-7), 201-250-5 (BPS), 201-240-0 (BPC), 204-279-1 (TBMD), 201-618-5 (6,6'-di-tert-butyl-4,4'-butylidenedi-m-cresol), 242-895-2, 248-607-1, 405-520-5 (D8), 217-121-1 (DAB), 227-033-5 (TMBPA), 210-658-2 (BPF), 411-570-9, 277-962-5 (contains BPS, 500-086-4 (contains BPA), 500-263-6 (contains BPA), 500-607-5 (contains BPA), 701-362-9, 904-653-0 (contains BPA), 908-912-9 (contains BPF), 926-571-4 (contains BPA), 931-252-8 (contains BPA), 941-992-3 (contains BPS), 943-503-9 (contains BPA).
- Boric acid, borates, and perborates
- Ethylenediamine tetraacetate (EDTA, CAS No. 6381-92-6) and its salts and diethylenetriamine pentaacetate (DTPA, CAS No. 67-43-6) and its salts
- Halogenated and/or aromatic solvents

  Solvents are defined as in Commission Directive 1999/13/EC: organic substances with a vapour pressure of at least 0.01 kPa at 20 °C.
- LAS (linear alkylbenzene sulphonates)
- MI (methylisothiazolinone, CAS no. 2682-20-4) and MI/CMIT 3:1 (5-Chloro-2-methyl-4-isothiazolin-3-one, CAS No. 26172-55-4)

- Microplastics

  Exemption: Polycarboxylates.

  Nordic Ecolabelling reserves the right to change the requirement when more guidance from the EU on the restriction of synthetic polymer microparticles in REACH is published.

  Microplastics are synthetic polymer microparticles as defined in REACH Regulation ((EC) No 1907/2006), Annex XVII, Entry no. 78: Synthetic polymer microparticles: polymers that are solid, and which fulfil both of the following conditions:

  a) are contained in particles and constitute at least 1% by weight of those particles; or build a continuous surface coating on particles.

  b) at least 1% by weight of the particles referred to in point (a) fulfil either of the following conditions:

  (i) all dimensions of the particles are equal to or less than 5 mm.

  (ii) the length of the particles is equal to or less than 15 mm and their length to diameter ratio is greater than 3.

  The following polymers are excluded from this designation:

  a) polymers that are the result of a polymerisation process that has taken place in nature, independently of the process through which they have been extracted, which are not chemically modified substances.

  b) polymers that are biodegradable as proved in accordance with Appendix 15 [to REACH, Regulation (EC) No 1907/2006].

  c) polymers that have a solubility greater than 2 g/L as proved in accordance with Appendix 16 [to REACH, Regulation (EC) No 1907/2006].

  d) polymers that do not contain carbon atoms in their chemical structure.

  N.B. The following "Conditions of restriction" paragraphs apply: 1 (concentration limit in mixtures), 2 (definitions), 3 (particle size limits). The remaining points do not apply, e.g. 4 (Paragraph 1 shall not apply to the placing on the market of:), e.g. 4(a) “synthetic polymer microparticles, as substances on their own or in mixtures, for use at industrial sites”, 5 (derogations), e.g. 5 (b) "synthetic polymer microparticles the physical properties of which are permanently modified during intended end use in such a way that the polymer no longer falls within the scope of this entry".

- Nanomaterials/-particles

  Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01):

  ‘Nanomaterial' means a natural, incidental or manufactured material consisting of solid particles that are present, either on their own or as identifiable constituent particles in aggregates or agglomerates, and where 50 % or more of these particles in the number-based size distribution fulfil at least one of the following conditions:

  (a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm;

  (b) the particle has an elongated shape, such as a rod, fibre or tube, where two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm;

(c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.

- NTA (nitrilotriacetic acid, CAS-no. 139-13-9) and its salts

  Exemption: Complexing agents of the MGDA and GLDA type may contain NTA impurities in the raw material in concentrations of less than 0.2% if the concentration of NTA in the final product is below 0.1%.

- Organic chlorine compounds, hypochlorous acid and hypochlorite
- PBT and vPvB substances in accordance with REACH Annex XIII
- Per- and polyfluorinated substances (PFAS)
- Phthalates (i.e., esters of phthalic acid CAS No. 88-99-3)
- Perfume
- Potential or identified endocrine disruptors, according to any of the following EU member state initiative "Endocrine Disruptor Lists":

  List I: https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu

  List II: https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption

  List III: https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities

  Exemption: MEK (Methyl ethyl ketone, CAS No. 78-93-3).

  N.B. A substance which is transferred to one of the corresponding sublists called "Substances no longer on list", and no longer appears on any of List I-III, is no longer excluded. The exception is those substances on sublist II which were evaluated under a regulation or directive which doesn't have provisions for identifying EDs (e.g. the cosmetic products regulation). For those substances, ED properties may still have been confirmed or suspected. Nordic Ecolabelling will evaluate the circumstances case-by-case, based on the background information indicated on sublist II.

- Quaternary ammonium compounds, which are not aerobically or anaerobically biodegradable** such as DTDMAC (CAS No. 61789-80-8), DSDMAC (CAS No. 107-64-2), DHTDMAC (CAS No. 61789-72-8) and DADMAC (CAS No. 7398-69-8).

  ** According to test method 301 (A-F) or 310 in OECD guidelines for testing of chemicals or other equivalent methods evaluated by an independent body and controlled by Nordic Ecolabelling.

- Siloxanes D4, D5, D6 and HMDS
- Substances on the REACH Candidate list of SVHC substances https://www.echa.europa.eu/candidate-list-table

☐ Appendix 1 or equivalent declaration completed and signed.

☐ Appendix 2 or equivalent declaration completed and signed by all raw material manufacturers/suppliers.

Background to requirement O9 Excluded substances

This requirement generally prohibits substances that Nordic Ecolabelling knows, or suspects have negative effects on health and the environment. Some of the substances are also prohibited in other requirements but are included here for the sake of clarity and to minimize the risk of misunderstandings.

The requirement is updated compared to generation 3 of the criteria.

APEO and APD Alkylphenols (AP) (e.g. butylated hydroxy anisole (BHA, CAS No. 25013-16-5), alkylphenol ethoxylates (APEO), and other alkylphenol derivates (APD)

Alkylphenols is a group of mainly non-ionic surfactants that are produced in large volumes and their use leads to widespread release to the aquatic environment. APEOs are highly toxic to aquatic organisms and degrade to more environmentally persistent compounds (APDs). Ethoxylated nonylphenol and several other alkylphenols are included in the Candidate List due to endocrine disrupting properties. Other alkylphenols are polyalkylated phenols such as butylated hydroxytoluene (BHT) and butylated hydroxyanisole (BHA) which have antioxidant properties. APEO and APD are also excluded from use through requirement O4 (Surfactants). The requirement is updated compared to generation 3 of the criteria.

Aminopolyphosphonates

Aminopolyphosphonates are for example used in laundry detergents. An analysis hypothesize that glyphosate may also be a transformation product of aminopolyphosphonates. Glyphosate is suspected of causing genetic damage. Glyphosate is acutely toxic to fish and birds and can kill beneficial insects and soil organisms that maintain ecological balance. Laboratory studies have identified adverse effects of glyphosate-containing products in all standard categories of toxicological testing. Glyphosate contamination in European rivers not from herbicide application? - ScienceDirect This is a new requirement in generation 4 of the criteria.

Benzalkonium chloride (CAS No. 63449-41-2)

Benzalkonium chlorides (BACs) is part of a group of chemicals with wide applications due to their antimicrobial properties against bacteria, fungi and viruses. There is a risk that frequent and widespread use of BACs in commercial products can generative selective environments for microbes and contribute to resistance to antibiotics. Furthermore, there is a risk to consumer exposure due to their toxicity and allergenic properties.The requirement is unchanged compared to criteria generation 3.

Bisphenols and bisphenol derivatives belonging to the group of 34 substances that have been identified by ECHA for further EU regulatory risk management that are known or potential endocrine disruptors for the environment of for human health, or that can be identified as toxic for reproduction

Several bisphenols with the general bisphenol structure and 'bisphenol derivatives' which have constituents with structural properties common to bisphenols are now prohibited. Based on the potential for widespread use and available information on potential endocrine

disruptors, reproductive toxicity and PBT/vPvB properties, 34 substances (see in the requirement) were identified in need for further regulatory risk management in EU. This is a new requirement in generation 4 of the criteria.

Boric acid, borates, and perborates

Perborates are sometimes used as bleaching agents. Many perborates are classified as toxic for reproduction. Nordic Ecolabelling wishes to continue listing these as prohibited, despite them also being banned under requirement O3 (Classification of ingoing substances). This is a new requirement in generation 4 of the criteria.

Ethylenediamine tetraacetate (EDTA, CAS No. 6381-92-6) and its salts and Diethylenetriamine pentaacetate (DTPA, CAS No. 67-43-6) and its salts

EDTA, DTPA and their salts are not readily degradable, furthermore, they are both classified toxic for reproduction and poses a risk to consumers. for EDTA, the EU's risk assessment states that under the conditions at municipal water treatment plants EDTA is either not broken down or only breaks down to a slight degree. To-date in Europe, EDTA has been replaced in virtually all consumer products by readily biodegradable alternatives such as MGDA (methylglycine diacetic acid) and GLDA (glutamic acid diacetic acid).The requirement is unchanged compared to criteria generation 3.

Halogenated and/or aromatic solvents (see definition in the requirement)

Halogenated organic compounds include many environmentally and health-damaging substances that are highly toxic to organisms in water, carcinogenic or otherwise harmful to health. The halogenated organic compounds are usually difficult to degrade in the environment. Volatile organic solvents can cause an increased content of ground-level ozone, which i.a. can cause damage to the vegetation. The requirement is unchanged compared to criteria generation 3.

LAS (linear alkylbenzene sulphonates)

Linear alkylbenzene sulphonates (LAS) are toxic to aquatic organisms and are not biodegradable in an anaerobic environment. LAS is already excluded through requirements for surfactants, but for the sake of clarity it is now also included in this requirement.

MI (methylisothiazolinone, CAS No. 2682-20-4) and MI/CMIT 3:1 (5-Chloro-2-methyl-4-isothiazolin-3-one, CAS No. 26172-55-4)

Allergies to preservatives, particularly MI (methylisothiazolinone, CAS no. 2682-20-4) have risen in recent years and Nordic Ecolabelling does not want to contribute towards unnecessary exposure. This is a new requirement in generation 4 of the criteria.

Microplastics (see definition in the requirement)

When microplastics are washed into the sewerage system, they mostly end up in the sludge at water treatment plants, but some also pass through. If the plastic particles continue into lakes and the sea, they are consumed by mussels, fish and other animals and cause damage. Some microplastics are then gradually broken down by sunlight into even smaller

particles. The particles can also absorb harmful compounds. It is therefore important to be extra careful about what is permitted. Polycarboxylates are exempted because this compound is important for alternative complex binders to phosphate to work. This is a new requirement in generation 4 of the criteria.

Nanomaterials/-particles (see definition in the requirement)

Due to their small size and large surface area nanoparticles are often more reactive and may have other properties compared to larger particles of the same material. Further, different sizes, shapes, surface modifications and coatings can also change their physical and chemical properties. Nanoparticles can cross biological membranes and thus be taken up by cells and organs. One of the main concerns are linked to free nanoparticles, as some of these – when inhaled – can reach deep into the lungs, where the uptake into the blood is more likely.

There is concern among public authorities, scientists, environmental organisations, and others about the insufficient knowledge regarding the potential detrimental effects on health and the environment. Nordic Ecolabelling takes these concerns seriously and applies the precautionary principle to exclude potentially hazardous nanomaterials from products. The requirement is updated compared to criteria generation 3.

NTA (nitrilotriacetic acid, CAS-no. 139-13-9) and its salts

NTA is classified as Carc cat. 2 (EU, 2008b) and is thus already prohibited in requirement O4 due to its classification. However, complexing agents that replace NTA (GLDA and MGDA) contain small quantities of NTA as residues from raw material production (as attested in various safety data sheets for the raw materials). To encourage a transition to MGDA and GLDA, they may contain NTA impurities in the raw material in concentrations of less than 0.2% if the concentration of NTA in the product is below 0.1%. This is a new requirement in generation 4 of the criteria.

Organic chlorine compounds, hypochlorous acid and hypochlorite

Organic chlorine compounds, hypochlorite and hypochlorous acid can be used as disinfecting and antibacterial substances and as bleaching agents. Chlorine-based substances generally have undesirable health and environmental properties. Both hypochlorite and hypochloric acid can lead to formation of organic chlorine compounds and byproducts that are toxic and bioaccumulative, like trihalomethanes and haloacetic acids. . Hypochlorous acid is not classified, and hypochlorite have the classification Very toxic to aquatic life (H400) and thus, they are not covered by the general requirement concerning environmentally hazardous substances. However, both pose an environmental risk due to the possibility of organic chlorine compounds forming. The requirement is unchanged compared to criteria generation 3.

PBT and vPvB substances in accordance with REACH Annex XIII

PBT and vPvB are abbreviations for substances that are persistent, bioaccumulative and toxic, and very persistent and very bioaccumulative, respectively, in accordance with REACH Annex XIII. This means that they are not biodegradable and that they accumulate in living organisms. Based on these adverse characteristics they pose a threat to the

environment and human health. They are prohibited in all Nordic Swan Ecolabel products.The requirement is updated compared to criteria generation 3.

Per- and polyfluorinated substances (PFAS)

Perfluorinated and polyfluorinated alkylated substances (PFAS) are a group of substances with undesirable properties. The substances are persistent and are readily absorbed by the body. PFASs are defined as fluorinated substances containing at least one fully fluorinated methyl or methylene carbon atom (without any H / Cl / Br / I atom attached to it), i.e., with a few listed exceptions, all chemicals with at least one perfluorinated methyl group (–CF3) or a perfluorinated the methylene group (–CF2–) is a PFAS as described in the OECD recommendations[5].

This is a new requirement in generation 4 of the criteria.

Phthalates (i.e., esters of phthalic acid CAS No. 88-99-3)

Several phthalates are identified as endocrine disruptors and some of them are classified as reprotoxic. For these reasons several phthalates are included in the Candidate list. Based on their hazardous properties, phthalates pose a threat to the environment and human health and there is a ban on this group of substances.The requirement is unchanged compared to criteria generation 3.

Perfume

Perfumes are often not easily biodegradable, many are ecotoxic and sensitizing. The requirement is unchanged compared to criteria generation 3.

Potential or identified endocrine disruptors

Endocrine disruptors (EDs) are chemicals that alter the functioning of the endocrine (hormone) system and consequently cause adverse health effects. The hormone system regulates many vital processes in living organisms and when normal signalling is disturbed, adverse effects may result. EDs raise high concern for their risk of causing serious negative impact on the environment as well as on human health specifically. Special concern is raised for effects on reproduction and development and about possible links to increases in public health diseases. While effects in wildlife populations have been confirmed, evidence is pointing to effects also in humans. By excluding both identified and prioritised potential EDs which are under evaluation, Nordic Ecolabelling ensures a restrictive policy on EDs.

The ED lists I-III on https://edlists.org/ are dynamic, and the companies are responsible for keeping track of updates, in order to keep labelled products compliant with the requirement throughout the validity of the licences. Nordic Ecolabelling acknowledges the challenges associated with new substances being introduced on particularly List II and III, and in some cases also List I. We will evaluate the circumstances and possibly decide on a transition period on a case-by-case basis.

[5] Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and practical Guidance, OECD 2021.

A number of substances that are moved from ED List II to sublist II, but can still be considered potential endocrine disruptors, is also prohibited. It includes the following:

- 2-ethylhexyl (2E)-3-(4- methoxyphenyl)acrylate (CAS No. 83834-59-7)
- Homosalate (CAS No. 118-56-9)
- Kojic acid (CAS No. 501-30-4)
- Octocrylene (CAS No. 6197-30-4)

MEK (Methyl ethyl ketone, CAS 78-93-3) is exempted from the requirement because it is allowed in the EU-recipe for denatured ethanol. The requirement is updated compared to criteria generation 3.

*Quaternary ammonium compounds, which are not aerobically or anaerobically biodegradable** such as DTDMAC (CAS No. 61789-80-8), DSDMAC (CAS No. 107-64-2), DHTDMAC (CAS No. 61789-72-8) and DADMAC (CAS No. 7398-69-8).*

Quaternary ammonium compounds (QACs) are usually surface-active agents where some of them precipitate or denature proteins and destroy micro-organisms. QACs are toxic to a lot of aquatic organisms including fish, daphnids, algae, rotifer and microorganisms employed in wastewater treatment systems. The requirement is unchanged compared to criteria generation 3.

Siloxanes D4, D5, D6 and HMDS

Siloxanes are a group of substances with molecular weights from a few hundreds to several hundred thousand. Many of them are substances with PBT and/or vPvB properties and gives rise to specific concern based on their potential to accumulate in the environment. Therefore, siloxanes with known problematic properties are excluded, more specifically D4, D5, D6 and HMDS. Other siloxanes or silicones are not included on the list of substances prohibited in the product under this requirement; however, they are restricted under requirement O11 (Biodegradability) and requirement O12 (Critical dilution volume (CDV)). This is a new requirement in generation 4 of the criteria.

Substances on the REACH Candidate list of SVHC substances
https://www.echa.europa.eu/candidate-list-table

The Candidate List identifies substances of very high concern which fulfil the criteria in article 57 of the REACH Regulation (EC 1907/2006). The list includes carcinogenic; mutagenic; and reprotoxic substances (CMR, categories 1A and 1B in accordance with the CLP Regulation); and PBT (persistent, bioaccumulative and toxic) and vPvB (very persistent and very bioaccumulative) substances (as defined in REACH Annex XIII). In addition, two more substance groups are included if they are of equivalent level of concern (ELoC) as the ones previously mentioned. These are endocrine disruptors and substances which are environmentally hazardous without fulfilling the requirements for PBT or vPvB. Based on these adverse characteristics, Nordic Ecolabelling prohibits substances on the Candidate List. This means that we act ahead of the legislation and ban the substances before they are subject to authorisation and restriction in accordance with REACH. The requirement is unchanged compared to criteria generation 3.

5.2 Biodegradability and aquatic toxicity

O10 Long-term environmental effects

The use of ingoing substances which are classified* with any of the hazard codes H410, H411 or H412 is limited as follows:

$M*100*C_{H410} + 10*C_{H411} + C_{H412} < LV_{H410\ /\ H411\ /\ H412}$, where M is the multiplying factor for H410 as stated in CLP.

C_{H410} = Concentration of substances with H410 in grams / litre in-use solution

C_{H411} = Concentration of substances with H411 in grams / litre in-use solution

C_{H412} = Concentration of substances with H412 in grams / litre in-use solution

$LV_{H410\ /\ H411\ /\ H412}$ = Limit value for ingoing substances which are classified as H410, H411 or H412 in grams / litre in-use solution.

Limit values per product type are given in the table below.

Table 3 Limit values per product type

Product type	**$LV_{H410/H411/H412}$ (grams / litre in-use solution)**
Water-based degreasers	40
CIP, component cleaning agents	10
Solvent-based products (ready-to-use)	40
Offshore	40
Graffiti removers	40

If information about the substance being hazardous to the environment (in the form of data concerning toxicity and biodegradability, or toxicity and bioaccumulability) is not available, the substance is treated as a worst case, i.e. as environmentally hazardous, H410.

** Please note that in order to assess the classification, all the available data must have been evaluated, including data in ECHA databases.*

- Summary of the product's content in % by weight of substances classified as H410, H411 and H412.
- Appendix 1 or equivalent declaration completed and signed.
- Appendix 2 or equivalent declaration completed and signed by all raw material manufacturers/suppliers.
- Calculation to show that the requirement is fulfilled. Nordic Ecolabelling's calculation sheet for Industrial cleaning and degreasing agents can be used. It is available from Nordic Ecolabelling's websites.

Background to requirement O10 Long-term environmental effects

A Nordic Swan Ecolabelled product must not be classified as environmentally hazardous, see requirement O3 (Classification of ingoing substances). To further minimise potential problems for the aquatic environment, a limit has been set for the highest permitted content of environmentally hazardous substances in a product.

The requirement has been changed compared to generation 3 of the criteria, removing the exemption for surfactants classified as H411 and H412. However, the intention has been to maintain the same level of the requirement. The requirement is also changed regarding the unit (from % in product to grams/litre in-use solution) and is set per product type. In addition, the multiplying factor M, for H410 as stated in CLP, is included in the calculation.

O11 Biodegradability

The quantity of organic substances that are aerobically non-biodegradable (aNBO) must not exceed 0.6 g/ litre in-use solution.

The quantity of organic substances that are anaerobically non-biodegradable (anNBO) must not exceed 0.6 g/ litre in-use solution.

The calculation must be based on the highest recommended dosing stated on the product label or accompanying product sheet.

Please note that all surfactants must be aerobically and anaerobically biodegradable under requirement O4 (Surfactants).

See also the exemption from the requirement of anaerobic biodegradability for substances which are not surfactants in Appendix 3, item 7, Anaerobic biodegradability.

- Reference to the DID list, version 2023 or later. For substances not on the DID list, the parameters must be calculated based on the guidance in part B of the DID list, and the related documentation must be submitted.
- Calculation of the product's content of organic substances that are either not aerobically or anaerobically biodegradable. Nordic Ecolabelling's calculation sheet for Industrial cleaning and degreasing agents can be used. It is available from Nordic Ecolabelling's websites.

Background to requirement O11 Biodegradability

The persistence of substances in nature is an important environmental parameter. The extent to which substances degrade in aquatic environments indicates how long they may impact the ecosystem. Degradation in water depends on the presence of oxygen in the receiving environment, which is why Nordic Ecolabelling distinguishes between aerobic (with oxygen) and anaerobic (without oxygen) degradability.

The proportion of non-aerobically or anaerobically degradable substances varies across different products. Industrial cleaning and degreasing agents may contain limited amounts of organic compounds that are neither aerobically nor anaerobically degradable. By restricting the content of such substances in chemicals, Nordic Ecolabelling ensures that no more substances are released into the environment than necessary.

The requirement is unchanged compared with generation 3 of the criteria.

O12 Critical dilution volume (CDV)

The critical dilution volume (CDV) of the product may not exceed the following limit values.

Table 4 Limit values per product type

Product type	$CDV_{chronic}$ (litres/in-use solution)
Water-based degreasers	300 000
CIP, component cleaning agents	50 000
Solvent-based products (ready-to-use)	300 000
Offshore	300 000
Graffiti removers	300 000

The calculation must be based on the highest recommended dosing stated on the product label or accompanying product sheet.

CDV is calculated using the following formula for all substances in the product:

$CDV_{chronic} = \sum CDV_i = \sum (dose_i \times DF_i \times 1000 / TF_i \text{ chronic})$, where

$dose_i$ = the input quantity of the individual substance in g/ litre of in-use solution

DF_i = biodegradation factor for substance “i”, in accordance with the DID list

TF_i chronic = chronic toxicity factor for substance “i”, in accordance with the DID list

If TF_i chronic is lacking, TF_i acute can be used.

- Reference to the DID list, version 2023 or later. For substances not on the DID list, the parameters must be calculated based on the guidance in part B of the DID list, and the related documentation must be submitted.
- Calculation of the product’s $CDV_{chronic}$. Nordic Ecolabelling’s calculation sheet must be used. It is available from Nordic Ecolabelling’s websites.
- Appendix 2 or equivalent declaration completed and signed by all raw material manufacturers/suppliers.

Background to requirement O12 Critical dilution volume (CDV)

CDV is a theoretical value that takes account of each substance’s toxicity and biodegradability in the environment. The method was developed together with the EU Ecolabel. Setting a maximum limit for CDV ensures that the Nordic Swan Ecolabelled products have a minimal impact on the receiving water. CDV is calculated for all ingoing substances in the product.

The CDV limit is only stated with chronic values. The use of chronic data is generally preferable, since long-term toxicity data is considered of higher quality and to give more precise/reliable estimates of potential environmental effects compared with acute toxicity data. The limit values have been set on the basis of licence data.

The requirement has been changed compared with generation 3 of the criteria in terms of: The limit values have been tightened up and the exemption for hydrochloric acid is removed.

5.3 Performance

The product must demonstrate satisfactory efficacy for its intended areas of use at the specified dosage. This can be documented either through a user test (alternative A) or a laboratory test (alternative B).

O13 Performance

Alternative A

The product's efficacy must be documented through a user test that meets the requirements outlined below:

- The product must have been used by at least five independent users within its area of application over a period that reflects the product's usage frequency (i.e., the product must have been used repeatedly).
- The product must be tested at the dosage recommended on the product label or accompanying product sheet.
- At least 80% of the users must rate the product as sufficiently effective or very effective.
- The user must complete Appendix 4. All appendices must be submitted to Nordic Ecolabelling.
- A test report detailing the user test, including a summary of the results, must be prepared.

☐ Appendix 4 from all users who have tested the product.

☐ Test report describing the user test, including summary of the results.

Alternative B

The product's efficacy must be documented through a laboratory test that meets the requirements outlined in Appendix 5. The product's efficacy must be assessed to be equal to or better than the reference product it is compared with, as well as better than water.

A reference product refers to an established product already on the market, designed for the same applications as the product being tested.

☐ Appendix 5 or equivalent declaration completed and signed.

Background to requirement O13 Performance

Performance testing is primarily a quality requirement to ensure that an Nordic Swan Ecolabelled product delivers effective cleaning results for its intended areas of use at the specified dosage. A product that performs well reduces the risk of overdosing.

Input from industry representatives and consultation feedback for criteria generation 3 indicated that there are no widely recognized standardized tests for these products' performance. Therefore, Nordic Ecolabelling developed a structured framework for a laboratory test as an alternative to the user report. This laboratory test has been refined and adapted for industrial cleaning and degreasing agents through dialogue with manufacturers, with the aim of enhancing test quality. The laboratory test may be conducted as specified in

Appendix 5 or through another well-documented laboratory test, provided it receives Nordic Ecolabelling's approval.

The requirement is unchanged compared with generation 3 of the criteria.

5.4 Packaging and user information

O14 User information

The product label or accompanying product sheet must include the information below.

- Product type and area of use.

  The product's area of use must align with the application for which it was tested in requirement O13 (Performance).

- For products that require dilution before use: Recommended dosage for regular use and typical soiling.

  The recommended dosage can be stated in units such as dl, pumps, or caps, for example.

- Description of how the user can avoid coming into contact with the product, for example, by using personal protective equipment.
- For products considered as environmentally hazardous waste after use: A statement that the product should be disposed of accordingly.
- For graffiti removers: Remediated paint are considered as environmentally hazardous waste and must be strictly handled to ensure it is not discharged into recipients or the municipal sewage system.

t̄ Copy of label and/or product sheet.

Background to requirement O14 User information

Incorrect use and overdosing of products result in an unnecessary and heightened environmental impact. To mitigate this, Nordic Ecolabelling requires that the product label or accompanying product sheet includes clear information on the intended use and correct dosage.

To ensure safe use of the product, there must be a description of how the user can avoid coming into contact with the product.

To make sure proper disposal of products considered as environmentally hazardous waste after use, for example brush cleaner, there must be a statement that the product should be disposed of accordingly.

The paints from graffiti removal often contain high levels of heavy metals. Therefore, remediated paint should be strictly handled to ensure it is not discharged into recipients or the municipal sewage system. It can, for example, be done by carrying out the graffiti removal in a dedicated remediation hall where the process water is treated, or by collecting the liquid in absorbent cloths/mats or in a container and then handling it as hazardous waste.

The requirement has changed compared to generation 3 of the criteria regarding the information on how to handle remediated paint from graffiti removal.

O15 Packaging

Packaging up to 20 litres must consist of either PE, PP or PET according to the following requirements.

PE and PP packaging

- The container and closure must be made of minimum: 99% polyethene (PE) or 95 % polypropene (PP).

  The remaining % must not be of biodegradable or any other material than PE or PP.

- Colours: Carbon black pigments must not be added to the packaging.
- Labels: Must be made of the same material as of the packaging component they are placed on.

PET packaging

- The container and closure must be made of minimum: 98% polyethylene terephthalate (PET).
- Colours: Transparent and transparent colours without carbon black are allowed.
- Labels: Must be made of PE or PP.
- The label must not cover more than 50% of the packaging surface for sizes ≤ 500 ml and 70% for sizes > 500 ml.

- Declaration from the supplier of what type of plastic the container consist of. Appendix 6 can be used.
- Declaration from the supplier of what type of plastic the closure consist of. Appendix 6 can be used.
- Declaration from the supplier of what type of plastic the label consist of. Appendix 6 can be used.
- For labels on the PET packaging: Declaration from the applicant regarding the size of the label compared to the container.

Background to requirement O15 Packaging

The Nordic recycling manuals for plastic packaging[6] are the base for the requirement stating that plastic bottles/containers and closures must be made from PE, PP or PET. These are the best plastics from a recycling perspective. Biodegradable plastics are not suitable in today's recycling systems and can cause problems in the material recovery process.

[6] "Plastförpackningar – En återvinningsmanual från FTI, version 0.7,
Suomen Uusiomuovi Oy: Opas kierrätyskelpoisen muovipakkauksen suunnitteluun
http://www.uusiomuovi.fi/document.php/1/130/packdes_painos_1/442070829017fd4aa7d7e00bf960978b (visited 2019-04-30)
https://plast.dk/wp-content/uploads/2018/11/Design-manual-ENG-Forum-for-Circular-Plastic-Packaging-NOVEMBER-2018.pdf, https://plast.dk/wp-content/uploads/2018/06/Bilag-A-designmanual.pdf;
https://www.grontpunkt.no/media/2777/report-gpn-design-for-recycling-0704174.pdf (Accessed 2020-08-12);
http://norden.diva-portal.org/smash/get/diva2:1364632/FULLTEXT01.pdf (Accessed 2020-08-12);

PE and PP containers must have labels of the same plastic material, in order to facilitate correct sorting by the NIR sensor.

PET containers must have labels made of PE or PP. Labels for sizes > 500 ml must not cover more than 70% of the container, and maximum 50% sizes ≤ 500 ml. The calculation of the percentage shall be based on the two-dimensional profile of the container i.e., the area of the top and bottom of the packaging and the sides of a box/container/bottle/can shall not be included in the calculation. If the label on the front of pack and back of pack are of different size, the maximum percentage of (50% or 70%) shall be fulfilled for each side separately. For a cylindrical bottle, the calculation can also be based on the three-dimensional profile exclusive bottom and top of the bottle.

The permitted sizes of labels of material other than the container come from ReCyclass' recommendations. These are the sizes they have tested and can vouch for in relation to NIR sorting. Swedish authorities' national Eco design guidelines have chosen to say 60% for all sizes. We have not been able to find a basis for that decision and have therefore chosen to go with what has been tested.

The requirement is new for this generation of the criteria.

5.5 Licence maintenance

The purpose of the licence maintenance is to ensure that fundamental quality assurance is dealt with appropriately.

O16 Customer complaints

The licensee must guarantee that the quality of the Nordic Swan Ecolabel product or service does not deteriorate during the validity period of the licence. Therefore, the licensee must keep an archive over customer complaints.

Note that the original routine must be in one Nordic language or in English.

- Upload your company’s routine for handling and archiving customer complaints.

Background to requirement O16 Customer complaints

Nordic Ecolabelling requires that your company has implemented a customer complaint handling system. To document your company’s customer complaint handling, you must upload your company’s routine describing these activities. The routine should be dated and signed and will normally be part of your company’s quality management system.

If your company does not have a routine for customer complaint handling, it is possible to upload a description of how your company perform these activities. During the on-site visit, Nordic Ecolabelling will check that the customer complaint handling is implemented in your company as described. The customer complaints archive will also be checked during the visit.

O17 Traceability

The licensee must be able to trace the Nordic Swan Ecolabel products in the production. A manufactured / sold product should be able to trace back to the occasion (time and date) and the location (specific factory) and, in relevant cases, also which machine / production line where it was produced. In addition, it should be possible to connect the product with the actual raw material used.

You can upload your company's routine or a description of the actions to ensure traceability in your company.

- Please upload your routine or a description.

Background to requirement O17 Traceability

Nordic Ecolabelling requires that your company has implemented a traceability system. To document your company's product traceability, you must upload your company's routine describing these activities. The routine should be dated and signed and will normally be part of your company's quality management system.

If your company does not have a routine for product traceability, it is possible to upload a description of how your company perform these activities. During the on-site visit, Nordic Ecolabelling will check that the product traceability is implemented in your company as described.

6 Environmental impact of industrial cleaning and degreasing agents

The relevant environmental impacts found in the life cycle of industrial cleaning and degreasing agents are set out in a MECO scheme, see section 6.2. A MECO describes the key areas that have impact on the environment and health throughout the life cycle of the product – including consumption of materials/resources (M), energy (E), chemicals (C) and other impact areas (O).

Nordic Ecolabelling sets requirements concerning the topics and processes in the life cycle that have a high environmental impact – also called hotspots. Based on the MECO analysis, an RPS tool is used to identify where ecolabelling can have the greatest effect. R represents the environmental relevance, P is the potential to reduce the environmental impact and S is the steerability on how compliance with a requirement can be documented and followed up. The criteria contain requirements in those areas in the life cycle that have been found to have high RPS, since there is potential to achieve positive environmental gains.

Degradability and toxicity to aquatic organisms, exposure of chemicals harmful to health, emission of VOC, eutrophication from phosphorous compounds, user information, dosing and performance and packaging stand out as key parameters in the MECO analysis. See section 6.1 for a RPS scheme on these parameters.

6.1 RPS scheme

Life cycle stages	Area and assessment of R, P, S (high, medium or low)	Comments
Raw materials		
	It is not identified any environmental hotspots during the production phase.	
Production		
	It is not identified any environmental hotspots during the production phase.	
Use		
	Exposure of chemicals harmful to health R: High P: High S: High RPS: High	R is high due to users being exposed to chemicals that are harmful to health. P is high as there is a potential to prohibit or limit ingredients with negative impact on health, like halogenated and/or aromatic solvents, allergens and endocrine disruptors. There is also a potential to ensure safe use of the product. S is high as requirements to prohibit or limit problematic substances can be set. In addition, Nordic Ecolabelling can require that the product label or accompanying product sheet include a description of how the user can avoid coming into contact with the product.
	User information, dosing and performance R: High P: High S: Medium RPS: High	R is high because incorrect use and overdosing of products result in an unnecessary and heightened environmental impact. P is high as there is a potential to ensure correct use of the product and to limit overdosing. Furthermore, a product that performs well reduces the risk of overdosing. S is medium as Nordic Ecolabelling can require that the product label or accompanying product sheet includes clear instructions for use and recommended dosage for products that require dilution before use. However, it is the user who decides whether the information is followed. In addition, Nordic Ecolabelling can set up performance requirement.
	The paints that the cleaning agents transfer into the water recipient R: High P: High S: Medium-low RPS: High	R is high because the paints from graffiti removal often contain high levels of heavy metals. Therefore, when removing graffiti, a great environmental impact comes from the graffiti paint that accompanies the cleaning agent when it is removed. P is high as the remediated paint could be properly handled and not be discharged into recipients or the municipal sewage system. S is medium-low as Nordic Ecolabelling can require that the product label or accompanying product sheet includes information on how to handle remediated paint from graffiti removal.

		However, it is the user who decides whether the information is followed.
	Emission of VOC R: High P: High S: High RPS: High	R is high as VOCs are harmful to health and contribute to ground-level ozone formation and are often slow to degrade in ecosystems, leading to long-term environmental impacts. P is high as there is a potential to prohibit or limit VOCs. In addition, ventilation during use of the product can reduce the exposure for the user. S is high as requirements to prohibit or limit VOCs can be set. Also, Nordic Ecolabelling can require that the product label or accompanying product sheet includes health and safety instructions.
End of life		
	Packaging disposal (incineration, reuse or recycling) R: Medium P: Medium S: High RPS: Medium	R is medium due to consumption of energy and fossil resources. P is medium as the packaging sizes generally are large (> 20 litres) and they are commonly reused. However, there are smaller packaging where there is potential to promote design for recycling. S is high as requirements concerning the packaging's recyclability can be set for smaller packaging.
	Product emissions from use, either to a water treatment plant or directly to the water recipient: Degradability and toxicity to aquatic organisms R: High P: High S: High RPS: High	R is high as the product end up in a water treatment plant or is discharged directly to the water recipient. The product therefore risks to harm both aquatic organism and the ecosystem, depending on the inherent properties of the ingredients. P is high as there is a potential to reduce the content of environmentally hazardous ingredients such as substances toxic to aquatic organism, non-degradable substances, microplastics, endocrine disruptors etc in the products. S is high as requirements to prohibit or limit problematic substances can be set.
	Eutrophication from phosphorous compounds R: High P: High S: High RPS: High	R is high because phosphorus is a driver of eutrophication. P is high as there is potential to prohibit or limit the content of phosphorus in the products. S is high as requirements to prohibit or limit phosphorous in the products can be set.

6.2 MECO scheme

	Raw material	Production	Use	End of life	Transport
Material	Fossil oil and plant materials (palm oil etc.) for production of chemical raw materials Plastic and other packaging raw material	Water consumption	Equipment for dosing and applying the products	**Packaging disposal (incineration, reuse or recycling)**	Cargo pallets, plastic wrapping and cardboard boxes Fuel for transportation
Energy	Extraction/ production of chemical raw materials and packaging materials	Production process (packaging production and mixing of chemicals)	Equipment for dosing and applying the products Some products may require heated water	Waste water treatment Incineration of packaging	Transport of raw materials, packaging and finished products
Chemicals	Additives, plasticisers and other chemical treatment relating to raw material production		**Exposure of chemicals harmful to health** **The dirt and oil that the cleaning agents transfer into the water recipient**	**Product emissions from use, either to a water treatment plant or directly to the water recipient: Degradability and toxicity to aquatic organisms** **Eutrophication from phosphorous compounds**	
Other	Work environment Ecosystem and loss of biodiversity	Work environment	**User information, dosing and performance** **Emission of VOC**		Particulate matter and emissions from distribution vehicles Eco driving and logistics

Sources for MECO

Boyano, A. and R. Kaps, G. Medyna, O. Wolf (2016). Revision of six EU Ecolabel Criteria for detergents and cleaning products. Main environmental hotspots, pp. 8-14. https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/contentype/product_group_documents/1581681262/Technical%20background%20report.pdf

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (2015). Closing the loop – An EU action plan for the Circular Economy, COM 2015 614 final, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015DC0614

Golsteijn, L. and R. Menkveld, H. King, C. Schneider, D. Schowanek, S. Nissen (2015). A compilation of life cycle studies for six household detergent product categories in Europe, Environmental Sciences Europe, 2015, 27:23. http://enveurope.springeropen.com/articles/10.1186/s12302-015-0055-4

Koehler, A. (2009). Comparing the Environmental Footprints of Home-Care and Personal-Hygiene Products: The Relevance of Different Life-Cycle Phases, 2009, Environ. Sci. Technol, 43, 8643–8651. https://assets.website-files.com/60785920d3e83f34edf78d07/612d9f94be86e62781325e80_Envtl%20Sci%20Tech%202009.pdf

Suikkanen, J. and A. Nissinen, M. Wesnaes (2019). Nordic Swan Ecolabel and Product Environmental Footprint: Focus on Product Environmental Information. https://norden.diva-portal.org/smash/get/diva2:1354808/FULLTEXT01.pdf

7 Changes compared to previous generation

Here, the most important changes compared to the previous generation are briefly listed.

Table 5 Overview of changes to criteria for Industrial cleaning and degreasing agents generation 4 compared with previous generation 3

Proposed requirement generation 4	Requirement generation 3	Same req.	Change	New req.	Comments
O1 Description of the product	O1 Information about the product	X			
O2 Classification of the product	O2 Classification of the product		X		The new EUH hazard classes for endocrine disruptors, PBT/vPvB, and PMT/vPvM are added to the prohibited classifications.
O3 Classification of ingoing substances	O3 Classification of constituent substances in the product		X		The new EUH hazard classes for endocrine disruptors, PBT/vPvB, and PMT/vPvM are added to the prohibited classifications.
O4 Surfactants	O10 Surfactants, readily aerobically and anaerobically degradable	X			
O5 Preservatives	O5 Preservatives		X		Updated according to Nordic Ecolabelling's policy on preservatives. A Challenge test is no longer required.
O6 Organic colorants	O6 Dyes	X			
O7 Volatile organic compounds (VOC)	O7 Volatile organic compounds (VOC)		X		The definition of VOC is updated according to the Industrial Emissions Directive (IED) 2010/75/EU.
O8 Phosphorus	O8 Phosphorus	X			
O9 Excluded substances	O9 Substances that must not be present in the products		X		The list of substances that are excluded from use in products is extended with: • Aminopolyphosphonates • Bisphenols and bisphenol derivatives • Boric acid, borates, and perborates • LAS (linear alkylbenzene sulphonates) • MI (methylisothiazolinone, CAS no. 2682-20-4) and MI/CMIT 3:1 (5-Chloro-2-methyl-4-isothiazolin-3-one, CAS No. 26172-55-4) • Microplastics • NTA (nitrilotriacetic acid, CAS-no. 139-13-9) and its salts

					• Per- and polyfluorinated substances (PFAS) • Siloxanes D4, D5, D6 and HMDS The requirements for potential or identified endocrine disruptors, nanomaterials/-particles and PBT and PvBv substances are updated.
O10 Long-term environmental effects	O4 Environmentally harmful substances		X		Surfactants classified as H411 and H412 are no longer exempted from the requirement. The unit has changed from % in product to grams/litre in-use solution. The requirement is set per product type. The multiplying factor M, for H410 as stated in CLP, is included in the calculation.
O11 Degradability	O11 Aerobic degradability, aNBO and Anaerobic degradability, anNBO	X			
O12 Critical dilution volume (CDV)	O12 CDV (critical dilution volume)		X		The limit values have been tightened up and the exemption for hydrochloric acid is removed.
O13 Performance	O13 Performance test – user reports and O14 Performance test – laboratory test	X			
O14 User information	O17 Information for users		X		For graffiti removers: The product label or accompanying product sheet must include information on how to handle remediated paint from graffiti removal.
O15 Packaging				X	A new requirement has been introduced for primary packaging concerning the packaging's recyclability.
O16 Customer complaints	O20 Quality of the cleaning agent		X		
O17 Traceability	O23 Traceability		X		

8 Future criteria generation

Points will be added after the consultation.

9 Criteria version history

Criteria version history will be added after the consultation.

10 How to apply and regulations for the Nordic Ecolabelling

Application and costs

For information about the application process and fees for this product group, please refer to the respective national website. For contact information see the beginning of this document.

The application consists of an application form/web form and documentation showing that the requirements are fulfilled.

Licence validity

The Nordic Swan Ecolabel licence is valid providing the criteria are fulfilled and until the criteria expire. The validity period of the criteria may be prolonged or adjusted, in which case the licence is automatically prolonged, and the licensee informed.

Revised criteria shall be published at least one year prior to the expiry of the present criteria. The licensee is then offered the opportunity to renew their licence.

On-site inspection

In connection with handling of the application, Nordic Ecolabelling normally performs on-site inspection visit/-s to ensure adherence to the requirements. For such an inspection, data used for calculations, original copies of submitted certificates, test records, purchase statistics, and similar documents that support the application must be available for examination.

Queries

Please contact Nordic Ecolabelling if you have any queries or require further information. See contact info in the beginning of this document. Further information and assistance (such as calculation sheets or electronic application help) is available. Visit the relevant national website for further information.

Follow-up inspections

Nordic Ecolabelling may decide to check whether the product fulfils Nordic Ecolabelling requirements during the licence period. This may involve a site visit, random sampling, or similar test.

The licence may be revoked if it is evident that the product does not meet the requirements.

Random samples may also be taken in-store and analysed by an independent laboratory. If the requirements are not met, Nordic Ecolabelling may charge the analysis costs to the licensee.

Regulations for the Nordic Ecolabelling of products

When the Nordic Swan Ecolabel is used on products the licence number shall be included.

More information on graphical guidelines, regulations and fees can be found at www.nordic-swan-ecolabel.org/regulations

Appendix 1 Declaration from the manufacturer of the industrial cleaning and degreasing agent

To be used in conjunction with an application for a licence for the Nordic Swan Ecolabel of industrial cleaning and degreasing agents.

This declaration is based on the knowledge we have at the time of the application, based on tests and/or declarations from raw material manufacturers, with reservations for new advances and new knowledge. Should such new knowledge arise, the undersigned is obliged to submit an updated declaration to Nordic Ecolabelling.

Product name:	
Product type and area of use:	
Product category (tick the box):	
Water-based degreasers	
CIP, component cleaning agents	
Solvent-based products (ready-to-use)	
Offshore	
Graffiti removers	

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the Nordic Swan Ecolabelled product. Impurities are not regarded as ingoing substances and are exempt from the requirements. Ingoing substances and impurities are defined below, unless stated otherwise in the requirements.

- Ingoing substances: all substances in the Nordic Swan Ecolabelled product regardless of amount, including additives (e.g., preservatives and stabilizers) in the raw materials. Substances known to be released from ingoing substances (e.g., formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
- Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials, that remain in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0.0100 w%).
- Impurities in the raw materials exceeding concentrations of 10 000 ppm (1.0000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.

Examples of impurities are residues of the following: residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.

O2 Classification of the product		
Is the product classified with any of the hazard phrases below? *Incl. all classification variants. For example, H350 also covers classification H350i.*	Yes	No
If the answer to all the classifications below is No, mark here		
Carc. 1A or 1B H350		
Carc. 2 H351		
Muta. 1A or 1B H340		
Muta. 2 H341		
Repr. 1A or 1B H360		
Repr. 2 H361		
Lact. H362		
Resp. Sens. 1, 1A or 1B H334		
Skin Sens. 1, 1A or 1B H317		
Acute Tox. 1 or 2 H300		
Acute Tox. 1 or 2 H310		
Acute Tox. 1 or 2 H330		
Acute Tox. 3 H301		
Acute Tox. 3 H311		
Acute Tox. 3 H331		
Acute Tox. 4 H302		
Acute Tox. 4 H312		
Acute Tox. 4 H332		
Aquatic Acute 1 H400		
Acute Chronic 1 H410		
Aquatic Chronic 2 H411		
Aquatic Chronic 3 H412		
Aquatic Chronic 4 H413		
Ozone H420		
STOT SE 1 H370		
STOT SE 2 H371		

STOT RE 1 H372		
STOT RE 2 H373		
Asp. Tox. 1 H304		
Flam. Aer. 1 H222		
Flam. Liq. 1 H224		
ED HH 1 EUH380		
ED HH 2 EUH381		
ED ENV 1 EUH430		
ED ENV 2 EUH431		
PBT EUH440		
vPvB EUH441		
PMT EUH450		
vPvM EUH451		

O3 Classification of ingoing substances		
Does the product contain substances classified with any of the hazard phrases below? *Incl. all classification variants. For example, H350 also covers classification H350i.*	Yes	No
If the answer to all the classifications below is No, mark here		
Carc. 1A or 1B H350		
Carc. 2 H351		
Muta. 1A or 1B H340		
Muta. 2 H341		
Repr. 1A or 1B H360		
Repr. 2 H361		
Lact. H362		
Resp. Sens. 1, 1A or 1B H334		
Skin Sens. 1, 1A or 1B H317		
ED HH 1 EUH380		
ED HH 2 EUH381		
ED ENV 1 EUH430		
ED ENV 2 EUH431		
PBT EUH440		
vPvB EUH441		

PMT EUH450		
vPvM EUH451		

O5 Preservatives		
	Yes	No
Does the product contain preservatives?		
If yes, state the BCF (Bioconcentration Factor) and/or log Kow (octanol-water partition coefficient):		

O6 Organic colorants		
	Yes	No
Does the product contain organic colorants?		
If yes, state the BCF (Bioconcentration Factor) and/or log Kow (octanol-water partition coefficient):		

O7 Volatile organic compounds (VOC)		
	Yes	No
Does the product contain volatile organic compounds*? ** An organic compound with a vapor pressure of 0.01 kPa or more at 293.15 K (20°C) .*		

O8 Phosphorus		
	Yes	No
Does the product contain phosphorus?		

O9 Excluded substances		
Does the product contain any of the following substances?	Yes	No
Alkylphenols (AP) (e.g. butylated hydroxy anisole (BHA, CAS No. 25013-16-5), alkylphenol ethoxylates (APEO), and other alkylphenol derivates (APD)		
Aminopolyphosphonates		
Benzalkonium chloride (CAS No. 63449-41-2)		
Bisphenols and bisphenol derivatives belonging to the group of 34 substances that have been identified by ECHA for further EU regulatory risk management that are known or potential endocrine disruptors for the environment of for human health, or that can be identified as toxic for reproduction: 201-245-8 (BPA), 201-025-1 (BPB), 401-720-1 (4,4'-Isobutylethylidenediphenol), 216-036-7 (BPAF) and its 8 salts (278-305-5; 425-060-9; 443-330-4; 468-740-0; 469-080-6; 479-100-5; 943-265-6; 947-368-7), 201-250-5 (BPS), 201-240-0 (BPC), 204-279-1 (TBMD), 201-618-5 (6,6'-di-tert-butyl-4,4'-butylidenedi-m-cresol), 242-895-2, 248-607-1, 405-520-5 (D8), 217-121-1 (DAB), 227-033-5 (TMBPA), 210-658-2 (BPF), 411-570-9, 277-962-5 (contains BPS, 500-086-4 (contains BPA), 500-263-6 (contains BPA), 500-607-5 (contains BPA), 701-362-9, 904-653-0 (contains BPA), 908-912-9 (contains BPF), 926-571-4 (contains BPA), 931-252-8 (contains BPA), 941-992-3 (contains BPS), 943-503-9 (contains BPA).		
Boric acid, borates, and perborates		
Ethylenediamine tetraacetate (EDTA, CAS No. 6381-92-6) and its salts and diethylenetriamine pentaacetate (DTPA, CAS No. 67-43-6) and its salts		
Halogenated and/or aromatic solvents *Solvents are defined as in Commission Directive 1999/13/EC: organic substances with a vapour pressure of at least 0.01 kPa at 20 °C.*		
LAS (linear alkylbenzene sulphonates)		
MI (methylisothiazolinone, CAS no. 2682-20-4) and MI/CMIT 3:1 (5-Chloro-2-methyl-4-isothiazolin-3-one, CAS No. 26172-55-4)		
Microplastics *Exemption: Polycarboxylates.* *Microplastics are synthetic polymer microparticles as defined in REACH Regulation ((EC) No 1907/2006), Annex XVII, Entry no. 78: Synthetic polymer microparticles: polymers that are solid, and which fulfil both of the following conditions:* *a) are contained in particles and constitute at least 1% by weight of those particles; or build a continuous surface coating on particles.* *b) at least 1% by weight of the particles referred to in point (a) fulfil either of the following conditions:* *(i) all dimensions of the particles are equal to or less than 5 mm.* *(ii) the length of the particles is equal to or less than 15 mm and their length to diameter ratio is greater than 3.* *The following polymers are excluded from this designation:* *a) polymers that are the result of a polymerisation process that has taken place in nature, independently of the process through which they have been extracted, which are not chemically modified substances.* *b) polymers that are biodegradable as proved in accordance with Appendix 15 [to REACH, Regulation (EC) No 1907/2006].* *c) polymers that have a solubility greater than 2 g/L as proved in accordance with Appendix 16 [to REACH, Regulation (EC) No 1907/2006].* *d) polymers that do not contain carbon atoms in their chemical structure.* *N.B. The following "Conditions of restriction" paragraphs apply: 1 (concentration limit in mixtures), 2 (definitions), 3 (particle size limits). The remaining points do not apply, e.g. 4 (Paragraph 1 shall not apply to the placing on the market of:), e.g. 4(a) "synthetic polymer microparticles, as substances on their own or in mixtures, for use at industrial sites", 5 (derogations), e.g. 5 (b) "synthetic polymer microparticles the physical properties of which are permanently modified during intended end use in such a way that the polymer no longer falls within the scope of this entry".*		
Nanomaterials/-particles *Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01):*		

'Nanomaterial' means a natural, incidental or manufactured material consisting of solid particles that are present, either on their own or as identifiable constituent particles in aggregates or agglomerates, and where 50 % or more of these particles in the number-based size distribution fulfil at least one of the following conditions: *(a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm;* *(b) the particle has an elongated shape, such as a rod, fibre or tube, where two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm;* *(c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.*		
NTA (nitrilotriacetic acid, CAS-no. 139-13-9) and its salts Exemption: Complexing agents of the MGDA and GLDA type may contain NTA impurities in the raw material in concentrations of less than 0.2% if the concentration of NTA in the final product is below 0.1%.		
Organic chlorine compounds, hypochlorous acid and hypochlorite		
PBT and vPvB substances in accordance with REACH Annex XIII		
Per- and polyfluorinated substances (PFAS)		
Phthalates (i.e., esters of phthalic acid CAS No. 88-99-3)		
Perfume		
Potential or identified endocrine disruptors, according to any of the following EU member state initiative "Endocrine Disruptor Lists": List I: https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu List II: https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption List III: https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities *Exemption: MEK (Methyl ethyl ketone, CAS No. 78-93-3).* *N.B. A substance which is transferred to one of the corresponding sublists called "Substances no longer on list", and no longer appears on any of List I-III, is no longer excluded. The exception is those substances on sublist II which were evaluated under a regulation or directive which doesn't have provisions for identifying EDs (e.g. the cosmetic products regulation). For those substances, ED properties may still have been confirmed or suspected. Nordic Ecolabelling will evaluate the circumstances case-by-case, based on the background information indicated on sublist II.*		
Quaternary ammonium compounds, which are not aerobically or anaerobically biodegradable** such as DTDMAC (CAS No. 61789-80-8), DSDMAC (CAS No. 107-64-2), DHTDMAC (CAS No. 61789-72-8) and DADMAC (CAS No. 7398-69-8).		
*** According to test method 301 (A-F) or 310 in OECD guidelines for testing of chemicals or other equivalent methods evaluated by an independent body and controlled by Nordic Ecolabelling.*		
Siloxanes D4, D5, D6 and HMDS		
Substances on the REACH Candidate list of SVHC substances https://www.echa.europa.eu/candidate-list-table		

O10 Long-term environmental effects		
	Yes	No
Does the product contain substances classified as H410, H411 or H412?		

If the answer to any of the above questions is yes, state the CAS No. (where possible), chemical name and level (in ppm, % by weight or mg/kg). Also, state whether the substance is contained in the form of an impurity or an ingoing substance.

_____

_____

In the event of any change to the composition of the product, a new declaration of fulfilment of the requirements is to be submitted to Nordic Ecolabelling.

Place and date	**Company name**
Responsible person	**Signature of responsible person**
Telephone	**Email**

Appendix 2 Declaration from the manufacturer of the raw material to the industrial cleaning and degreasing agent

To be used in conjunction with an application for a licence for the Nordic Swan Ecolabel of industrial cleaning and degreasing agents.

This declaration is based on the knowledge we have at the time of the application, based on tests and/or declarations from raw material manufacturers, with reservations for new advances and new knowledge. Please inform Nordic Ecolabelling if new knowledge arises and submit an updated declaration.

For suppliers: If you do not have knowledge about the complete composition of the raw material/ingredient, you are obliged to obtain this information from the manufacturer.

Manufacturer/Supplier
Trade name of the raw material

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the Nordic Swan Ecolabelled product. Impurities are not regarded as ingoing substances and are exempt from the requirements. Ingoing substances and impurities are defined below, unless stated otherwise in the requirements.

- Ingoing substances: all substances in the Nordic Swan Ecolabelled product regardless of amount, including additives (e.g., preservatives and stabilizers) in the raw materials. Substances known to be released from ingoing substances (e.g., formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
- Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials, that remain in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0.0100 w%).
- Impurities in the raw materials exceeding concentrations of 10 000 ppm (1.0000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.

Examples of impurities are residues of the following: residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.

Note that if the raw material contains impurities listed in this appendix, write the amount at the end of the appendix. The manufacturer of the Nordic Swan Ecolabelled product is responsible for calculating compliance with the requirements of the criteria.

Ingoing substances in the raw material/ingredient (chemical name, INCI name, CAS No., amount in weight-%):

Function of the raw material/ingredient(s), including all ingoing substances:

Please note that substances that are defined as surfactants according to Detergent Regulation (EC) No 648/2004, must always be reported with the function "surfactant".

Suggested DID-numbers for the raw material/ingredient(s), including all declared ingoing substances. The DID-list is available from the Nordic Ecolabelling web pages:

Please note that the information in this declaration is internally shared with certification personnel in Nordic Ecolabelling to be used in evaluation of applications of chemical technical products.

O3 Classification of ingoing substances		
Does the raw material contain substances classified with any of the hazard phrases below? *Incl. all classification variants. For example, H350 also covers classification H350i.*	Yes	No
If the answer to all the classifications below is No, mark here		
Carc. 1A or 1B H350		
Carc. 2 H351		
Muta. 1A or 1B H340		
Muta. 2 H341		
Repr. 1A or 1B H360		
Repr. 2 H361		
Lact. H362		
Resp. Sens. 1, 1A or 1B H334		
Skin Sens. 1, 1A or 1B H317		
ED HH 1 EUH380		
ED HH 2 EUH381		
ED ENV 1 EUH430		
ED ENV 2 EUH431		
PBT EUH440		
vPvB EUH441		
PMT EUH450		
vPvM EUH451		

O5 Preservatives		
	Yes	No
Does the raw material contain preservatives?		
If yes, state the BCF (Bioconcentration Factor) and/or log Kow (octanol-water partition coefficient):		

O6 Organic colorants		
	Yes	No
Does the raw material contain organic colorants?		
If yes, state the BCF (Bioconcentration Factor) and/or log Kow (octanol-water partition coefficient):		

O7 Volatile organic compounds (VOC)		
	Yes	No
Does the raw material contain volatile organic compounds*? ** An organic compound with a vapor pressure of 0.01 kPa or more at 293.15 K (20°C) .*		

O8 Phosphorus		
	Yes	No
Does the raw material contain phosphorus?		

O9 Excluded substances		
Does the raw material contain any of the following substances?	Yes	No
Alkylphenols (AP) (e.g. butylated hydroxy anisole (BHA, CAS No. 25013-16-5), alkylphenol ethoxylates (APEO), and other alkylphenol derivates (APD)		
Aminopolyphosphonates		
Benzalkonium chloride (CAS No. 63449-41-2)		
Bisphenols and bisphenol derivatives belonging to the group of 34 substances that have been identified by ECHA for further EU regulatory risk management that are known or potential endocrine disruptors for the environment of for human health, or that can be identified as toxic for reproduction: 201-245-8 (BPA), 201-025-1 (BPB), 401-720-1 (4,4'-Isobutylethylidenediphenol), 216-036-7 (BPAF) and its 8 salts (278-305-5; 425-060-9; 443-330-4; 468-740-0; 469-080-6; 479-100-5; 943-265-6; 947-368-7), 201-250-5 (BPS), 201-240-0 (BPC), 204-279-1 (TBMD), 201-618-5 (6,6'-di-tert-butyl-4,4'-butylidenedi-m-cresol), 242-895-2, 248-607-1, 405-520-5 (D8), 217-121-1 (DAB), 227-033-5 (TMBPA), 210-658-2 (BPF), 411-570-9, 277-962-5 (contains BPS, 500-086-4 (contains BPA), 500-263-6 (contains BPA), 500-607-5 (contains BPA), 701-362-9, 904-653-0 (contains BPA), 908-912-9 (contains BPF), 926-571-4 (contains BPA), 931-252-8 (contains BPA), 941-992-3 (contains BPS), 943-503-9 (contains BPA).		
Boric acid, borates, and perborates		
Ethylenediamine tetraacetate (EDTA, CAS No. 6381-92-6) and its salts and diethylenetriamine pentaacetate (DTPA, CAS No. 67-43-6) and its salts		
Halogenated and/or aromatic solvents *Solvents are defined as in Commission Directive 1999/13/EC: organic substances with a vapour pressure of at least 0.01 kPa at 20 °C.*		
LAS (linear alkylbenzene sulphonates)		
MI (methylisothiazolinone, CAS no. 2682-20-4) and MI/CMIT 3:1 (5-Chloro-2-methyl-4-isothiazolin-3-one, CAS No. 26172-55-4)		
Microplastics *Exemption: Polycarboxylates.* *Microplastics are synthetic polymer microparticles as defined in REACH Regulation ((EC) No 1907/2006), Annex XVII, Entry no. 78: Synthetic polymer microparticles: polymers that are solid, and which fulfil both of the following conditions:* *a) are contained in particles and constitute at least 1% by weight of those particles; or build a continuous surface coating on particles.* *b) at least 1% by weight of the particles referred to in point (a) fulfil either of the following conditions:* *(i) all dimensions of the particles are equal to or less than 5 mm.* *(ii) the length of the particles is equal to or less than 15 mm and their length to diameter ratio is greater than 3.* *The following polymers are excluded from this designation:* *a) polymers that are the result of a polymerisation process that has taken place in nature, independently of the process through which they have been extracted, which are not chemically modified substances.*		

b) polymers that are biodegradable as proved in accordance with Appendix 15 [to REACH, Regulation (EC) No 1907/2006]. *c) polymers that have a solubility greater than 2 g/L as proved in accordance with Appendix 16 [to REACH, Regulation (EC) No 1907/2006].* *d) polymers that do not contain carbon atoms in their chemical structure.* *N.B. The following "Conditions of restriction" paragraphs apply: 1 (concentration limit in mixtures), 2 (definitions), 3 (particle size limits). The remaining points do not apply, e.g. 4 (Paragraph 1 shall not apply to the placing on the market of:), e.g. 4(a) "synthetic polymer microparticles, as substances on their own or in mixtures, for use at industrial sites", 5 (derogations), e.g. 5 (b) "synthetic polymer microparticles the physical properties of which are permanently modified during intended end use in such a way that the polymer no longer falls within the scope of this entry".*		
Nanomaterials/-particles *Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01):* *'Nanomaterial' means a natural, incidental or manufactured material consisting of solid particles that are present, either on their own or as identifiable constituent particles in aggregates or agglomerates, and where 50 % or more of these particles in the number-based size distribution fulfil at least one of the following conditions:* *(a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm;* *(b) the particle has an elongated shape, such as a rod, fibre or tube, where two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm;* *(c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.*		
NTA (nitrilotriacetic acid, CAS-no. 139-13-9) and its salts Exemption: Complexing agents of the MGDA and GLDA type may contain NTA impurities in the raw material in concentrations of less than 0.2% if the concentration of NTA in the final product is below 0.1%.		
Organic chlorine compounds, hypochlorous acid and hypochlorite		
PBT and vPvB substances in accordance with REACH Annex XIII		
Per- and polyfluorinated substances (PFAS)		
Phthalates (i.e., esters of phthalic acid CAS No. 88-99-3)		
Perfume		
Potential or identified endocrine disruptors, according to any of the following EU member state initiative "Endocrine Disruptor Lists": List I: https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu List II: https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption List III: https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities *Exemption: MEK (Methyl ethyl ketone, CAS No. 78-93-3).* *N.B. A substance which is transferred to one of the corresponding sublists called "Substances no longer on list", and no longer appears on any of List I-III, is no longer excluded. The exception is those substances on sublist II which were evaluated under a regulation or directive which doesn't have provisions for identifying EDs (e.g. the cosmetic products regulation). For those substances, ED properties may still have been confirmed or suspected. Nordic Ecolabelling will evaluate the circumstances case-by-case, based on the background information indicated on sublist II.*		
Quaternary ammonium compounds, which are not aerobically or anaerobically biodegradable** such as DTDMAC (CAS No. 61789-80-8), DSDMAC (CAS No. 107-64-2), DHTDMAC (CAS No. 61789-72-8) and DADMAC (CAS No. 7398-69-8).		
*** According to test method 301 (A-F) or 310 in OECD guidelines for testing of chemicals or other equivalent methods evaluated by an independent body and controlled by Nordic Ecolabelling.*		
Siloxanes D4, D5, D6 and HMDS		
Substances on the REACH Candidate list of SVHC substances https://www.echa.europa.eu/candidate-list-table		

O10 Long-term environmental effects		
	Yes	No
Does the raw material contain substances classified as H410, H411 or H412?		

If the answer to any of the above questions is yes, state the CAS No. (where possible), chemical name and level (in ppm, % by weight or mg/kg). Also, state whether the substance is contained in the form of an impurity or an ingoing substance.

_____

_____

In the event of any change to the composition of the product, a new declaration of fulfilment of the requirements is to be submitted to Nordic Ecolabelling.

Place and date	**Company name**
Responsible person	**Signature of responsible person**
Telephone	**Email**

Appendix 3 Analysis and test laboratories

Requirements concerning the analysis laboratory

The following requirements apply to tests regarding eco-toxicological effects.

The analysis laboratory must meet the general requirements in accordance with standard EN ISO 17025 or be an officially GLP-approved analysis laboratory.

The applicant's analysis or measurement laboratory may be approved to conduct analyses and measurements if:

- The authorities monitor the sampling and analysis process, or
- The manufacturer has a quality system incorporating sampling and analyses, and which is certified in accordance with ISO 9001, ISO 9002 or The International Featured Standards-standard (IFS) for Household and Personal Care, or
- The manufacturer can show that the manufacturer's own tests are in agreement with those of an impartial test institution, as certified through a parallel test, and that the manufacturer takes samples in accordance with a prescribed sampling plan.

The manufacturer's test laboratory can be approved to conduct testing to document efficacy if the following additional requirements are met:

- The manufacturer has a quality system incorporating sampling and analyses, and which is certified in accordance with ISO 9000 or The International Featured Standards-standard (IFS) for Household and Personal Care.
- Test method for effectiveness test is included in the quality system.
- The samples must be de-identified for the test laboratory.
- The ecolabelling organisation must have access to all data of the effectiveness test.

Ecotoxicology testmethods

International test methods (OECD Guidelines for Testing of Chemicals, ISBN 92-64-1222144) or other equivalent methods shall be used for documentation. If equivalent methods are used, these must be evaluated by an independent body to ensure that the results are equal. The relevant test methods to be used are given below.

Acute/chronic aquatic toxicity

Use test methods 201, 202 and 203 in the OECD guidelines for testing of chemicals, or equivalent method to test acute aquatic toxicity.

Use test methods 210, 211, 215 and 229 in the OECD guidelines for testing of chemicals, or equivalent method to test chronic aquatic toxicity.

Bioaccumulation

To gain an understanding of a substance's ability to accumulate in organisms bioconcentration factor (BCF) for fish or distribution factor octanol / water (POW or KOW) is

determined. These methods should be used: OECD 107, 117 or 305, and classification shall take place according to the following:

Classification	OECD 107 or 117	OECD 305
Not bioaccumulating	logKow < 4,0	BCF < 500
Bioaccumulating	logKow > 4,0	BCF ≥ 500

OECD test method 107 cannot be used for surfactant since they have both grease and water soluble properties. For these substances it must be displayed with a high degree of certainty that they and their degradation products do not pose any risk to aquatic organisms in the longer term.

Computer models (such as BioWIN) are accepted, but if the results of the model calculations are near the limits or if Ecolabelling organization has contradictory data, additional documentation is required.

If there is information on both BCF and logKow, the value for the maximum measured BCF used.

Aerobic degradation

Use test method 301 (A to F) or 310 in the OECD guidelines for testing of chemicals (or equivalent method to test aerobic degradation.

Other scientifically accepted test methods may also be used. The test results of such equivalent methods must be evaluated by an independent body.

Anaerobic degradation

Use ISO 11734, OECD 311, ECOTOC no. 28 (June 1988) or equivalent test method to determine anaerobic degradation. The minimum requirement to be considered as anaerobically degradable is > 60% mineralization after maximum 56 days (ECETOC nr 28, juni 1988), 60 days (ISO 11734) and 60 days (OECD 311).

The following exceptions from anaerobic degradation for non-surfactants that are not on the DID-list can be made for substances that are aerobically degradable and not toxic to the aquatic environment (LC50/EC50/IC50>10 mg/l) and if one of the following is fulfilled:

- Ready biodegradability and low adsorption (A < 25%), or
- Ready biodegradability and high desorption (D > 75%), or
- Ready biodegradability and not bioaccumulating.

Adsorption/desorption can be tested according to OECD guidelines 106 or ISO CD 18749 ”Water quality - Adsorption of substances on activated sludge - Batch test using specific analytical methods”.

Inherent biodegradability

Test method 302 (A to C) in the OECD Guidelines for the Testing of Chemicals (ISBN 92641222144) should be used to test inherent biodegradability. For a constituent substance to be considered inherently biodegradable a mineralisation of >70% after 28 days is required (>70% BOD/DOC/COD reduction).

Other scientifically accepted test methods may also be used. The test results of such equivalent methods must be evaluated by an independent body.

DID-list

The DID-list, Detergent Ingredient Database has been developed to facilitate the ecolabel application process and is a tool to rank chemicals and thus make it easier for licence holders and producers to choose less environmentally harmful chemicals in their products. The list contains information on toxicity and degradability of several substances that are used in chemical products.

The substances on the DID-list cannot be seen as an overview of substances that are contained in ecolabelled products, and the DID-list cannot be used to document the toxicity of the individual substances in connection with the classification rules. Here, information from safety data sheets, literature or the raw materials producer must be used.

The DID-list can be obtained from the ecolabelling organisation or the website of the respective country. If a substance is not included on the DID-list, or biodegradability data is missing, the methods described in part B of the DID-list must be used. For these criteria, the DID-list dated 2023 or later versions apply.

Appendix 4 User test form

This appendix must be filled in by the user.

Information about the product

Product name:	
Manufacturer:	
Product type and area of use:	
Product category (tick the box):	
Water-based degreasers	
CIP, component cleaning agents	
Solvent-based products (ready-to-use)	
Offshore	
Graffiti removers	

Information about the test

The product must be tested within its area of application over a period that reflects the product's usage frequency (i.e., the product must have been used repeatedly).

The product must be tested at the dosage recommended on the product label or accompanying product sheet.

Dosage (g/litre in-use-solution)	
Is the product tested at the dosage recommended on the product label or accompanying product sheet?	Yes ☐ No ☐
Test period	Start date: End date:
How many times has the product been tested in the stated test period?	

Performance of the product

The performance of the product must be visually assessed upon completion of the defined test period. Its performance is considered to be:

Not effective / not satisfactory	☐
Sufficiently effective / sufficiently satisfactory	☐
Very effective / very satisfactory	☐

Other comments to the assessment of the product:

Information about the site of testing performance

Place and date	**Company name**
Responsible person	**Signature of responsible person**
Telephone	**Email**

Appendix 5 Laboratory test

This appendix outlines the framework for a laboratory test designed to evaluate the efficacy of industrial cleaning and degreasing agents. Alternative tests may be used, provided they are well-documented, thoroughly described, and approved by Nordic Ecolabelling.

Laboratory test

The test product, reference product, and water must be tested using the same method, temperature, and soil type relevant to the product's area of application.

The test must be performed with at least five replicates for the test product, the reference product, and water.

The results should demonstrate that the test product's efficacy is equal to or better than the reference product it is compared with, as well as better than water.

Reference product

The reference product should be an established product already on the market, designed for the same applications as the product being tested.

Dosage

The test must be conducted using the lowest recommended dosage for normal dirt, applicable to both the test product and the reference product.

Dirt

The dirt used must be relevant to the product's intended area of application.

Surfaces

The surfaces used for testing must be relevant to the intended area of application for which the product is marketed.

Performing the test

The test must be performed with at least five replicates for the test product, the reference product, and water.

Relevant contamination is applied to the test surface prior to applying the test product, reference product, and water.

Duration of the test

The duration of the test should be selected from one of the following options:

1. The time specified by the manufacturer in relation to the dosage. The product's efficacy is assessed after the manufacturer-recommended time has elapsed.

or

2. The efficacy of the product is assessed at regular intervals (e.g., after 1, 3, 5, 7 minutes, etc.). It should be recorded whether the test product performs as well as or better than the reference product throughout the test. When either the test product or the reference product demonstrates the desired effect, the assessment and corresponding time (in minutes) should be noted.

Assessment of product

After completing the test, the efficacy of the test product should be compared to that of the reference product and water. The assessment can be based on visual or instrumental measurements (e.g., reflection or gravimetric).

If the test product is found to be less effective than the reference product after the designated assessment period (e.g., after a specified number of minutes), it should be considered "less effective than the reference product" and thus not satisfactory.

If an alternative evaluation method is more suitable for the product than continuous assessment or evaluation after a specific duration, it may be used. The rationale for selecting this method should be clearly explained, and the method must be described in detail.

Information about the product

Product name:	
Manufacturer:	
Product type and area of use:	
Product category (tick the box):	
Water-based degreasers	
CIP, component cleaning agents	
Solvent-based products (ready-to-use)	
Offshore	
Graffiti removers	

Test conditions

Description of the test conditions applied during the evaluation of the product's efficacy.

Test method:	☐ As described in this appendix. ☐ Other method. Specify:
Performing the test:	Describe how the test is performed:
Reference product	
Name:	
Area of application:	
Lowest recommended dosage:	
Time:	☐ Recommended by producer: _____ minutes ☐ Ongoing
Test product:	
Area of application:	
Lowest recommended dosage:	
Time:	☐ Recommended by producer: _____ minutes ☐ Ongoing
Dirt (description):	
Test surface:	

Test results

Description of the method used to evaluate the product's efficacy.

Assessment method:	☐ As described in this appendix. ☐ Other method. Specify:
Time:	Product was assessed after: ☐ _____ minutes (time recommended by manufacturer) ☐ _____ minutes (number of minutes when test or reference product exhibit the desired effect).

Is the test product considered more effective than water in all evaluations?	Yes	No

Assessment – visual:					
Conducted tests (parallells):	1	2	3	4	5
Not effective / not satisfactory (not as good as the reference product)					
Sufficiently effective / sufficiently satisfactory (as good as the reference product)					
Very effective / very satisfactory (better than the reference product)					
Other comments to the assessment of the products:					

Assessment according to another method (specified above):
Assessment of the test product:
☐ Not effective / not satisfactory (not as good as the reference product)
☐ Sufficiently effective / sufficiently satisfactory (as good as the reference product)
☐ Very effective / very satisfactory (better than the reference product)
☐ Other assessment – specify:

Details of the test laboratory

Place and date	**Company name**
Responsible person	**Signature of responsible person**
Telephone	**Email**

Appendix 6 Packaging

To be used in conjunction with an application for a licence for the Nordic Ecolabelling of industrial cleaning and degreasing agents.

This declaration is based on the knowledge we have at the time of the application, based on tests and/or declarations from raw material manufacturers, with reservations for new advances and new knowledge. Should such new knowledge arise, the undersigned is obliged to submit an updated declaration to Nordic Ecolabelling.

Producer/distributor:
Part of the packaging (container, closure, label):
Packaging material (type of plastic, cardboard etc.) List all materials included in the packaging component and the percentage of each material:

O15 Packaging: Container		
	Yes	No
Does the container consist of PE (polyethene)?		
If yes, how many % ? _____%		
Does the remaining % consist of biodegradable material or other material than PE or PP?		
Has carbon black been added to the component?		
Does the container consist of PP (polyethyleneterephtalate)?		
If yes, how many % ? _____%		
Does the remaining % consist of biodegradable material or other material than PE or PP?		
Has carbon black been added to the component?		
Does the container consist of PET (polypropene)?		
If yes, how many % ? _____%		
Has carbon black been added to the component?		
Are the colour of the component transparent?		

O15 Packaging: Closure		
	Yes	No
Does the closure consist of PE (polyethene)?		
If yes, how many % ? _____%		
Does the remaining % consist of biodegradable material or other material than PE or PP?		
Has carbon black been added to the component?		
Does the closure consist of PP (polyethyleneterephtalate)?		
If yes, how many % ? _____%		
Does the remaining % consist of biodegradable material or other material than PE or PP?		
Has carbon black been added to the component?		
Does the closure consist of PET (polypropene)?		
If yes, how many % ? _____%		
Has carbon black been added to the component?		
Are the colour of the component transparent?		

O15 Packaging: Label
Please specify which material the label consist of (PE (polyethene), PP (polypropene) or other material): _____

Place and date	**Company name**
Responsible person	**Signature of responsible person**
Telephone	**Email**