Nordic Ecolabelling for

Vehicle Care Products

Version 7.0 • date – date

CONSULTATION

Nordic Ecolabelling

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013 Vehicle care products, version 7.0, 15 June 2026

Contact information

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:

Denmark

Ecolabelling Denmark

www.svanemaerket.dk

Iceland

Ecolabelling Iceland

www.svanurinn.is

Finland

Ecolabelling Finland

www.joutsenmerkki.fi

Norway

Ecolabelling Norway

www.svanemerket.no

Sweden

Ecolabelling Sweden

www.svanen.se

1 Summary

Vehicle care products designed for cleaning or polishing vehicles, including cars, buses, trucks, boats, ships, airplanes, motorcycles, bicycles, scooters, and equivalent, and trains and other rail transport, are eligible for the Nordic Swan Ecolabel. The criteria document applies to vehicle care products for use by consumers and professionals. Products for manual washing and automatic dosing systems are included.

Nordic Ecolabelling recognizes a good potential to reduce important environmental impacts of vehicle care products by setting requirements for:

- Raw material sourcing, section 5.3 and section 5.6 - to minimize biodiversity impacts of plant materials used for production of chemical raw materials (especially palm oil and ethanol)
- Ingoing substances, section 5.4 - addressing exposure of chemicals harmful to health or the environment, for example,
- Ecotoxicity and biodegradability, section 5.5 - addressing impacts to aquatic organisms and ecosystems
- Packaging, section 5.7 - to address plastic and other packaging raw material resource use and recyclability
- User information, section 5.7 - to remind consumers to only wash in a location where drainage connects to a water treatment plant
- Performance, section 5.8 - to avoid ineffective products that lead to overdosing, a problem that wastes both raw materials and packaging while increasing air and water pollution
- License maintenance, section 5.9 - to ensure quality and traceability needed to ensure fulfilment of Nordic Ecolabelling requirements

According to dialogues with companies in the industry, Nordic Swan Ecolabel vehicle care products reduce environmental impact compared to typical vehicle care products on the market regarding ecotoxicity, phosphorous, volatile organic carbons, cyclic siloxanes, sensitizing substances/perfumes, colorants, and packaging.

1.1 Changes compared to previous generation

In generation 7, some requirements are consolidated, added, and reorganized to better align with other Nordic Ecolabelling chemical technical product group criteria. As a result, the numbering of many of the requirements has changed.

An overview of all requirements and changes from previous generation are found in Table 1.

Table 1 Overview of changes to criteria for Vehicle Care Products generation 7 compared with previous generation 6.

Req. gen. 7	Req. gen. 6	Same req.	Change	New req.	Comments
O1 Description of the product and formulation	O1, O2		X		Editorial changes and merging of 2 requirements
O2 Classification of the product	O4		X		Strengthened: New EUH hazard classes added.
O3 Human rights and environmental due diligence				X	New requirement regarding due diligence when sourcing minerals or renewable raw materials
	O3				Sustainable raw materials requirement removed: no longer required to demonstrate increased use of renewable raw materials
O4 Certified raw materials from oil palms				X	New requirement requiring RSPO certification for raw materials from oil palms
O5 Classification of ingoing substances	O5		X		Strengthened: New EUH hazard classes, STOT RE1, and ozone hazard classes added. Exemption for NTA impurities based on active content of MGDA/GLDA raw material.
O6 Excluded substances	O7, O8		X		Strengthened: Definitions for endocrine disruptors and nanoparticles updated. Excluded substance list expanded. BHT, bronopol, all isothiazolinones are excluded. Additional limitations for siloxanes and D4/D5/D6 impurities. Limit for aromatic hydrocarbon impurities in solvents lowered to 1000 ppm.
O7 Microplastics	O7		X	X	Strengthened: Updated with REACH definition and made into its own requirement (previously in O7 Prohibited substances)
O8 Surfactants - aerobically and anaerobically biodegradable	O6		X	X	Strengthened: Refers to DID list 2023 or later. Split previous "O6 Organic substances, degradability" requirement into 2 requirements (O8 & O14). O8 addresses only surfactants.
O9 Fragrances	O9		X		Strengthened: Includes expanded list of fragrance allergens from Cosmetics Regulation. Fragrances only allowed in products for automatic dosing systems, but not pre-wash products. Fragrances no longer allowed in windshield washer fluid.
O10 Phosphorous	O10		X		Strengthened: Total phosphorous content limit reduced from 2.5 g to 1.0 g per litre of in-use solution
O11 Volatile organic compounds (VOC)	O11		X		Strengthened: Removed POCP calculation factor and adjusted limit values.
O12 Long-term environmental effects	O12		X		Strengthened: Removed H411 & H412 exemption for surfactants and included M-factor. Raised long-term effects calculation limits. Removed limit for H400 classified substances.
O13 Critical dilution volume (CDV)	O13		X		Strengthened: Tightened CDV limit values by about 25%. Refers to DID list 2023 or later.
O14 Aerobic and anaerobic biodegradability (aNBO & anNBO)	O6		X	X	Strengthened: Refers to DID list 2023 or later. Split previous "O6 Organic substances, degradability" requirement into 2 requirements (O8 & O14). O14 addresses all ingoing organic substances except surfactants. Implemented limit value for content of non-biodegradable substances and removed most exemptions.

Req. gen. 7	Req. gen. 6	Same req.	Change	New req.	Comments
O15 Ethanol in windshield washer fluids	O14	X			Seeking input into expanding this requirement to accept recycled ethanol in addition to bioethanol.
O16 Performance and frost protection for windshield washer fluids	O15	X			
O17 Recycling design of plastic packaging and closures	O16A	X			
O18 Labels for rigid plastic packaging: Design for recycling	O16B		X		Strengthened: Updated label requirements to improve recyclability of the packaging
O19 Recycling design of flexible bags/pouches	O17	X			
O20 Recycling design of paper-based packaging				X	New requirement for design for recycling of paper-based packaging.
O21 Packaging for spray products	O18	X			
O22 User information	O19		X		Strengthened: products intended for boats and ships shall include user information text to encourage washing where the wash water drains to a water treatment plant
O23 Performance	O20		X		Strengthened: Function test method and documentation requirements further specified in Appendix 8. Editorial changes only to User Test in Appendix 9.
O24 Customer complaints	O23		X		Strengthened: routine and archive of customer complaints now required
O25 Traceability	O26	X			
	O21				Requirement moved to application form: Responsible person and organisation
	O22				Requirement moved to application form: Documentation
	O24				Requirement moved to application form: Planned changes
	O25				Requirement moved to application form: Unplanned nonconformities
	O27				Requirement moved to application form: Legislation and regulations

2 Environmental communication guideline for Nordic Swan Ecolabel Vehicle care products

Nordic Swan Ecolabel vehicle care products are among the best in terms of environmental profile. The whole life cycle of the products is considered, and strict requirements are set for the products' ingredients, performance, and packaging.

Nordic Swan Ecolabel vehicle care products:

- Meet strict environmental requirements for chemicals to avoid long-term, negative effects in nature (biodegradability), to avoid harmful chemicals

accumulating in animals and humans (bioaccumulation), and to avoid substances that are toxic to, for example, fish and crustaceans (ecotoxicity).
- Fulfil strict requirements concerning volatile organic compounds and thus limit health impacts and the formation of near ground level ozone.
- Meet strict requirements concerning chemicals that are harmful to health.. Also identified or potential endocrine disruptors on up-to-date lists from EU and national authorities or by classification are banned.
- Promote responsible sourcing of renewable raw materials, and any raw materials from palm oil or palm kernel oil in the product is RSPO certified.
- Offer effective cleaning performance.
- Use packaging design and material composition choices that promote material recycling and reduce resource use, contributing to a circular economy.
- Provide information to users about how to protect the environment when using the product. This includes reminding consumers to only wash in a location where drainage connects to a water treatment plant.

The environmental impacts throughout the lifecycle of this product group and Nordic Swan Ecolabel's identification of where ecolabelling can have the greatest effect is described in Section 6 Environmental impact of vehicle care products.

3 What can carry the Nordic Swan Ecolabel?

Product group definition

Products that have a cleaning function (e.g., degreasers, shampoos, and windshield washer fluids) and / or polishing function (e.g. waxes and polishes) for the care of vehicles can be Nordic Swan Ecolabelled. The products can be used for cleaning or polishing a wide range of vehicles including cars, buses, trucks, boats, ships, airplanes, motorcycles, bicycles, scooters, trains, and other rail transport.

Both consumer and professional products can be Nordic Swan Ecolabelled. The products may be concentrates or ready-to-use (RTU). Products for manual washing and automatic dosing systems can be Nordic Swan Ecolabelled. Definitions of these terms are found in section 5.1 Definitions.

Subcategories

The product group is divided into the following subcategories, which are used in requirements where there are several different requirement levels:

- Alkaline degreaser
- Cold degreaser
- Microemulsion (degreaser)
- Shampoo
- Drying aid
- Wax / polish
- Wheel / rim cleaner
- Insect cleaner

- Windshield washer fluid
- Other products (e.g., glass cleaner, interior cleaner, acid degreaser)

These subcategories are described in section 5.1 Definitions. Products that serve multiple functions are called 2-in-1 products and are subject to the requirements in each relevant subcategory.

Other criteria

Products for cleaning vehicle wash halls and installations that are not meant for cleaning vehicles, for example acidic cleaners for removing limescale and rust, should refer to Nordic Ecolabelling's criteria 065 Industrial cleaning and degreasing agents.

What cannot be licensed

The criteria are not applicable to products whose main purpose is something other than the care of vehicles.

Specialist products such as anti-corrosion agents, hull cleaners, antifouling paint, wood oil, and appliances for mechanical cleaning (such as washing sponges, brushes, cloths or equivalent) cannot be Nordic Swan Ecolabelled in accordance with these criteria.

Products within the scope of the Biocides Regulation 528/2012, including products claiming to be antibacterial, antimicrobial, antiseptic, or disinfecting, cannot also make green claims, according to the regulation, and therefore cannot be Nordic Swan Ecolabelled. Furthermore, marketing claims about ingredients that are antibacterial, antimicrobial, antiseptic, or disinfectant are not allowed by Nordic Ecolabelling.

In the event of dispute, Nordic Ecolabelling will determine whether a product may be ecolabelled under these criteria.

3.1 Justification of the product group definition

For a description of the product group definition, see section 3 “What can carry the Nordic Swan Ecolabel” in the criteria document.

Products with multiple uses

Products designed for more than one function, such as a 2-in-1 alkaline degreaser and shampoo, must fulfil the strictest requirement for the applicable subcategories. The product must also pass the performance test requirement for each function for which it is marketed or claims to be effective.

Other criteria

Nordic Ecolabelling's criteria 065 Industrial cleaning and degreasing agents is developed for products for professional use in industrial settings, for example, cleaning vehicle wash halls and installations. In contrast, the requirements in 013 Vehicle care products are developed for the care and cleaning of vehicle surfaces.

What cannot be licensed

The criteria are not applicable to products whose main purpose is something other than the care of vehicles.

Specialist products such as anti-corrosion agents, hull cleaners, antifouling paint, wood oil, and appliances for mechanical cleaning (such as washing sponges, brushes, cloths or equivalent) cannot be Nordic Swan Ecolabelled in accordance with these criteria.

Products within the scope of the Biocides Regulation 528/2012, including products claiming to be antibacterial, antimicrobial, antiseptic, or disinfecting, cannot also make green claims, according to the regulation, and therefore cannot be Nordic Swan Ecolabelled. Some ingredients, for example, preservatives, have antibacterial, antimicrobial, antiseptic, or disinfectant properties. While these ingredients can be necessary in product formulations, Nordic Ecolabelling does not allow products that are marketed with claims about antibacterial, antimicrobial, antiseptic, or disinfectant ingredients. Overuse of products or ingredients with antibacterial, antimicrobial, antiseptic, or disinfectant properties can contribute to increased bacterial resistance and may also harm beneficial microbial populations.

In the event of dispute, Nordic Ecolabelling will determine whether a product may be ecolabelled under these criteria.

4 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 are also icons in the text to make this clearer. These icons are:

- Upload
- Requirement checked on site

Before a license is issued, the Nordic Ecolabelling organization will normally pay an inspection visit to the applicant and/or the manufacturer. If necessary, multiple inspection visits can be made.

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

5 Requirements and justification of these

The requirements (O1-O25) are for all subcategories unless otherwise stated. Additional requirements for windshield washer fluid (O15, O16) are found in section 5.6.

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. The Definitions table below explains these and other important terms found in the criteria.

5.1 Definitions

Subcategory	Definition
Alkaline degreaser	Water-based degreaser with 5-10% surfactant and 5-20% alkali, e.g. Meta silicate, potassium, or sodium hydroxide. Often pH > 11.
Cold degreaser	Degreasers containing, e.g., hydrocarbons, esters, and/or residual fatty acids and 2-4% surfactants.
Microemulsion (degreaser)	Degreaser containing, e.g., 5-30% hydrocarbons emulsified in water using 5-20% surfactants.
Shampoo	Mainly composed of water and surfactants and usually diluted before use.
Drying aid	Used often in combination with automatic car wash cleaning products to facilitate drying. These materials often contain cationic surfactants with a high attraction to the painted surfaces and thus give a water-repellent film. Silicone and polyethylene wax is also used.
Wax / polish	Used to give the paint/surface a protective layer. They are found in pure form (hard wax), semi-liquid form (liquid hard wax), and in emulsified form (polish).
Wheel / rim cleaner	Used to clean wheels / rims.
Insect cleaner	Used to clean spots from insects.
Windshield washer fluid	Cleaning fluid that is stored in a tank in the vehicle, sprayed onto the windshield (or headlights) with jets, and cleans the glass with help of the wipers on the vehicle.
Other products	Vehicle care products that do not fit the other categories. This includes, for example, glass cleaners, vehicle interior cleaners, acid degreasers, active foams.
Terms	**Definition**
Consumer products	Vehicle care products for use by consumers that are primarily sold through retailers. Products are considered for consumer use if more than 20% of sales are to consumers.
Professional products	Vehicle care products that are sold business-to-business or business-to-government for use in automatic wash installations, wash halls, and professional contexts such as transportation depots and docks. While consumers do not buy or handle these products directly, they may use these products in diluted form, for example, via a high-pressure wand at a car wash hall. Products for manual use by professionals are also considered professional products. Products are considered for professional use if 80% or more of sales are to professionals or sold business-to-business.
Concentrated products	Products that are intended to be diluted with water before use.
RTU (Ready- to-use)	Products that are pre-diluted and ready for use directly on the surface to be cleaned or polished.
Two-in-one (2-in-1) products	Products that are marketed with more than one function (e.g., wax+shampoo,,alkaline degreaser+shampoo). When requirements differ by subcategory, the 2-in-1 product must meet the stricter requirement of the applicable subcategories. The product must also pass the performance test requirement for each function for which it is marketed or claims to be effective.
Automatic dosing system	Machines that automatically dose and dilute the vehicle care product. These systems are found in automatic wash installations and in do-it-yourself wash halls where products are applied with, e.g., spray wands and brushes.
Pre-wash products	Include alkaline degreasers, cold degreasers, microemulsions, insect removers and wheel rim cleaners.
Foam/spray products	Products with a spray nozzle on the packaging. See requirement O20. This does not refer to automatically dosed products that are diluted in a machine before spraying onto the vehicle (e.g., with a high-pressure wand).
Calculation sheet	Applicants must use an Excel sheet to calculate limit values e.g., CDV, aNBO, anNBO, WUR. Download the calculation sheet from the Nordic Swan Ecolabel website.[1]
Dosage	Mass of product used per volume in-use solution. This value (grams / liter in-use solution) is used in the calculation sheet. For concentrated products, this is the grams per liter after

[1] https://www.nordic-swan-ecolabel.org/criteria/care-products-for-vehicles-013/

	dilution. For pre-diluted/RTU products, the calculation sheet uses the mass of 1 liter product (i.e., normally ca 1000 g depending on product density).
In-use solution	The solution that is applied to the vehicle surface. This includes the volume of water used to dilute concentrated products. For pre-diluted/RTU products, the product is already an in-use solution.
Ingoing substances**	All substances* in the vehicle care product including additives (e.g. preservatives and stabilisers) in the raw materials. Substances known to be released from ingoing substances (e.g. biocidal active substances generated by preservatives, such as formaldehyde, and arylamine and in situ-generated preservatives) are also regarded as ingoing substances. Foil that is not removed before use of the product, and that is water soluble is also considered ingoing substances. See more concerning definition of ingoing substances and impurities below the Definitions Table. **N.B. the difference from the definition of substances in the REACH Regulation (EC) No 1907/2006. Whereas a REACH substance encompasses a chemical element or compound as well as its stabilising additives and process impurities, a substance here refers to each of the constituents separately. The constituents of a UVCB substance (Unknown or Variable composition, Complex reaction products or of Biological materials) are also regarded separately, and all known constituents shall be regarded.*
Impurities**	Trace levels of pollutants, contaminants and residues from production, including production of raw materials that remain in the vehicle care product in concentrations ≤ 100 ppm (≤0.0100 w%, 100,0 mg/kg). For formaldehyde other than as a biocidal active substance and for arylamine, the corresponding concentration is ≤ 50 ppm (≤ 0.0050 w%). *Examples of impurities: Background environmental pollutants from feedstock, as well as contaminants and residues from production such as reactants (incl. monomers), reagents, catalysts, by-products, scavengers, detergents for production equipment, and carry-over from other or previous production lines.* Impurities in the raw materials in concentrations ≥ 10 000 ppm (≥1.0000 w%) are always regarded as ingoing substances, regardless of the concentration in the final Nordic Swan Ecolabelled product.
DID-list	The DID-list (Detergent Ingredient Database) part A contains information on toxicity and degradability of several substances that are used in detergents and cleaning products. If an ingoing substance is included on the DID-list, the data from the DID-list must be used for calculations of the amount of aerobic/anaerobic non-biodegradable organics, the critical dilution value and biodegradability and toxicity. If a substance is not included on the DID-list, or data is missing, the methods described in part B of the DID-list must be used. For this criteria generation, the DID-list dated 2023 or later versions apply. See further details in Appendix 3. The DID-list can be obtained from the Nordic Swan Ecolabelling websites.
Sales packaging	In accordance with Regulation (EU) 2025/40 on Packaging and Packaging Waste (PPWR), the term "sales packaging" means packaging conceived so as to constitute a sales unit consisting of products and packaging to the end user at the point of sale.
Primary packaging	In accordance with EU Directive 94/62/EC on packaging and packaging waste, the term "primary packaging" is defined as consumer packaging, i.e., packaging conceived to constitute a sales unit to the final user or consumer at the point of sale.
Container	Bottles, foam/spray bottles and similar.
Closure	Caps/lids, dosage equipment, pumps and foam/spray triggers mounted on the packaging.
Label	Traditional label and shrink film label/sleeve.
Recycled material	Recycled material is defined in the requirement according to ISO 14021, which applies the following two categories: “Pre-consumer/commercial” is defined as material that is recovered from the waste stream during a manufacturing process. Materials that are reworked or reground, or waste that has been produced in a process, and can be recycled within the same manufacturing process that generated it, are not considered to be pre-consumer recovered material. “Post-consumer/commercial” is defined as material generated by households or commercial, industrial, or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose. This includes materials from the distribution chain.

****Additional information concerning definitions of ingoing substances and impurities**

Limit values: The limit for excluded ingoing substances is 0 ppm (unless otherwise stated), while there's a specific defined limit for impurities. The impurity limit applies separately to each individual excluded substance, from each individual raw material. Concentrations of different impurities with the same excluded classification or substance group characteristics shall not be summed up to meet the impurity limit in the labelled product. Also, concentrations of an individual impurity, originating from different raw materials, shall not be summed.

UVCB substances: UVCB substances (Unknown or Variable composition, Complex reaction products or of Biological materials) have a composition of constituents that is not completely known or is variable from time to time. For UVCB substances, all constituents that are known must be declared in the Nordic Swan Ecolabel raw material appendix based on the best available knowledge. All constituents are considered individually and are subject to the chemical requirements, including for instance those on excluded substances and excluded classifications.

However, in the requirements O12 Long-term environmental effects, O13 Critical dilution volume (CDV) and O14 Aerobic and anaerobic biodegradability (aNBO and anNBO), the UVCB substance can be considered as one ingoing substance and placed in a single row in the calculation sheet. If the UVCB substance can be assigned a DID-number, the data on the DID-list must be used. N.B. that for UVCBs that are perfumes, a specific approach applies regarding the requirement on environmentally hazardous substances, as described below.

Perfumes: Perfumes constitute a group of complex raw materials that are often, but not always, UVCBs. All perfume constituents must be declared the same way as described for UVCBs above. A perfume can also be placed in one row in the calculation sheet. However, for requirement O12 Long-term environment effects, a perfume must not be regarded as one ingoing substance, irrespective of whether the perfume is an UVCB or not. Instead, each constituent of the perfume mixture must be regarded in a calculation of the weighted sum of substances classified H410, H411 and H412. For perfumes, specific toxicity and biodegradability data can be used. If data is not available, the data on DID 2549 must be used.

5.2 General requirements

The general requirements include two requirements:

- Description of the product and formulation
- Classification of the vehicle care product

O1 Description of the product and formulation

The applicant must provide the following information about the product:

- All trade names if the product is sold in several countries.
- The product's volume(s).
- Description of the product's area of use.

- Whether the product is sold directly to consumers (i.e., via retail sales), or if it is sold to professional users / business-to-business. If the product is sold to both consumers and professionals, provide approximate percentage sold to consumers.
- Whether the product is intended for manual washing, automated wash installations, or other types of automatic dosing machines (for example, for cleaning wands and brushes in do-it-yourself wash halls)
- The function of the product, i.e., under which subcategory the product falls (e.g., cold degreaser, shampoo, wax, etc.).
- The product's dosing stated as grams / litre of in-use solution and a description of how this value calculated, based on the recommended dosing on the label / product sheet.

The applicant must provide a complete formulation for the product. The formulation must contain the following information for each ingoing raw material:

- Trade name
- Chemical name of all ingoing substances and impurities
- Amount (both with and without solvents, e.g., water)
- CAS no. / EC no.
- Function
- DID number* for substances that may be placed on the DID list

** The DID number is an ingredient's number on the DID list, version 2023 or later, which is used when calculating chemical requirements. The DID list can be obtained from Nordic Ecolabelling's websites, see contact information at the beginning of the document.*

- ☐ Appendix 1 for the product or equivalent certification duly completed and signed.
- ☐ Label and product data sheet (if available) that includes dosing and user instructions.
- ☐ The complete formulation of the product as set out in the requirement. Nordic Ecolabelling's calculation sheet may be used. It is available from our websites.
- ☐ Safety data sheet for each raw material in line with prevailing European legislation (Annex II to REACH (Regulation 1907/2006/EEC)).

Background to O1 Description of the product and formulation

A description of the product as set out in requirement O1 is needed for Nordic Ecolabelling to be able to assess whether it fits into the product group definition and which requirements apply.

Nordic Ecolabelling needs a complete formulation for the product to check that it meets the requirements.

O2 Classification of the vehicle care product

The vehicle care product must not be classified with any of the hazards from CLP Regulation (EC) No 1272/2008 listed in Table 2.

Table 2 Excluded hazard classifications for the product

Hazard class	Hazard Category	Hazard Statement Code
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
Aspiration hazard **	Asp. Tox. 1	H304 **
Skin corrosion or irritation ***	Skin Corr. 1, 1A, 1B or 1C	H314 ***
Respiratory or skin sensitising	Resp. Sens. 1, 1A or 1B Skin sens. 1, 1A or 1B	H334 H317 EUH208 "Contains (name of sensitizing substance). May cause an allergic reaction."
Germ cell mutagenicity ****	Muta. 1A or 1B Muta. 2	H340 H341
Carcinogenicity ****	Carc. 1A or 1B Carc. 2	H350 H351
Reproductive toxicity ****	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362
Specific target organ toxicity: single exposure and repeated exposure	STOT SE 1 STOT SE 2 STOT SE 3 STOT RE 1 STOT RE 2	H370 H371 H335, H336 ***** H372 H373
Toxic to aquatic organisms	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
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

** Exemption for Acute toxicity (H302): Professional products where the user does not come in contact with the product.*

*** Exemption for Aspiration hazard (H304): Professional products where the user does not come in contact with the product.*

**** Exemption for Skin corrosion or irritation (H314): Professional products if the classification concerns pH, and where the user does not come in contact with the product.*

***** Includes all classification variants (e.g., H350 also covers H350i).*

****** Specific target organ toxicity STOT SE 3 (H335 & H336) applies only to spray products*

- Safety data sheet for the product in line with prevailing European legislation (Annex II to REACH (Regulation 1907/2006/EEC)).
- Appendix 1 for the product or equivalent certification duly completed and signed.
- If using exemption for H302 or H304: Confirmation that the product is intended for professional use. Documentation of how the user is prevented from coming in contact with the product.
- If using exemption for H314: Confirmation that the product is intended for professional use. Documentation of how the user is prevented from coming in contact with the product. Documentation confirming that the classification relates to pH.

Background to O2 Classification of the vehicle care product

Nordic Ecolabelling aims to minimize the health and environmental impact of Nordic Swan Ecolabel products. Therefore, vehicle care products with the following classifications cannot be certified: hazardous to the aquatic environment, hazardous to the ozone layer, acutely toxic, causes damage to organs, causes skin corrosion, aspiration toxic, sensitising, carcinogenic, mutagenic, toxic for reproduction, endocrine disruptive, and persistent, bioaccumulative/mobile and toxic.

The updated CLP classifications now include endocrine disruptors, PBT/vPvB and PMT/vPvM substances, covering environmental toxicity, persistence, mobility and bioaccumulation. Including PMT and vPvM substances is essential due to their persistence, mobility and potential impact on water quality. The new rules entered into force 20 April 2023. From this date, the Member States may propose harmonized classification and labelling (CLH) with the new hazard classes and manufacturers, importers, downstream users and distributors may also self-classify their substances and mixtures accordingly.

There are transitional periods following the Delegated Regulation's into force. During these periods classification under the new hazard classes is voluntary. Manufacturers, importers, downstream users and distributors are not yet required to classify their substances or mixtures according to the new hazard classes. During these periods, the new hazard classes can be applied on a voluntary basis. However, any product classified according to these new hazard classes will be excluded under these criteria.

This is a standard requirement, based on the precautionary principle and is adapted to the specific product group.

Professional products are exempt from some of the health-related classification requirements under the condition that the user does not come into contact with the concentrated products. This can be due to the packaging design or the fact that the products

are used in enclosed / automated wash installations. This exemption enables professionals to use very concentrated products in, for example, automatic dosing systems where products are diluted prior to use.

Specific target organ toxicity STOT SE 3 (H335 & H336) applies only to spray products where there is more risk of inhaling small droplets when using the product.

To clearly indicate that CRM substances are undesirable, these classifications are also prohibited at product level, in addition to raw material level.

5.3 Raw material sourcing

The requirements for raw material sourcing include two requirements:

- Human rights and environmental due diligence
- Certified raw materials from oil palms

O3 Human rights and environmental due diligence

The licensee must conduct ongoing risk-based due diligence to identify, prevent and mitigate social and environmental impacts and risks, including deforestation risks, in the sourcing of minerals and renewable raw materials* used in the vehicle care product.

The due diligence process must be in line with the UN Guiding Principles and the OECD Guidelines, which include the core ILO conventions on fundamental principles and rights at work.

Supplier expectations. The licensee must communicate to all direct suppliers what is expected of them regarding compliance with laws and regulations, respect for human rights and environmental protection. This can be done through, e.g., a Supplier Code of Conduct. Suppliers are in turn responsible for communicating the expectations onwards to sub-suppliers. The information must be public.

** Renewable raw materials composed of biomass and that can be continually replenished, for example, wood, crops, marine products, and organic waste.*

- Signed application form
- Submit supplier Code of Conduct or equivalent information or reference to info on webpage.
- Due diligence system/process will be checked on-site.
- Risk assessment or other information on identified risks will be checked on-site.
- Measures to prevent and mitigate identified risks will be checked on-site.
- How supplier Code of Conduct or equivalent is made public and communicated to the supply chain will be checked on-site.

Background to requirement O3 Human rights and environmental due diligence

This requirement applies to companies sourcing renewable raw materials or minerals for the vehicle care product. The sourcing of these raw materials is often associated with social and environmental risks, particularly at the raw material stage. This stage can be labour-intensive and often takes place in regions with elevated risks, for example child labour, forced labour

and environmental degradation. Therefore, renewable raw materials and minerals are prioritised in this requirement. Companies differ in how systematically and effectively they identify and address risks in their sourcing.

The requirement helps prepare companies for emerging due diligence expectations, as they may need to show how they identify and manage risks, both as suppliers to larger companies and in response to regulatory developments. It also supports them in addressing the EU Deforestation Regulation and the Forced Labour Regulation in line with international expectations.

This requirement reflects a risk-based approach to due diligence, focusing on identifying and addressing the most significant risks in sourcing. Companies are expected to do this in a way that is proportionate to their size and the nature of the identified risks. Due diligence involves identifying and prioritising the most relevant issues (e.g. related to specific raw materials, suppliers, or sourcing countries), taking appropriate steps to address these risks (e.g. through dialogue with suppliers or adjustments in sourcing practices), and following up over time, for example when suppliers or sourcing conditions change. Companies are expected to be able to explain how risks have been assessed and what actions are taken in practice.

As part of this process, the licensee must define and communicate clear expectations to direct suppliers. This helps ensure that suppliers understand what is expected of them and provides a basis for follow-up and improvement. Making these expectations public contributes to transparency and strengthens accountability in the supply chain.

O4 Certified raw materials from oil palms

The requirement does not apply to substances derived from palm oil/palm kernel oil in raw materials where the substances amount to < 1% in the vehicle care product.

If raw materials from palm oil are used in the product, the palm oil/palm kernel oil must be RSPO certified. This also includes by-products, residues, and waste fractions from palm oil industries, such as palm fatty acid distillate and palm effluent sludge. Traceability must be ensured by Mass Balance, Segregated, or Identity Preserved.

Book and Claim are not accepted.

- Appendix 2 or equivalent declaration completed and signed by all relevant raw material manufacturers/suppliers.
- A valid RSPO Supply chain certificate from all relevant raw material manufacturers/suppliers or a valid RSPO Supply chain certificate from the manufacturer of the vehicle care product.
- By request, the manufacturer of the vehicle care product must present invoices/delivery notes/order confirmation that the palm oil purchased is RPSO certified and information about traceability system (Mass Balance, Segregated or Identity Preserved accepted).
- By request, the manufacturer of the vehicle care product must, if they are RSPO Chain of Custody certified, present a third party-controlled balance sheet showing RSPO certified raw materials being accounted/recorded to the vehicle care product(s).

Background to requirement O4 Certified raw materials from oil palms

Palm oil plantations are often established at the expense of tropical rainforest and other protected areas. This is one of the biggest threats to biodiversity in Southeast Asia, leading to the loss of valuable species, habitats, ecosystems, and landscapes. Hence, palm oil is part of EU´s Regulation on deforestation-free products.

Palm oil is widely used as an ingredient or feedstock for chemical substances and therefore difficult to exclude in NSE products. Therefore, if palm oil is used in the product the palm oil/palm kernel oil, including by-products or residues, must be RSPO certified.[2] Traceability must be ensured by Mass Balance, Segregated, or Identity Preserved. Book and claim are not accepted as there is no link between the claim for certified palm oil and the product itself.

The manufacturer or supplier of palm oil must present a valid RSPO Supply chain certificate (RSPO SCC certificate). The certificate/RSPO schemes ensures and controls the flow of certified claims throughout the supply chain. The manufacturer of the Nordic Swan Ecolabelled product must at request present invoices/delivery notes/order confirmation that the palm oil purchased is RSPO certified. The type of traceability (Mass Balance, Segregated, or Identity Preserved) must be apparent from the documentation.

In cases where the Manufacturer of the Nordic Swan Ecolabelled product is RSPO Chain of Custody certified, the applicant must at request present a third party-controlled balance sheet showing RSPO certified raw materials being accounted/recorded to the Nordic Swan Ecolabelled product(s). This to ensure that RPSO raw materials (credits) are used in the Nordic Swan Ecolabelled product(s).

5.4 Requirements concerning ingoing substances

The requirements for ingoing substances include seven requirements:

- Classification of ingoing substances
- Excluded substances
- Microplastics
- Surfactants
- Fragrances
- Phosphorous
- Volatile organic compounds

The requirements 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 in the Definitions table in section 5.1.

O5 Classification of ingoing substances

Ingoing substances must not be classified with any of the hazards from CLP Regulation (EC) No 1272/2008 listed in Table 3.

[2] https://rspo.org/as-an-organisation/our-standards/

Table 3 Excluded hazard classifications for the ingoing substances

Hazard class	Code for hazard class and category	Hazard statement code
Respiratory or skin sensitisation *	Skin sens. 1, 1A or 1B Resp. Sens. 1, 1A or 1B	H317 * H334 *
Germ cell mutagenicity **	Muta. 1A or 1B Muta. 2	H340 H341
Carcinogenicity **	Carc. 1A or 1B Carc. 2	H350 H351 ***
Reproductive toxicity **	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362
Specific target organ toxicity: Repeated exposure	STOT RE 1	H372
Hazardous to the ozone layer	Ozone	H420
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

** Exemptions from Respiratory or skin sensitisation (H334, H317):*

- Professional products if the packaging is designed so that the user is at no risk of coming into contact with the product
- Fragrances (see separate requirements in O9)
- Preservatives, but see also requirement O6 Excluded substances

*** Includes all classification variants (e.g. H350 also covers H350i).*

**** Exemption for Carcinogenicity (H351): Complexing agents of the MGDA and GLDA type may contain NTA impurities in the raw material in concentrations of less than 0.2% by weight of the MGDA/GLDA active content, if the concentration of NTA in the vehicle care product is below 0.1% by weight.*

***** See also O6 Excluded substances for additional requirements for potential or identified endocrine disruptors and PBT/vPvB substances.*

- Safety data sheet (SDS), prepared in accordance with Annex II to REACH Regulation (EC) No 1907/2006 for each raw material.
- Appendix 1 for the product and Appendix 2 or equivalent for all raw materials, completed and signed.

- For professional products that are exempted from H334 and / or H317: Documentation showing the packaging is designed so that the user is at no risk of coming into contact with the product.

Background to O5 Classification of ingoing substances

Nordic Ecolabelling strives to ensure that the health and environmental impact of the products are as low as possible. The requirements therefore make it clear that ingoing substances with the following classifications cannot be used in the Nordic Swan ecolabelled product: hazardous to the ozone layer, causes damage to organs, sensitising, carcinogenic, mutagenic, toxic for reproduction, endocrine disruptors, and persistent, bioaccumulative/mobile and toxic. See 5.1 Definitions table for definitions of ingoing substances, impurities, and other relevant information.

The new CLP classifications for endocrine disruptors, PBT/vPvB and PMT/vPvM (environmental toxicity, persistency, mobility and bioaccumulation) are included. The inclusion of PMT and vPvM substances is crucial due to their persistence, mobility and potential impact on water quality. The new rules are in force as of 20 April 2023. From this day on, the Member States can make proposals for harmonized classification and labelling (CLH) with the new hazard classes and manufacturers, importers, downstream users and distributors can self-classify their substances and mixtures accordingly.

There are transitional periods from the entry into force of the Delegated Regulation, during which manufacturers, importers, downstream users and distributors are not yet required to classify their substances or mixtures according to the new hazard classes. During these periods, the new hazard classes can be applied on a voluntary basis. However, if an ingoing substance is classified according to these new hazard classes and used in a product, it will be excluded under these criteria.

This is a standard requirement, that is set by the precautionary principle and adapted to the product group. The requirement is intended to exclude problematic substances that might be added to products in the future, even if they are not necessarily found in products on the market today.

Complexing agents GLDA and MGDA contain small quantities of NTA (CAS 139-13-9, classified as Carc2 H351) as residues from raw material production (as attested in various safety data sheets for the raw materials). Nordic Ecolabelling recognizes there can be a need to use these complexing agents in vehicle care products. NTA as an impurity in complexing agents is therefore exempted from the requirement, but subject to the limitation that the concentration of NTA in the raw materials must be below 0.2% by weight of the MGDA/GLDA active content in the raw material (e.g., for raw materials with 30% MGDA active content, maximum 0.2% · 30% = 0.06% NTA is permitted in the raw material), and that the concentration of NTA in the end-product must be below 0.1% by weight.

Nordic Ecolabelling wants to minimise the content of sensitising substances in the products to reduce the risk of allergies. In the case of manually used vehicle care products, the products may come into direct contact with skin. Professional products for automated wash installations are exempted from the requirement if the packaging is designed so that the user is at no risk of coming into contact with the product. Preservatives and fragrances are exempted from the requirement, since this requirement is not meant to exclude preservatives and fragrances, but they are subject to other requirements including O6

Excluded substances, O9 Fragrances, and the requirements in section 5.5 for ecotoxicity and biodegradability.

O6 Excluded substances

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

- Alkylphenols (e.g. butylated hydroxy anisole (BHA, CAS No. 25013-16-5), butylated hydroxytoluene (BHT, CAS No. 128-37-0), alkylphenol ethoxylates (APEOs), and other alkylphenol derivates (APD))
- Aminopolyphosphonates
- Amphoacetate derivatives of N-hydroxyethyl imidazolines (EC No. 271-792-5, 271-794-6, 931-291-0, 938-645-3, 942-589-5, 943-154-2, 944-415-3, 946-565-5, 947-998-2)
- Aromatic solvents

Solvents as defined in Directive 1999/13/EC: Organic substances with a vapour pressure of at least 0.01 kPa at 20 °C

Exemption: Solvents in cold degreasing, microemulsions and drying aids products may contain ≤ 1000 ppm aromatic hydrocarbon impurities in the raw material as a result of the purification / refining process.

- Bisphenols and bisphenol derivatives, defined as 34 bisphenols identified by ECHA[3] for further EU regulatory risk management due to known or potential endocrine disruption or reproductive toxicity.
- Colourants

Exemption: Professional products and windshield washer fluid may contain colourants.

- Endocrine disruptors, potential or identified, listed in "Endocrine Disruptor Lists" List I, II or III

Note: Substances moved to "Substances no longer on list" and not present on Lists I-III, are no longer excluded, except for those on sublist II where concern remains. Nordic Ecolabelling will assess these on a case-by-case basis.

- Ethylenediamine tetraacetate (EDTA, CAS No. 60-00-4) and its salts and Diethylenetriamine pentaacetate (DTPA, CAS No. 67-43-6) and its salts
- Halogenated organic compounds
- Heavy metals and metalloids: Mercury (Hg), chromium VI (Cr), cobalt (Co), zinc (Zn), copper (Cu), nickel (Ni), cadmium (Cd), lead (Pb), arsenic (As), antimony (Sb).
- Isothiazolinones (e.g. methylisothiazolinone (MIT), CAS No. 2682-20-4, metylchloroisothiazolinone (CMIT), C(M)IT/MIT (3:1), CAS No. 55965-84-9, CAS

[3] EC/List No. 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).
[1] Assessment of regulatory needs: Bisphenols. ECHA – 16 December 2021: Section 2.1: Bisphenols for which further EU RRM is proposed https://echa.europa.eu/documents/10162/5e60f2fe-12d0-7f6b-5868-f199cfd7f984

No. 26172-55-4, benzisothiazolinone (BIT), CAS No. 2634-33-5, octylisothiazolinone (OIT), CAS No. 26530-20-1 and dichlorooctylisothiazolinone (DCOIT), CAS No. 64359-81-5)

- Linear alkylbenzene sulphonates (LAS)
- Methyldibromo glutaronitrile (MG), CAS no. 35691-65-7
- Nanomaterials/-particles

Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01):[4]
'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.

- Nitro musks and polycyclic musk compounds
- NTA (nitrilo triacetic acid, CAS-no. 139-13-9), and its salts

  Exemptions: Complexing agents of the MGDA and GLDA type may contain NTA impurities in the raw material in concentrations of less than 0.2% by weight of the MGDA/GLDA active content, if the concentration of NTA in the vehicle care product is below 0.1% by weight.
- PBT and vPvB as defined in REACH Annex XIII, including those under ECHA PBT assessment https://echa.europa.eu/da/pbt
- Per- and polyfluoroalkyl substances (PFAS)

PFAS is defined as any substance that contains at least one fully fluorinated methyl (CF_3-) or methylene (-CF_2-) carbon atom (without any H/Cl/Br/I attached to it).

- Quaternary ammonium compounds that are not readily aerobic biodegradable such as benzalkonium chloride (CAS No. 8001-54-5), 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).

Aerobic biodegradable according to OECD test method 301 (A-F) or 310 or equivalent methods evaluated by an independent body and controlled by Nordic Ecolabelling.

- Siloxanes

  Exemption: linear siloxanes are permitted in waxes, polishes, drying aids, and 2-in-1 products with wax properties
- Silver, including colloidal silver, nano-silver, and micro-silver
- Substances on the REACH Candidate list of SVHC substances https://www.echa.europa.eu/candidate-list-table

- Appendix 1 for the product and Appendix 2 for all raw materials or equivalent certification duly completed and signed.

[4] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0614(01)&from=EN

- For neutral and basic products (pH ≥ 6) containing bronopol: Test report for the products according to EPA 8315A, VdL-RL03, the Merckoquant method or other equivalent test method that shows that the requirement is met.

Background to O6 Excluded substances

Certain problematic substances and substance groups are difficult to exclude through general chemical requirements. To address this, Nordic Ecolabelling has compiled a list of substances that must not be present as ingoing substances in the ecolabelled vehicle care product.

The purpose of this list is to prohibit substances that are not be excluded by other requirements but are associated with environmental and health hazards. Some substances are included for clarity, even if they are already prohibited under other requirements.

This is a standard requirement that is set by the precautionary principle and adapted to the product group. The requirement may exclude some substances that are not necessarily found in vehicle care products on the market today, so that we exclude these substances if they are added to vehicle care products in the future.

Alkylphenols (e.g. butylated hydroxy anisole (BHA, CAS No. 25013-16-5), butylated hydroxytoluene (BHT, CAS No. 128-37-0), alkylphenol ethoxylates (APEO) and other alkylphenol derivates (APD))

The non-ionic APEO group of surfactants are produced in large volumes and their uses lead 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 REACH Candidate List due to endocrine disrupting properties.

BHT (CAS No. 128-37-0) is under evaluation for endocrine disruption (ED List II).

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[5].

Amphoacetate derivatives of N-hydroxyethyl imidazolines (EC No. 271-792-5, 271-794-6, 931-291-0, 938-645-3, 942-589-5, 943-154-2, 944-415-3, 946-565-5, 947-998-2)

The group consists of 9 amphoacetates, that are used as surfactants in consumer products like detergents and cosmetic products. Based on the potential for widespread use and

[5] Schwientek, M. et al. (2024). Glyphosate contamination in European rivers not from herbicide application, Water Research, Volume 263, 2024,122140, ISSN 0043-1354, https://doi.org/10.1016/j.watres.2024.122140. (https://www.sciencedirect.com/science/article/pii/S004313542401039X)

available information on potential reproductive toxicity (Repro. 1B), these amphoacetates were identified in need for further regulatory risk management in EU.[6]

Aromatic solvents

Aromatic solvents are harmful to health, often not readily biodegradable and can have negative effects on the earth's ozone layer. Some aromatic solvents are suspected of causing cancer.

Cold degreasing is needed to dissolve the toughest dirt such as oils, asphalt and tar. Microemulsions are a common type of degreaser that is mainly used when regular washing takes place. Drying aids are often used in combination with other cleaning products in wash installations to improve drying. Solvents in Nordic Swan Ecolabelled cold degreasing products, microemulsions and drying aids may contain ≤ 1000 ppm aromatic hydrocarbons in the raw material as a residue from the purification / refining process. In this way, Nordic Ecolabelling distinguishes products with a low aromatic content in relation to products that contain cheaper bulk raw materials where the aromatic content is higher.

Azo dyes that may release aromatic amines with carcinogenic properties

Aromatic amines released by azo dyes may be carcinogenic, allergenic, irritating, and toxic.

Bisphenols and bisphenol derivatives

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 were identified in need for further regulatory risk management in EU.[7]

Colourants

Colourants tend to be added for aesthetic reasons, but in some cases, it is stated that they help to make correct dosing easier. There are few studies describing the health and environmental properties of dyes. Colourants are generally considered unnecessary for a product's function and are therefore excluded from products for consumer use. The requirement does not apply to windshield washer fluid, since a colourant makes it easier to see when the washer fluid tank is full when topping it up.

Endocrine disruptors, potential or identified, according to any of the EU member state initiative "Endocrine Disruptor Lists" List I, II, or III

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 can result including diseases and effects on reproduction and development.

The term potential EDs is used for chemicals with properties that make them suspected to be EDs. Substances listed under List II are excluded because they are under evaluation in

[6] ECHA group assessment of Amphoacetate and amphopropionate derivatives of N-hydroxyethylimidazolines: https://echa.europa.eu/documents/10162/bfd90551-19c6-41ab-b608-a00147d7db8a

[7] Assessment of regulatory needs: Bisphenols. ECHA – 16 December 2021: Section 2.1: Bisphenols for which further EU RRM is proposed https://echa.europa.eu/documents/10162/5e60f2fe-12d0-7f6b-5868-f199cfd7f984

an EU legislative process due to explicit concerns about possible endocrine-disrupting properties. Excluding them limits exposure while the evaluation is ongoing.

Substances moved to “Substances no longer on list” and not present on Lists I-III, are not excluded, except for those on sublist II where concern remains. Nordic Ecolabelling will assess these on a case-by-case basis.

Ethylenediamine tetraacetate (EDTA, CAS No. 60-00-4) and its salts and Diethylenetriamine pentaacetate (DTPA, CAS No. 67-43-6) and its salts

Ethylenediaminetetraacetic acid (EDTA), diethylenetriamine pentaacetate (DTPA) and their salts are not readily degradable. Furthermore, DTPA is classified toxic for reproduction and may potentially pose 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. EDTA can be replaced by readily biodegradable alternatives such as MGDA (methylglycine diacetic acid) and GLDA (glutamic acid diacetic acid).

Halogenated organic compounds

Halogenated organic compounds, including short-chain chlorinated paraffins (C10-C13), medium-chain chlorinated paraffins (C14-C17), chlorophenols and dimethyl fumarate derivates, is a large group of substances that are harmful to both the environment and human health. They are often carcinogenic, highly toxic to aquatic organisms and very persistent to degradation.

Organic chlorine compounds, hypochlorites and hypochlorous acid are sometimes used as disinfecting and antibacterial substances and as bleaching agents. Organic chlorine compounds can be, or lead to the formation of, toxic and bioaccumulative substances that are difficult to break down. They can also lead to resistance in bacteria, both to biocides and against antibiotics. Mixing these substances with an acid (e.g., acidic cleaning products) can lead to formation of toxic chlorine vapour, which is an additional concern.[8]

The substance group also includes, for example, PVC, brominated flame retardants, fluorine compounds and several preservatives such as CMIT, IPBC, DCOIT, MG, (methyldibromoglutaronitrile) and bronopol.

Heavy metals and metalloids: Mercury (Hg), chromium VI (Cr), cobalt (Co), zinc (Zn), copper (Cu), nickel (Ni), cadmium (Cd), lead (Pb), arsenic (As), antimony (Sb).

Heavy metals and metalloids refer to heavy and particularly environmentally harmful metals as specified in the requirement. They are prohibited/restricted because they are toxic to humans and other organisms, both on land and in the aquatic environment. In forest ecosystems, metals can, for example, inhibit microorganisms that are responsible for the degradation of dead organic matter, which in turn slows down nutrient cycling and affects plant growth. In agricultural soils, metals can disturb soil organisms or have toxic effects on plants. A big problem with metals in agricultural soils is that they can be taken up to varying degrees by the crop and thereby lead to human exposure.[9] Mercury, cadmium, arsenic, and

[8] LOUS, 2009: List of adverse substances 2009. Information from the Danish Environmental Protection Agency no. 3 2010 http://www2.mst.dk/udgiv/publikationer/2010/978-87-92617-15-6/pdf/978-87-92617- 16-3.pdf
[9] Varor utan faror - förslag till genomförande av nya riktlinjer inom kemikaliepolitiken. Betänkande från Kemikalieutredningen - Regeringen.se

lead are toxic to the human nervous system and kidneys, amongst other things, and the metals can accumulate in living organisms.[10] Chromium VI is also highly toxic and associated with serious health effects including carcinogenicity.

Isothiazolinones (e.g. methylisothiazolinone (MIT), CAS No. 2682-20-4, metylchloroisothiazolinone (CMIT), C(M)IT/MIT (3:1), CAS No. 55965-84-9, CAS No. 26172-55-4, benzisothiazolinone (BIT), CAS No. 2634-33-5, octylisothiazolinone (OIT), CAS No. 26530-20-1 and dichlorooctylisothiazolinone (DCOIT), CAS No. 64359-81-5)

MIT and CMIT have caused widespread outbreaks of allergy contact dermatitis worldwide. In Europe, allergy rates to MIT/CMIT peaked in 2013-2014, affecting over 7% of individuals who underwent patch testing, while in North America prevalence exceeded 10% by 2017-2018.[11] Other isothiazolinones could pose similar risks if used extensively. These substances are potent skin sensitizers, and for some, even trace concentrations in the ppm range can trigger allergic reactions. Excluding the entire group prevents regrettable substitution and reduces sensitization risk.

Linear alkylbenzene sulphonates (LAS)

LAS are anionic surfactants that are toxic to aquatic organisms and are not biodegradable in an anaerobic environment. In parts of Europe where LAS is commonly used, LAS is found in significant concentrations in wastewater and sewage sludge. SCHEER (2020)[12] reports "negligible anaerobic degradation in freshwater and degradation only under certain conditions in marine waters may lead to accumulation of LAS and thus may present an issue of relevant environmental concern." Hazardous property classification for LAS reported to ECHA are Aquatic Chronic 3, Acute Toxic 4, Skin Irritation 2, and Eye Damage 1. LAS is excluded to avoid impacting soil and aquatic environments, including estuarine and coastal environments, as a result of wastewater release and sludge application on fields.

Methyldibromo glutaronitrile (MG, CAS No. 35691-65-7)

Methyldibromo glutaronitrile (MDBGN) is a bromine-containing preservative. MDBGN has been shown to be a sensitizer and cause for allergic contact dermatitis and is therefore banned.

Nanomaterials/-particles
Nanomaterials[13] are a diverse group of materials under the size of 100 nm. Examples of nanomaterials/nanoparticles in chemical products can include ZnO, TiO_2, SiO_2, and Ag. 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

[10] Toxicity, mechanism and health effects of some heavy metals: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4427717/
[11] Reeder MJ et al. (2023). Trends in the Prevalence of Methylchloroisothiazolinone/Methylisothiazolinone Contact Allergy in North America and Europe. JAMA Dermatol. 2023 Mar 1;159(3):267-274. https://pmc.ncbi.nlm.nih.gov/articles/PMC9857829/
[12] https://health.ec.europa.eu/latest-updates/scheer-final-opinion-potential-anaerobic-biodegradability-marine-and-freshwater-linear-alkylbenzene-2020-06-22_en
[13] Nordic Swan Ecolabel webtext: https://www.nordic-swan-ecolabel.org/nordic-ecolabelling/environmental-aspects/chemicals-nano-and-microplastics/nanomaterials/

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.[14],[15],[16] Nordic Ecolabelling take these concerns seriously and apply the precautionary principle to exclude potentially hazardous nanomaterials from products.

Nitro musks and polycyclic musk compounds

Nitro musks and polycyclic musk compounds are synthetic fragrance substances used to impart a long-lasting scent in perfumed consumer products. Nitro musks are largely phased out in the EU due to concerns related to persistence, bioaccumulation and potential adverse health effects[17]. Polycyclic musks, such as galaxolide (HHCB) and tonalide (AHTN), are still widely used, particularly in detergents, cleaning products and cosmetics[18]. These substances are environmentally persistent, incompletely removed during wastewater treatment, and have been detected in environmental compartments and biota, leading to concerns about long-term exposure.

NTA (nitrilo triacetic acid), CAS No. 139-13-9, and its salts

NTA is a synthetic complexing agent and does not naturally occur in the environment. Itis present in the environment as a result of its release in sewage from processing. NTA is considered to be persistent and is suspected carcinogenic. Complexing agents that replace NTA (GLDA and MGDA) contain small quantities of NTA as residues from raw material production. To encourage a transition to MGDA and GLDA, these raw materials may contain NTA impurities in concentrations of less than 0.2% by weight of the MGDA/GLDA active content (e.g., for raw materials with 30% MGDA active content, maximum 0.2% · 30% = 0.06% NTA is permitted in the raw material), if the concentration of NTA in the vehicle care product is below 0.1% by weight.

PBT and vPvB substances in accordance with REACH Annex XIII, including those under ECHA PBT assessment https://echa.europa.eu/da/pbt

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.

Nordic Ecolabelling excludes substances under ECHA PBT assessment since these substances are suspected of PBT properties. Therefore, we use the precautionary principle

[14] UNEP (2017) Frontiers 2017 Emerging Issues of Environmental Concern. United Nations Environment Programme, Nairobi. https://wedocs.unep.org/bitstream/handle/20.500.11822/22255/Frontiers_2017_EN.pdf
[15] Parliamentary Assembly of the Council of Europe (2013) Nanotechnology: balancing benefits and risks to public health and the environment.
http://assembly.coe.int/CommitteeDocs/2013/Asocdocinf03_2013.pdf
[16] SCCS (Scientific Committee on Consumer Safety) (2019) Guidance on the Safety Assessment of Nanomaterials in Cosmetics. SCCS/1611/19.
https://ec.europa.eu/health/sites/health/files/scientific_committees/consumer_safety/docs/sccs_o_233.pdf
[17] https://wwfeu.awsassets.panda.org/downloads/fact_sheet___synthetic_musks_food.pdf
[18] https://www.safecosmetics.org/chemicals/synthetic-musks/

in excluding them to limit their release into the environment while they are under assessment.

Per- and polyfluoroalkyl substances (PFAS)

Per- and polyfluoroalkyl substances (PFAS) are used in many types of products due to their water and dirt repellent properties. These compounds constitute a group of substances that have highly problematic intrinsic hazardous properties. They are extremely persistent and accumulate in the body. They are spread all over the globe, from the large oceans to the Arctic, and are found in e.g. wild birds and fish and their eggs. Also, shorter chain compounds (2–6 carbon atoms) have been discovered in nature. The substances in this group are suspected to be endocrine disruptors, carcinogenic, and to have a negative impact on the human immune system.

Quaternary ammonium compounds that are not aerobically biodegradable such as benzalkonium chloride (CAS No. 8001-54-5), *DTDMAC (CAS No. 68783-78-8), DSDMAC (CAS No. 107-64-7), DHTDMAC (CAS No. 61789-80-8) 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 many aquatic organisms including fish, daphnids, algae, rotifer and microorganisms employed in wastewater treatment systems.

Siloxanes

Cyclic siloxanes cyclotetrasiloxane (D4), cyclopentasiloxane (D5), and cyclohexasiloxane (D6) are on the REACH candidate list of Substances of Very High concern. These cyclic siloxanes are toxic to human health and the environment having PBT and/or vPvB properties. Hexamethyldisiloxane (HMDS, CAS no. 107-46-0) is a low molecular weight, volatile siloxane that evaporates when used and can be dispersed over large distances in the air. Linear polydimethylsiloxane (PDMS), also known as dimethicone, is not considered toxic or bioaccumulative. However, there is a concern that over time, dimethicone will slowly degrade into smaller units exerting the same properties as the cyclic siloxanes. Therefore, the use of both cyclic and linear siloxanes is generally prohibited.

However, silicon oil, which contains siloxanes, is used for wax products and drying aids where there is demand for quick application on the vehicle surface and/or a product that does not clog up the spray equipment. Therefore, an exemption is made for linear siloxanes in waxes, polishes, drying aids, and 2-in-1 products with wax properties.

Silver, colloidal silver and nanosilver

Silver is antibacterial agent used in various consumer products, typically in nano form, where it has a greater effect per total amount of silver. Silver is hazardous to health with since it is classified as reprotoxic and under assessment for endocrine disruptive properties. In addition, silver is extremely hazardous to the environment, classified H400 and H410 with an M factor of 10-1000 depending on particle size.

Substances of Very High Concern (SVHC) on the REACH Candidate list

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.

O7 Microplastics

Microplastics* must not be present as ingoing substances in the vehicle care product and must not be added to the product during manufacturing.

Exemption: Film-forming polymers in wax, polish, drying aid, and 2-in-1 products that have wax properties.

Nordic Ecolabelling has updated the definition of microplastics by adopting the EU definition in the REACH restriction on synthetic polymer microparticles, which entered into force on 17 October 2023. The new definition shall be used.

** 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, a*nd 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:

1. all dimensions of the particles are equal to or less than 5 mm.

2. 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:

- *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.*
- *polymers that are biodegradable as proved in accordance with Appendix 15 [to REACH, Regulation (EC) No 1907/2006].*
- *polymers that have a solubility greater than 2g/L as proved in accordance with Appendix 16 [to REACH, Regulation (EC) No 1907/2006].*
- *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".

- [ ] 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 O7 Microplastics

Microplastics[19] are very small fragments of plastic material. They can be harmful to health and the environment due to their size, surface properties, resistance to degradation and because they can carry harmful chemicals. By excluding microplastics ‘added to the product during manufacturing’, Nordic Ecolabelling also prohibits microplastics that are claimed to transform within the final product to no longer be defined as microplastics.

Microplastic pollution comes from various sources including pellets, paint, tires, textiles, personal care products, and various plastic items. In cleaning agents, microplastics can be added to formulas, for example, as granulates for scouring or as film-forming polymers. Microplastic pollution is found all over the world, at sea, in freshwater, sediments, sludge from wastewater treatment plants, and agricultural soil. Microplastics are detected in various aquatic organisms across the food chain, from zooplankton to vertebrates, and in human tissues and organs such as blood and placenta. The Nordic Swan Ecolabel uses the precautionary principle and strives to limit the use and release of microplastics wherever possible.

Film-forming products (wax, polish, drying aid and 2-in-1 products with wax properties), which are considered microplastics according to the definitions of the Nordic Ecolabelling and the EU, are exempted from the requirement. Cars and other vehicles are often treated with a protective wax film as a final step in the washing process. Alternatively, a "2 in 1" shampoo containing wax can be used. The purpose of the wax is to protect the vehicle's paint layer against weather, wind and wear and to reduce the risk of rust attack. In addition, the wax can help keep the vehicle clean longer and extend the time until the next wash. This is positive from an environmental perspective because it saves resources. As for drying aids, film-forming polymers can be added to the rinse water in order for the vehicle to dry quickly and to avoid water spots. This can save energy as the vehicle wash's fans can run for a shorter time or at lower power. These products (waxes, polished, drying aids, and 2-in-1 products with wax properties) are film-forming products, which are considered microplastics according to the definitions of the Nordic Ecolabelling and the EU. For these products to be eligible for the Nordic Swan Ecolabel, film-forming products are exempted from the ban on microplastics.

To reduce the risk of the release of secondary microplastics, as well as other pollutants, the consumer is asked to choose a washing place where the washing water is led to a drain that is connected to a treatment plant.

O8 Surfactants - aerobically and anaerobically biodegradable

All surfactants in the vehicle care product, irrespective of their function in the product must be readily aerobically biodegradable* and anaerobically biodegradable*.

** In accordance with the DID-list “Detergents Ingredients Database” version 2023 or later, see Appendix 3 for further details. For substances not on the DID-list, or substances where biodegradation data is missing on the DID-list, the parameters must be calculated based on the guidance in part B of the DID-list and associated documentation must be presented.*

[19] https://www.nordic-swan-ecolabel.org/nordic-ecolabelling/environmental-aspects/chemicals-nano-and-microplastics/microplastics/

- Documentation showing that the requirement is fulfilled. Nordic Ecolabelling's calculation sheet can be used which is obtained from Nordic Ecolabelling's websites.

Background to requirement O8 Surfactants

Surfactants are widely used in vehicle care products and can constitute a large proportion of the ingredients in such products. As vehicle care products are sometimes used in places that lack connection to waste water treatment and go straight into nature, it is relevant to set requirements on biodegradability of surfactants. Nordic Ecolabelling therefore requires surfactants (irrespective of function) to be biodegradable in both aerobic and anaerobic conditions for this product group.

Compounds that accumulate in the environment can pose a risk both now and, in the future, if they are acutely toxic. Knowledge of the long-term effects of non-readily biodegradable substances is often in short supply. Rapid biodegradability under oxygen-rich (aerobic) and oxygen-poor (anaerobic) conditions is therefore of major environmental importance. Surfactants are essential in this context, since they are a group of organic substances that appear in large quantities, and since many surfactants are toxic to aquatic organisms.

The EU Detergent Regulation (EC) No 648/2004 prescribes that surfactants must be aerobically biodegradable, but there are opportunities for exemptions from the regulation for professional products. Since the possibility exists, we believe it is appropriate to retain the requirement of aerobic biodegradability of surfactants. The need for the requirement for aerobic biodegradability of surfactants can be reviewed once the transitional period for the revised EU Detergent Regulation (EU) 2026/405 ends in 2029.

Examples of surfactants that are not sufficiently biodegradable to clear this requirement include linear alkylbenzene sulphonate (LAS) and alkylphenol ethoxylates (APEO)/ alkylphenol derivatives (APD). LAS and APEO/APD are also excluded in requirement O6 Excluded substances.

O9 Fragrances

All fragrance substances in the vehicle care product, including fragrance substances in plant extracts, must live up to the following requirements:

a) Fragrances are only permitted in professional products for automatic dosing systems* for wash installations where the drainage is connected to a water treatment system.

Fragrances must not be added to:

- professional pre-wash* products
- consumer* products
- windshield washer fluid for consumers or professionals.

**See definitions for automatic dosing systems, consumer and professional products and pre-wash products in the Definition table in Section 5.1.*

b) Fragrances must be in line with the International Fragrance Association (IFRA) guidelines. The IFRA guidelines can be read at https://ifrafragrance.org/docs/default-source/51st-amendment/ifra-51st-amendment---guidance-for-the-use-of-ifra-standards.pdf?sfvrsn=79750005_2

c) Substances with the hazard statement H317 and/or H334 or fragrance allergens listed in Annex III of the Cosmetic Regulation may be included in concentrations <0.0100% (100 ppm) per substance in the vehicle care product.

d) The following substances are prohibited:
   - oak moss extract (Evernia prunastri, CAS No. 90028-68-5)
   - tree moss extract (Evernia furfuracea, CAS No. 90028-67-4)
   - HICC (CAS No. 31906-04-4, 51414-25-6)

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

Background to requirement O9 Fragrances

Fragrances are a group of ingoing substances that do not generally have a cleaning or polishing effect in the product, and at the same time they contain substances with negative health aspects, particularly allergens, as well as negative environmental effects, since they are usually not readily biodegradable and they tend to be classified as hazardous to the environment.

The user is exposed to the product during manual vehicle care, and Nordic Ecolabelling has therefore chosen to prohibit fragrances in consumer products and professional products that are not intended for automatic dosing systems.

However, some consumers prefer scent as part of the wash experience in wash installations. Fragrances can also mask the smell of stagnant wastewater that can occur in wash installations (both automated and DIY). A complete ban on fragrances would likely result in significantly smaller market penetration for Nordic Swan Ecolabelled vehicle care products. The overall health and environmental benefits of ecolabelled products would thus be reduced. Nordic Ecolabelling therefore does not prohibit fragrances in professional products intended for automatic dosing systems, which are found in automatic car washes and do-it-yourself wash halls, but prohibits fragrances in pre-wash products. Pre-wash products include alkaline degreasers, cold degreasers, microemulsions, insect removers and wheel/rim cleaners. In this way, Nordic Ecolabelling encourages lower use of fragrances while still enabling scent to be part of the experience.

Fragrances are not allowed in windshield washer fluids to reduce the environmental impact of windshield washer fluids, which enter the environment directly after application.

International Fragrance Association (IFRA) represents the fragrance industry. The association conducts safety assessments of fragrance substances and provide public standards/guidelines for the use of these. The requirement for compliance with IFRA's guidelines[20] ensures that the manufacture, handling, and use of fragrances in the products meets specific standards in terms of prohibited substances, restricted use, and purity. IFRA's guidelines support the industry in offering products that are safe for consumers and for the

[20] Guidance for the use of IFRA Standards, The International Fragrance Association, 2023

environment. The guidelines apply to the manufacture and handling of all fragrance materials for all applications and contain the complete IFRA standards.

In 2023, the Cosmetic Regulation added 56 fragrance substances that must be declared on the packaging of cosmetic products, leading to a total of 80 substances that are subjected to declaration[21]. These substances are adopted from the EU Scientific Committee on Consumer Safety (SCCS) opinion on fragrance allergens in cosmetic products from June 2012[22]. SCCS refrains from recommending maximum limits for the content of the fragrance substances in cosmetic products but however states that the general limit of 100 ppm is tolerated by most consumers and wishes to guard against the development of new allergy sufferers both within generally tolerant and sensitive people. This limit is therefore also set in the requirement for fragrance allergens in vehicle care products.

Nordic Ecolabelling does not distinguish between fragrance substances that are subject to declaration and fragrance substances that meet the classification H317 (may cause sensitisation by skin contact) or H334 (may cause allergy or asthma symptoms or breathing difficulties if inhaled), therefore the requirement includes all these substances.

SCCS recommends that chloroatranol, atranol, and HICC are not included in cosmetic products. Chloratranol and atranol occur in Oak moss (Evernia Prunastri, CAS No. 90028-68-5) and Tree moss (Evernia Furfuracea, CAS No. 90028-67-4) extract. Nordic Ecolabelling considers it relevant to prohibit them in vehicle care products.

O10 Phosphorous

Phosphates, phosphonates, phosphonic acid and phosphoric acid must not be present in products for boats and ships nor in windshield washer fluids.

In other products, phosphates, phosphonates, phosphonic acid and phosphoric acid must not be present in quantities such that the total amount of phosphorus (P) exceeds 1.0 grams / litre of in-use solution.

If the dosing is stated as an interval, the highest recommended dosage is to be used for the calculation.

t̄ Calculation of the amount of phosphate, phosphonate, phosphonic acid and phosphoric acid (calculated as phosphorus (P)) in grams / litre of in-use solution. Nordic Ecolabelling's calculation sheet may be used. It is available from Nordic Ecolabelling's websites.

Background to O10 Phosphorous

Eutrophication is a challenge for lakes, coastal regions, and the Baltic Sea. Algal blooms, oxygen deficiency and dead zones are some of the problems for which eutrophication is a contributory factor. Eutrophication occurs when too much of the plant nutrients nitrogen and phosphorus enters the water. Nordic Ecolabelling prohibits phosphates, phosphonates, phosphonic acid and phosphoric acid in products for boats and ships and in windshield washer fluid, since they often make their way directly into the recipient watercourse after use.

[21] Regulation (EC) No 1223/2009, 2009.
[22] SCCS (Scientific Committee on Consumer Safety), opinion on fragrance allergens in cosmetic products, 26-27 June 2012

Phosphorus is a non-renewable resource, facing ever-increasing demand, especially for fertilizer production. While striving to minimize the use of phosphorous compounds, Nordic Ecolabelling allows small quantities of phosphorous compounds in vehicle care products because they are more effective in some situations than a higher concentration of other ingredients. In products that are not for boats or ships, phosphates, phosphonates, phosphonic acid and phosphoric acid may be present in quantities such that the total amount of phosphorus (P) is less than 1.0 gram / litre of in-use solution.

Observe national legislation on phosphorus in the country in which the product is sold / marketed. In Norway, use of phosphorus is subject to the “Regulation limiting the use of chemicals and other products that are harmful to health and the environment (The Product Regulation)”, Sections 2-12.

O11 Volatile Organic Compounds (VOC)

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

Volatile organic compounds (VOCs) are organic compounds with a vapor pressure of 0.01 kPa or more at 293.15 K (20°C)[23].

Exemptions: Ethanol (including denaturing agents), isopropanol, and butyl glycol

- Appendix 1 or equivalent declaration completed and signed
- Appendix 2 or equivalent declaration completed and signed by all relevant raw material manufacturers/suppliers.
- Calculation of the product’s VOC content. Nordic Ecolabelling’s calculation sheet can be used which is obtained from Nordic Ecolabelling’s websites.

Background to O11 Volatile Organic Compounds (VOC)

Volatile organic compounds (VOCs) are organic compounds with a vapor pressure of 0.01 kPa or more at 293.15 K (20°C)[24]. VOCs are undesirable, as many VOCs are associated with adverse effects on human health, including nervous system, and, for some substances, carcinogenic effects[25]. In the environment, several VOCs are persistent or poorly biodegradable in aquatic systems and may pose risks to aquatic organisms[26]. In the atmosphere, VOCs act as precursors in photochemical reactions with nitrogen oxides, contributing to the formation of ground-level ozone and photochemical smog, which have negative effects on human health and ecosystems[27].

Some vehicle care products, 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. Ethanol, isopropanol and butyl glycol are exempted from the requirement as they are main components in windshield washer fluid and glass

[23] Industrial Emissions Directive (IED) 2010/75/EU.
[24] Industrial Emissions Directive (IED) 2010/75/EU.
[25] https://www.epa.gov/indoor-air-quality-iaq/what-are-volatile-organic-compounds-vocs
[26] https://pubs.usgs.gov/publication/70093914
[27] https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics

cleaners/window shine and are crucial for the function of these products, and they have a more favourable health and environmental profile than that of more potent VOCs.

5.5 Ecotoxicity and biodegradability

The requirements for ecotoxicity and biodegradability include three requirements:

- Long-term environmental effects (O12)
- Critical dilution volume (CDV) (O13)
- Aerobically and anaerobically biodegradability (aNBO and anNBO) (O14)

In all calculations, the highest recommended normal dose must be used.

O12 Long-term environmental effects

Content of ingoing substances classified as environmentally hazardous according to Regulation (EC) No 1272/2008 (C_{total}) in the vehicle care product is limited as follows:

C_{total} ≤ the limit value in Table 4.

C_{total} is calculated using the following formula for all ingoing substances in the product:

$$C_{total} = M \cdot 100 \cdot C_{H410} + 10 \cdot C_{H411} + C_{H412}$$

where

M is the multiplying factor for H410 as described in the CLP regulation (EC) No 1272/2008

C_{H410} is the concentration of substances with H410 in grams/litre in-use solution*

C_{H411} is the concentration of substances with H411 in grams/litre in-use solution*

C_{H412} is the concentration of substances with H412 in grams/litre in-use solution*

**The amount of ingoing substances with respective classification in the product in grams per liter in-use solution based on the highest recommended normal dose stated on the packaging.*

See information concerning calculations with UVCB substances and perfumes in section 5 "Additional information concerning definitions of ingoing substances and impurities."

If data is missing on a substance, it is assessed according to a worst-case scenario with H410 and M factor of 10.

Table 4 Limit values for environmentally hazardous substances

Subcategory	Limit value (grams / liter in-use solution)
Alkaline degreaser	5.0
Cold degreaser	4.0
Microemulsion (degreaser)	4.0
Shampoo	4.0
Drying aid	1.0
Wax / polish	1.0
Wheel / rim cleaner	4.0
Insect cleaner	4.0
Windshield washer fluid	0.5
Other products	1.0

See section 5.1 Definitions Table for explanations for the subcategories.

- Appendix 1 (product) and Appendix 2 (raw material) signed and completed, or equivalent signed information.
- Calculation according to the above formula showing that the requirement is fulfilled. Nordic Ecolabelling's calculation sheet can be used which is obtained from Nordic Ecolabelling's websites.

Background to O12 Long-term environmental effects

A Nordic Swan Ecolabelled vehicle care product must never be classified as environmentally hazardous, see requirement O2. Substances that are classified as environmentally hazardous may be present in vehicle care products in limited quantities, but are prohibited in windshield washer fluid. Substances that are toxic to the environment and are also not readily biodegradable or substances that are chronically toxic (H410, H411 and H412) constitute a potential problem for the aquatic environment. Limitation of these adverse characteristics will reduce the risk of negative environmental impacts.

The environmental properties of vehicle care products are important, because the products are discharged either directly or via treatment plants into the recipient watercourse after use. Consequently, a requirement is set concerning the maximum content of environmentally hazardous substances in a product. By weighting the parameters, substances classified as H410 are subject to the greatest limitation. The weighting in the formula is connected to classification limits for environmentally hazardous substances.

From 1 December 2012 the CLP Regulation changed the criteria used as its basis for classification as environmentally hazardous. This meant that many surfactants which were not previously classified as environmentally hazardous now needed to be, and they were therefore at that time exempted from the requirement, as surfactants have an important irreplaceable function in vehicle care products. To promote usage of less environmentally hazardous surfactants, surfactants are no longer exempted in this criteria version. Furthermore, the multiplying factor M for H410 classifications is included in the calculation. To accommodate for these two changes, the limit value has been increased for most subcategories. If data is missing for a substance, it is assessed according to a worst-case scenario with H410 and M factor of 10, since M factors above 10 are rare.

O13 Critical dilution volume (CDV)

The product's critical dilution volume (CDV) must not exceed the limit values stated in Table 5.

Exemption: Windshield washer fluid is exempted from this requirement.

Table 5 Limit values for CDV

Subcategory	Limit value for $CDV_{chronic}$ / litre in-use solution
Alkaline degreaser	80 000
Cold degreaser	130 000
Microemulsion (degreaser)	130 000
Shampoo	40 000
Drying aid	20 000
Wax / polish	40 000
Wheel / rim cleaner	130 000
Insect cleaner	80 000
Other products	25 000

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

$$CDV_{chronic} = \sum CDV_i = \sum \left(\frac{dose_i \cdot DF_i \cdot 1000}{TF_{i,chronic}} \right)$$

$dose_i$ = The ingoing volume of each individual substance "i", in grams / 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*

CDV is calculated based on the highest stated dose (grams / litre of in-use solution) on the label.

**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.*

See information concerning calculations with UVCB substances and perfumes in section 5 "Additional information concerning definitions of ingoing substances and impurities."

See section 5.1 for definitions of subcategories.

- Calculation of $CDV_{chronic}$ for the product in accordance with the above formula. Nordic Ecolabelling's calculation sheet may be used and can be obtained from Nordic Ecolabelling's websites.

Background to O13 Critical dilution volume (CDV)

The critical dilution volume (CDV) is a theoretical value which considers the toxicity and aquatic degradability of each substance. A maximum limit for CDV ensures that the Nordic Swan Ecolabelled products have a minimal impact on the recipient watercourse. The limit values are based on data from existing Nordic Swan Ecolabel licences.

CDV is calculated for all ingoing substances included in the vehicle care product. Chronic data must be used because it better describes the environmental impact. When chronic data is unavailable, acute data can be used combined with higher safety factors.

O14 Aerobic and anaerobic biodegradability (aNBO and anNBO)

The total content of ingoing substances that are not aerobically biodegradable* (aNBO) and that are not anaerobically biodegradable* (anNBO) in the product may not exceed the limits stated in Table 6 per litre of in-use solution.

The product's aNBO and anNBO are calculated based on the highest recommended normal dose stated on the packaging.

** In accordance with the DID-list "Detergents Ingredients Database" version 2023 or later, see Appendix 3 for further details. For substances not on the DID-list, or substances where biodegradation data is missing on the DID-list, the parameters must be calculated based on the guidance in part B of the DID-list and associated documentation must be presented.*

See information concerning calculations with UVCB substances and perfumes in section 5 "Additional information concerning definitions of ingoing substances and impurities."

Note that all surfactants must be aerobically and anaerobically biodegradable in accordance with O9. See also the exemption from the requirement of anaerobic biodegradability for substances which are not surfactants (Appendix 3, section 6, Anaerobic biodegradability).

Table 6 Limit values for aNBO and anNBO content per category as well as ingoing substances exempt from calculation of anNBO per subcategory

Subcategory	aNBO (grams / litre in-use solution)	anNBO (grams / litre in-use solution)	Substances exempt from anNBO limit
Alkaline degreaser	0.2	0.8	
Cold degreaser	0.4	0.8	Hydrocarbons C11-20
Microemulsion	0.0	0.8	Hydrocarbons C11-20
Shampoo	0.2	0.2	
Drying aid	0.8	0.8	
Wax / polish	0.8	0.8	
Wheel/rim cleaner	0.0	0.2	Rocin acid & unsaponifiables in tall oil *
Insect cleaner	0.8	0.8	
Windshield washer fluid	0.2	0.2	Denaturing agents in ethanol
Other products	0.1	0.1	

** The exemption only applies to professional products for closed, automatic wash installations.*

- Calculation of the concentration of aNBO and anNBO for the vehicle care product in grams / litre of in-use solution. Nordic Ecolabelling's calculation sheet can be used. This is obtained from Nordic Ecolabelling's websites. If a substance is exempted from the inclusion in the calculation of anNBO content, state which exemption it falls under.

Background to O14 Aerobic and anaerobic biodegradability (aNBO and anNBO)

The requirement concerning the biodegradability of organic substances reduces the potential accumulation of non-readily biodegradable substances in waste sludge and in other relevant pockets in the environment. In some places, sludge is used as a soil improver and in this case, it is important that the sludge contains as low a level of non-readily biodegradable substances as possible. Organic substances with poor degradability remain in the environment for a long time, thus increasing the risk of damage to nature (particularly regarding substances that also have other negative environmental or health properties).

Some substances are exempt from the requirement to ensure product effectivity or functionality, to prevent environmental impacts of replacing these substances with others (burden shift), and/or to give producers time to find better alternatives.

Hydrocarbons C11-20 in cold degreasers and microemulsions are used to break up oily dirt and asphalt. Due to the number of products relying on this type of ingredient, hydrocarbons C11-20 are exempt from the anNBO limit.

The exemption for rocin acid & unsaponifiables in tall oil only applies to professional wheel/rim cleaner products for closed, automatic wash installations, where tall oil's separating properties in the oil/water separator may be an advantage. Furthermore, tall oil is a renewable resource whereas alternative ingredients may be based on fossil fuels.

Denaturing agents in ethanol are permitted to ensure the ethanol meets regulatory requirements related to denaturing agents.

5.6 Requirements for windshield washer fluid

The two requirements in this section apply only to windshield washer fluid:

- Ethanol in windshield washer fluid
- Performance and frost protection for windshield washer fluid

O15 Ethanol in windshield washer fluid

The ethanol in windshield washer fluid must be produced from renewable raw materials or recycled ethanol.* The requirements regarding renewable raw materials are stated below.

**The requirements on recycled ethanol are under development and will be added later.*

To assist the development of the requirements for recycled ethanol, Nordic Ecolabelling welcomes information regarding the availability of recycled ethanol and/or any information on its lifecycle impact compared to other types of ethanol.

Concentrated windshield washer fluid (<10 vol % water)

a) The ethanol must be produced from renewable raw material.

A renewable raw material is defined as a raw material originating from biological material which is renewed continuously in nature within the immediate future, such as cereals and wood (European standard EN 16575:2014).

b) On an annual basis at least 10% must be produced from a residual product or waste in line with the Renewable Energy Directive (EU) 2018/2001[28].

Residue: a substance that is not the end product(s) that a production process directly seeks to produce; it is not a primary aim of the production process and the process has not been deliberately modified to produce it.

Agricultural, aquaculture, fisheries and forestry residues: residues that are directly generated by agriculture, aquaculture, fisheries and forestry and that do not include residues from related industries or processing.

Waste: waste in accordance with the definition in Article 3.1 of Directive 2008/98/EG, with the exception of substances that have been intentionally manipulated or contaminated to meet the definition. In Article 3.1 of Directive 2008/98/EG, waste refers to: substance or object that the holder disposes of or intends or is obliged to dispose of.

[28] DIRECTIVE (EU) 2018 / 2001 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 on the promotion of the use of energy from renewable sources, Article 2, points 43 and 44.

c) Ethanol that is produced from sugar cane is only accepted if the sugar cane is certified to Bonsucro standard (EU REDII approved), version 5.1 or later version.

The requirement does not cover by-products, residues and waste products from the sugar cane industry itself. The requirement also does not cover residues and waste products generated by households or commercial, industrial or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose.

d) Ethanol that is produced from genetically modified organisms (GMOs), e.g. genetically modified maize or sugar beet, is prohibited.

Genetically modified organisms are defined in EU Directive 2001/18. Enzymes and other substances produced by the use of genetically modified microorganisms are not defined as GMOs or material derived from GMOs.

Pre-mixed windshield washer fluid (>10 vol % water)

a) The ethanol must be produced from renewable raw material.

A renewable raw material is defined as a raw material originating from biological material which is renewed continuously in nature within the immediate future, such as cereals and wood (European standard EN 16575:2014).

b) On an annual basis at least 90% must be produced from a residual product in line with the Renewable Energy Directive (EU) 2018/2001[29].

Residue: a substance that is not the end product(s) that a production process directly seeks to produce; it is not a primary aim of the production process and the process has not been deliberately modified to produce it.

Agricultural, aquaculture, fisheries and forestry residues: residues that are directly generated by agriculture, aquaculture, fisheries and forestry and that do not include residues from related industries or processing.

c) Ethanol that is produced from sugar cane is only accepted if the sugar cane is certified to Bonsucro standard (EU REDII approved), version 5.1 or later version. The requirement does not cover by-products, residues and waste products from the sugar cane industry itself. The requirement also does not cover residues and waste products generated by households or commercial, industrial or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose.

d) Ethanol that is produced from genetically modified organisms (GMOs), e.g. genetically modified maize or sugar beet, is prohibited.

Genetically modified organisms are defined in EU Directive 2001/18. Enzymes and other substances produced by the use of genetically modified microorganisms are not defined as GMOs or material derived from GMOs.

- Declaration of the type of renewable raw material used.
- Documentation showing that the residual product meets the definition in the Renewable Energy Directive (EU) 2018/2001.
- Calculation to show the proportion of ethanol produced from a residual product on an annual basis.

[29] DIRECTIVE (EU) 2018 / 2001 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 on the promotion of the use of energy from renewable sources, Article 2, points 43 and 44.

- If ethanol that is produced from sugar cane is used: Valid Bonsucro EU-RED Chain of Custody certificate from the supplier/or link to valid certificate on Bonsucro certificate database covering all sugar cane used in ethanol in the Nordic Swan Ecolabelled windshield washer fluid.
- If ethanol that is produced from sugar cane is used: Documentation showing that the quantity of Bonsucro EU-RED certified sugar cane is met. This should be specified in e.g. invoices or delivery notes according to Bonsucro EU-RED requirements for Chain of Custody.
- Appendix 4 or equivalent certification completed and signed.

Background to O15 Ethanol in windshield washer fluid

Each year, between 30-35 million liters of windshield washer fluid is used in Denmark, Norway and Sweden[30]. Windshield washer fluid is released into the aquatic environment directly after use. Thus, there is a large potential to reduce environmental impacts from the chemicals entering the environment as well as from the production of raw materials for windshield washer fluid.

Ethanol is produced petrochemically through the hydration of ethylene. Ethanol can also be produced from renewable raw materials, primarily cereals, sugar, and maize. In order to encourage a move away from fossil materials, Nordic Ecolabelling sets a requirement that all ethanol used in Nordic Swan Ecolabelled windshield washer fluid must be based on renewable raw material.

In setting a requirement for ethanol from a residual product, Nordic Ecolabelling encourages the use of ethanol which reduces greenhouse gas emissions compared with fossil alternatives in accordance with the Renewable Energy Directive (EU) 2018/2001.

Sugar cane is one renewable source of ethanol. As demand for sugar cane as a raw material rises, the production areas are expanded which can result in a significant loss of biodiversity. Nordic Ecolabelling therefore only allows ethanol based on sugar cane that is certified to Bonsucro standard (EU REDII approved), version 5.1 or later version.

GMO is a highly debated topic, and several countries have banned cultivation of GMOs. Topics discussed are food security, land use, lack of scientific knowledge about effects under local agricultural / forest conditions and risk of adverse effects on health and the environment.

Nordic Ecolabelling emphasises the precautionary principle and bases its position on regulations that have a holistic approach to GMOs. This means that sustainability, ethics and benefit to society must be emphasised together with health and the environment. We are not in principle against genetic engineering and GMOs per se but are concerned about the consequences when genetically modified plants, animals and microorganisms are propagated in nature. Nordic Ecolabelling believes that GMOs should be assessed on a case-by-case basis.

[30] Holmberg, Fred; Business Development Swed Handling AB. E-mail. 2019-12-03.

Enzymes used as catalysts in industrial processes may sometimes be produced by genetically modified microorganisms in closed systems. Such enzymes are not themselves defined as GMOs or material derived from GMOs and are thus allowed to use in the ethanol production.

O16 Performance and frost protection for windshield washer fluids

The windshield washer fluid product must perform at least as effectively as equivalent products on the market. The product's performance must be documented with a user test as set out in Appendix 5 and Appendix 6.

The product's frost protection is to be documented in accordance with standard ASTM D1177-17 "Standard Test Method for Freezing Point of Aqueous Engine Coolants", ASTM D2386-19 "Standard Test Method for Freezing Point of Aviation Fuels" or equivalent.

- ☐ User test in line with Appendix 5 and Appendix 6.
- ☐ Test report in accordance with standard ASTM D1177-17 "Standard Test Method for Freezing Point of Aqueous Engine Coolants", ASTM D2386-19 "Standard Test Method for Freezing Point of Aviation Fuels" or equivalent.

Background to O16 Performance and frost protection for windshield washer fluids

The windshield washer fluids that are available on the market vary in their performance and there may be major differences between the freezing point stated on the packaging and the actual freezing point. Nordic Ecolabelling therefore sets a requirement concerning the product's performance and frost protection.

At least 80% of the users who test a product in a user test must find it acceptably effective or very effective for the requirement to be met.

5.7 Packaging and user information

This chapter contains requirements concerning plastic packaging and user information. If the product is packaged in a material other than plastic or that is paper-based, please contact Nordic Ecolabelling to establish requirements.

Nordic Ecolabelling has set requirements on packaging to contribute to a circular economy by increasing the possibility to recycle the material, improving the quality of recycled material, and promoting reuse of materials. Additional packaging requirements for foam/spray products reduce health risks for the end user.

The following are requirements on the primary packaging such as bottles, containers, and pouches:

- Recycling design of plastic packaging and closures (excluding pouches)
- Labels for rigid plastic packaging
- Recycling design of flexible plastic bags/pouches
- Recycling design of paper-based packaging
- Packaging for spray products
- User information

Sales packaging made of plastic must either live up to requirements O17-O19 below or the sales packaging must have a Recyclability certificate from RecyClass showing that the whole sales packaging is recyclable with a minimum recyclability score of B.

O17 Recycling design of plastic packaging and closures

Plastic packaging smaller than 200 litres and associated closures must have a design that facilitates material recovery. It must either live up to the requirements below or the plastic packaging must have a Recyclability certificate from RecyClass showing that it's fully recyclable with a minimum recyclability score of B.

Packaging refers to bottles, cans, pots or similar.

Closure refers to caps, lids, oblates, seals, and integral dosing devices / pumps.

- Packaging and closures must be made from either PE (polyethylene), PP (polypropylene) or PET (polyethylene terephthalate).

Exemption: Spray triggers may contain the following plastics in small technical details: Polyoxymethylene (POM), expanded polyethylene (EPE), ethylene butyl acrylate copolymer (EBA), synthetic rubber copolymer of acrylonitrile and butadiene (NBR), and up to 6% Ethylene vinyl acetate (EVA).

- Oblate and seals must be made of PE (polyethylene), PP (polypropylene), PET (polyethylene terephthalate), aluminium, paper or EPE (expanded polyethylene). They must be separable from packaging or cap/lid.
- It is not allowed to add pigments to PET used for packaging.

Exemption:

- *Recycled PET-granulate where the pigment originates from the recycled material.*
- *Pigments that are added to UV blockers and that do not make up more than 10 ppm of the packaging (without closure).*

- Packaging and closures must not be dyed with carbon black.

Exemption: Small amounts of carbon black used in other colours than black if it can be documented that the NIR sensor reads and sorts the packaging or the closure to the correct plastic fraction.

- Silicone must not be used in closures.

Exemption: Lubricant in spray bottle triggers.

- Barriers are not permitted in packaging.
- Fillers such as CaCO3 must not be added to PE and PP packaging and closures to a level that takes the density of the plastic beyond 0.995 g/cm3.
- There must be no metal components in packaging or closures.

Exemption:

- *Metal springs in pump bottles.*
- *Metal in technical parts in trigger for spray bottles for cold degreasing products.*

t̄ Packaging specification (including bottle / can / pot or similar, labels and closure) or certification showing which plastic has been used and the colour of the packaging and closure. Appendix 7 or equivalent certification filled out by the manufacturer/supplier

can be used, or a Recyclability certificate from RecyClass showing that the primary packaging is fully recyclable with a minimum recyclability score of B.

- Documentation showing that the NIR sensor reads and sorts the packaging or closure to the correct plastic fraction if small amounts of carbon black have been used in other colours than black.
- Calculation showing that the density limit has not been exceeded.

O18 Labels for rigid plastic packaging: Design for recycling

To enable recycling of the packaging, labels and print on rigid plastic packaging must meet the requirements below.

Label material

For packaging made from polyethylene (PE) and polypropylene (PP):

- The label must be of the same material as the packaging (PE/PP) and the polymer composition of the label material (excluding adhesive and print) must consist of either > 95% polypropylene (PP) or > 99% polyethylene (PE). The total density of the label must be < 1.0 g/cm^3.

  *Exemption for PE packaging: Fold-out (cross-over) labels of PP if the label does not cover more than 50% of the packaging surface for sizes ≤ 500 ml and 70% for sizes > 500 ml.**

For packaging made from polyethylene terephthalate (PET):

- The polymer composition of the label material (excluding adhesive, print and liner) must consist of either > 95% polypropylene (PP) or > 99% polyethylene (PE). The total density of the label must be < 1.0 g/cm^3.
- The label must not cover more than 50% of the packaging surface for sizes ≤ 500 ml and 70% for sizes > 500 ml.*

**Instructions and example calculations can be found in section 8 in Appendix 3.*

Print

- Printing inks for rigid plastic packaging must be compliant with EuPIA Charter on raw material selection and exclusion for printing inks and related products**
- Direct print on the container is not permitted except for date codes, batch codes and UFI (Unique Formula Identifier).

*** In accordance with https://www.eupia.org/wp-content/uploads/2025/04/Ed8_EP_final.pdf*

- Label specifications showing the material used and density. Appendix 7 can be used. Alternatively, recyclability certificate from RecyClass showing that the primary packaging is recyclable with a minimum recyclability score of B.
- For labels of different material than the packaging: Calculation of label size compared to the surface of the container. Nordic Ecolabelling's calculation sheet for the packaging can be used. Not applicable if the requirement is documented by a RecyClass certificate.
- Declaration from the applicant that direct print is not used except for date codes, batch codes and UFI. Appendix 1 can be used.

Background to O17 Recycling design of plastic packaging and closures and O18 Labels for rigid plastic packaging: Design for recycling

The Nordic recycling manuals[31] are the base for the requirement stating that plastic packaging must be made from PE, PP or PET. These are the best plastics from the recycling perspective. Biodegradable plastics are not suitable in today's recycling systems and can cause problems in the material recovery process.

Oblate and seals are used because closures must be guaranteed to be tight in all handling, even when transporting large quantities. Many conveyors use automatic machine sorting where packages are handled very harshly. Then ordinary corks are not enough, but an oblate is required if the packaging is to be tight. Oblates and seals are a small part of the packaging, and they are also allowed to be made of aluminium and paper if they are separable from the packaging or cap / lid.

Colourless plastics have the highest recovery value. Dark colours result in darker recycled fraction, which is not preferable and carbon black cause problems in automated sorting plants, as the NIR (near infrared reflectance) detector cannot identify dark colours produced with carbon black.

For virgin PET, pigments are not accepted since there is no market for coloured packaging and coloured packaging are currently burned in Nordic recycling systems. For PE and PP carbon black is excluded from packaging and closures, to contribute to lighter recycled fraction, and to avoid problem with NIR-detection. An exemption to lighter colours, incl. shadows of grey with small amounts of carbon black has been made if it can be shown that the NIR-sensor can read and sort them.

Fillers are restricted so that the HDPE or PP density does not exceed 0.995g / cm3. If the plastic becomes too dense, it sinks in the water bath recycling process and goes to incineration instead of material recovery.

Metal is not allowed because residues cause plastics to be rejected if there are metal detectors on the sorting line. Metal residues can also break down plastics and become a problem in recycled plastic production[32,33].

Silicone is not allowed in packaging because silicone impurities in recycled fraction are problematic and it is difficult to remove in the recycling process.

At present, almost all vehicle care products are packaged in plastic packaging, which is why the requirements focus on these. The future may bring new materials into play for packaging, in the desire to reduce the use of plastic in general, switch to an increased share of renewable materials or ensure a higher share of recycled material. This ongoing development of the packaging market can happen quickly and can be difficult to predict.

[31] "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 / 442070829017fd4aa7d7e00bf9609 78b (besökt 2019-04-30) https: / / plast.dk / wp-content / uploads / 2018 / 11 / Design-manual-ENG-Forum-for-Circular-PlasticPackaging-NOVEMBER-2018.pdf, https: / / plast.dk / wp-content / uploads / 2018 / 06 / Bilag-Adesignmanual.pdf
[32] Plastkretsen and FTI, Bättre förutsättningar för återvinning av plastförpackningar.
[33] http://www.plasticsrecycling.org/hdpe hämtad 2017-08-08

Therefore, Nordic Ecolabelling reserves the right to assess alternative packaging materials for vehicle care products and their environmental performance in specific inquiries. Future requirements for other packaging materials will be published in future versions of the criteria if these are developed.

Label

There is a strong interest from the recycling sector for the Nordic Ecolabel to set requirements on the labels that promote recycling, and there is a lot happening in this area now both politically and technology wise. The Nordic Ecolabel's intentions are to follow the political development in Europe on this. The goal is to set requirements on packaging and labels securing good recyclability.

When it comes to recycling plastic packaging, the best alternative is when the label is made of the same material as the bottle. Otherwise, if the near-infrared sensor at the sorting facility hits the label instead of the bottle, the bottle may end up in the rejected fraction. Therefore, Nordic Ecolabelling sets requirements on labels to promote correct sorting and minimize rejects.

Fold-out labels are increasingly common. To ensure both the label's quality while on the package and recyclability of the package after use, Nordic Ecolabelling has set requirements for fold-out labels.

Paper labels on plastic bottles can cause fibres from the paper labels to be transferred into the recycled plastic and cause problems for the manufacture of new products. Therefore, paper labels are not allowed.

A float/sink bath is another sorting step that can sort plastics of different densities. For PET containers, only PP or PE labels with density <1.0 g/ml are allowed to ensure correct separation in the float/sink bath. (PET has a density > 1.0 g/ml). As a consequence, for the time being, cPET labels are not allowed.

PET-G labels/shrink film labels are excluded on PET containers since PET-G is problematic in recycling in large quantities as it is not compatible with the PET commonly used for the containers (A-PET).

PVC and other halogenated plastics are excluded since they lead to adverse environmental impacts in waste handling.

If the NIR sensor at the sorting facility hits the label instead of the bottle, the bottle may end up in the rejected fraction. Therefore, labels and shrink film labels of different materials than the container must not cover more than 50% of the container surface for sizes ≤ 500 ml and more than 70% for sizes > 500 ml in accordance with RecyClass' guidelines.

Laser printing is permitted as there are no inks used in the process.

Direct printing on the container is restricted, as ink residues lower the quality of the recycled plastic.

Metallized labels can be detected by metal detectors causing the packaging to be sorted to reject. Thin metal layers do not seem to possess major problems for the sorting or recycling, if the labels can be separated from the containers. However, these metal materials will not be recycled, and single use of metal is not supportable from a resource point of view.

O19 Recycling design of flexible plastic bags/pouches

Pouches must have a design that facilitates material recovery.

Packaging in this requirement means flexible plastic bags / pouches.

Closure means caps and lids.

- Packaging and closures must be made from either PE (polyethylene), PP (polypropylene) or PET (polyethylene terephthalate).
- The packaging must be made of monomaterial, i.e. not laminated with layers of different materials. Barrier coatings must only use EVOH (ethylene vinyl alcohol) and make up max 5% of the total weight.
- Packaging and closures must not be dyed with carbon black.

Exemption:

Small amounts of carbon black used in other colours than black if it can be documented that the NIR sensor reads and sorts the packaging or the closure to the correct plastic fraction.

Text and pictograms.

- Silicone must not be used in closures.
- Fillers such as CaCO3 must not be added to PE and PP packaging or closures to a level that takes the density of the plastic beyond 0.995 g / cm3.
- PS, (polystyrene), PET (polyethylene terephthalate), PVC (polyvinyl chloride) and other halogenated plastics may not be used in labels.

- Packaging specification (including pouch, any labels and closure) or certification showing which plastic has been used and the colour of the packaging and closure.
- Appendix 7 or equivalent certification duly and signed. Alternatively, recyclability certificate from RecyClass showing that the primary packaging is recyclable with a minimum recyclability score of B.
- Documentation showing that the NIR sensor reads and sorts the packaging or closure to the correct plastic fraction if small amounts of carbon black have been used in other colours than black.
- Calculation showing that the density limit has not been exceeded.

Background to O19 Recycling design of flexible plastic bags/pouches

The requirement for pouches is the same as for plastic packaging and closures, with the addition that barrier coatings must only use EVOH (ethylene vinyl alcohol) and make up max 5% of the total weight. This is in line with what recycling companies recommend in order to avoid negative effects on the recycling process[34].

Nordic Ecolabelling is aware that it is currently not possible to produce flexible bags / pouches from monomaterial if they are to meet the requirements for UN labelling. In practice, therefore, the requirement means that we steer towards cans or bottles in, for example, polyethylene (PE). Such packaging requires more packaging material per litre of liquid, but can in turn be recycled, which Nordic Ecolabelling considers to be superior.

[34] Grönt Punkt: Basic Facts Report on Design for Plastic Packaging Recyclability, 2017 https: / / www.grontpunkt.no / media / 2777 / report-gpn-design-for-recycling-0704174.pdf

O20 Recycling design of paper-based packaging

1. Cardboard packaging

- Cardboard packaging must contain at least 90% paper/paperboard.
- A minimum of 90% by weight of the wood raw material that is used in the paper/cardboard must be made of recycled material.
- The remaining proportion of wood raw material (that is not recycled material) must be covered by the FSC/PEFC control schemes (FSC controlled wood/PEFC controlled sources).
- Two-sided plastic laminate is not permitted.
- Polyvinyl chloride (PVC) and other halogenated plastics must not be used in the packaging (container and / or closure).
- Aluminium and other metals must not be used in the packaging (container and / or closure).
- Paper labels are permitted. Other types of labels are not permitted. The label glue must be water soluble.
- Solid coloured cardboard is not permitted

  Exemption: White solid coloured cardboard.

2. Corrugated board packaging

- Corrugated board packaging must contain at least 90% paper/paperboard.
- A minimum of 70% by weight of the wood raw material that is used in the paper/cardboard must be made of recycled material*.
- The remaining proportion of wood raw material (that is not recycled material) must be covered by the FSC/PEFC control schemes (FSC controlled wood/PEFC controlled sources).
- Two-sided plastic laminate is not permitted.
- Polyvinyl chloride (PVC) and other halogenated plastics must not be used in the packaging (container and / or closure).
- Aluminium and other metals must not be used in the packaging (container and / or closure).
- Paper labels are permitted. Other types of labels are not permitted. The label glue must be water soluble.
- Solid coloured cardboard is not permitted.

  Exemption: White solid coloured cardboard.

T̄ Description of the packaging from the packaging producer showing:

- percentage (by weight) of paper/paperboard material, and percentage of recycled material in wood raw material
- percentage (by weight) of any barrier material; material type and description showing whether the barrier is one- or two-sided
- percentage (by weight) of other materials that might be present in elements such as closure, handles etc. and material type.

  Appendix 7 can be used.

- Declaration that any non-recycled wood raw material is covered by the FSC/PEFC control schemes.
- Declarations that polyvinyl chloride (PVC) and other halogenated plastics have not been used. Appendix 7 can be used.
- Declarations that aluminium and other metals have not been used. Appendix 7 can be used.
- If labels are used: Specification from the manufacturer showing that the label is of paper.
- If labels are used: Specification from the manufacturer showing that the adhesive is water soluble.

Background to O20 Recycling design of paper-based packaging

Legislation and infrastructure are in place for paper-/cardboard collection and recycling in the Nordic countries[35]. To promote the use of recycled materials and to save virgin resources, an obligatory requirement on the amount of recycled materials is introduced of 90% and 70% respectively, same as is currently employed in other, similar criteria documents of Nordic Ecolabelling.

Two-sided plastic laminate is not allowed since the doble layer impedes the pulpability and leads to a low degree of fibre recovery. Specialized pulpers are required to obtain good fibre recovery for two-sided laminates. A significant proportion of the Nordic board waste is currently not sent to such specialised facilities[36].

PVC and other halogenated plastics are excluded since they lead to adverse environmental impacts in waste handling. Even though aluminium from paper/cardboard packaging can be separated and material recycled, it is excluded due to the energy consumption required in the aluminium production. Aluminium is not essential in the packaging within this product group.

Direct print instead of labels is preferable in the recycling process. However, Nordic Ecolabelling has decided to allow paper labels, to provide for flexibility for the producers. For paper labels, water soluble adhesive is preferable in the recycling process[37].

Solid coloured material other than white is not permitted, as this may lead to discolouration of non-coloured fractions in the pulper.

O21 Packaging for spray products

a) Sprays that contain propellants are not allowed.

b) Spray products for interior cleaning must have a permanent aerosol-reducing nozzle (foaming nozzle).

Alternatively, spray products must have some other aerosol-reducing system, such as an aerosol-reducing formulation that gives a viscous product. This alternative is acceptable if a test is carried out showing that the amount of inhalable, thoracic and

[35] http://norden.diva-portal.org/smash/get/diva2:1304371/FULLTEXT01.pdf Accessed on 2020-12-08.
[36] Personal communication with Johannes Daae, Grønt Punkt Norge (January 2021).
[37] Personal communication with Cecilia Halling Linder, Fiskeby Board AB (December 2020).

respirable aerosol is at least as low for the test product in its ordinary packaging as it is for a reference product with a foaming nozzle. The reference product must be a Nordic Swan Ecolabelled product with a foaming nozzle.

The chemical composition and physical properties of the reference product must be equivalent to the product being tested. This test is to be carried out in line with the "determination of inhalable, thoracic and respirable aerosol fractions", as described in Olsen et al. (2017)[38]. The test is to be performed in a laboratory that is competent and independent. It must meet the general requirements of standard EN ISO 17025 or have official GLP laboratory status.

- Documentation showing that no propellant is used, for example a description of the packaging.
- Certification / documentation from the manufacturer of the trigger / spray bottle showing that it has a permanent foaming nozzle.
- Description of the alternative aerosol-reducing system and test report on the comparison between the test and reference products.
- Documentation showing that the test was performed at a laboratory that is competent and independent – and that meets the general requirements of standard EN ISO 17025 or has official GLP laboratory status.

Background to O21 Packaging for spray products

a) Sprays with a propellant differ from trigger sprays in that the container is metal and the products contain propellants that are usually flammable. Vehicle care products with propellants have a low market share, making the potential low. Nordic Ecolabelling has therefore decided to exclude this product format, without investigating in detail the environmental effects compared with trigger spray products.

b) Products sold in spray bottles have a different exposure scenario compared with products that are diluted in water before use. Using a spray forms a mist that the user could breathe in. This increases the risk of the user being exposed to allergens, especially when used inside the car.

Several studies have indicated a correlation between cleaning sprays and asthma in adults[39]. The amount of the health-related aerosol fractions (inhalable, thoracic and respirable aerosols) in spray mists can be significantly reduced by using a foaming nozzle[40, 41].

Spray products for interior cleaning without a foaming nozzle or an equivalent aerosol-reducing system are not eligible for Nordic Swan Ecolabelling.

[38] Rengjøringsmidler i sprayform – Frigir de helseskadelige stoffer til arbeidsatmosfæren som kan inhaleres til lungene? Olsen, R., et al. (2017). STAMI report No. 2. ISSN no. 1502-0932.
[39] Siracusa A, De Blay F, Folletti I, Moscato G, Olivieri M, Quirce S, Raulf-Heimsoth M, Sastre J, Tarlo SM, Walusiak-Skorupa J, Zock J-P. Asthma and exposure to cleaning products – a European Academy of Allergy and Clinical Immunology task force consensus statement. Allergy 2013; 68: 1532-1545
[40] Rengjøringsmidler i sprejform – Frigir de helseskadelige stoffer til arbeidsatmosfæren som kan inhaleres til lungene? Olsen, R., et al. (2017). STAMI-rapport nr 2. ISSN nr 1502-0932. https: / / stami.no / wp-content / uploads / 2017 / 02 / STAMI-rapport20nr202202017.pdf
[41] Personal contact with Raymond Olsen, STAMI, 2017

The second alternative involves the manufacturer of the product reducing aerosols in some other way, such as having a viscous product. This may be acceptable if a test can show that, in its ordinary packaging, the test product has at least as low a level of inhalable, thoracic and respirable aerosol as a reference product with a mesh foamer. The reference product must be a Nordic Swan Ecolabelled product with a mesh foamer. This test is to be carried out in line with the “determination of inhalable, thoracic and respirable aerosol fractions”, as described in Olsen et al. (2017)[42]. The test is to be performed in a laboratory that is competent and independent. It must meet the general requirements of standard EN ISO 17025 or have official GLP laboratory status.

O22 User information

The product’s label must include the information below. In the case of professional products, the information may be provided on an accompanying product sheet.

- The product’s area of use.
- Dosing instructions for products that need to be diluted before use.
- Freezing point at the recommended dosing for windshield washer fluid.
- How the packaging should be sorted / recycled / reused or properly disposed in each Nordic country in which it is sold. Text or symbols may be used.
- For consumer products (except windshield washer fluids) and products intended for boats and ships: Instructions to wash in a place where the water drains into a sewage system connected to a water treatment plant. Suggested text: *To protect the environment when washing – choose a place where the water drains into a sewage system connected to a water treatment plant.*

t̄ Copy of label and / or product sheet.

Background to O22 User information

A significant environmental parameter is that the product is used for the correct purpose and that the correct dosage is used. Incorrect use and overdosing lead to an increased and unnecessary environmental impact. Nordic Ecolabelling therefore sets a requirement that the product’s label must carry clear information on the area of use and the dosing.

There is a potential to change some vehicle care product users' behaviour and reduce direct emissions to the environment. Therefore, users of consumer products and products for boats and ships are directed to choose a washing location where the water is drained into a sewage system connected to a water treatment plant, like a wash hall, to avoid products being released directly into the soil and aquatic environment. Despite meeting strict ecotoxicity and biodegradability requirements compared to conventional products, Nordic Ecolabel vehicle care products are still not guaranteed to be safe for release directly into the environment.

To encourage recycling, information must be provided on how the packaging should be sorted / recycled in each Nordic country in which it is sold. For packaging of hazardous

[42] Rengjøringsmidler i sprejform – Frigir de helseskadelige stoffer til arbeidsatmosfæren som kan inhaleres til lungene? Olsen, R., et al. (2017). STAMI report No. 2. ISSN no. 1502-0932.

goods, information about take-back systems, where available, or proper disposal is important to prevent contamination of other waste streams.

5.8 Performance

O23 Performance

The product must perform at least as effectively as equivalent products on the market and be compatible with the vehicle surfaces cleaned or polished. The product's performance must be documented as stated below:

a) For windshield washer fluids, see Requirement O17.

b) In the case of consumer vehicle care products, their performance must be documented with a function test as set out in Appendix 8.

c) With professional vehicle care products, performance is to be documented with either:

- a function test in line with Appendix 8 or
- a user test in line with Appendix 9.

d) The performance of polishing products for manual use is to be documented in line with standard ASTM D4955-89 "Standard Practice for Field Evaluation of Automotive Polish".

e) The performance of polishing products for non-manual use is to be documented with either:

- a function test in line with Appendix 8 or
- a user test in line with Appendix 9.

t̄ For consumer vehicle care products: Function test in line with Appendix 8.

t̄ For professional vehicle care products: Function test in accordance with Appendix 8 or user test in accordance with Appendix 9.

t̄ For polishing products for manual use: Test report in line with the standard ASTM D4955-89 "Standard Practice for Field Evaluation of Automotive Polish".

t̄ For polishing products for non-manual use: Function test in accordance with Appendix 8 or user test in accordance with Appendix 9.

Background to O23 Performance

It is important that Nordic Swan Ecolabelled products perform at least as effectively as equivalent products on the market. Achieving good performance with the recommended dose prevents the need for rewashing or overdosing the product. Overdosing wastes resources used for producing the product and packaging and causes avoidable wastewater emissions. The product's performance must therefore be documented with a function test or user test, or in line with the standard ASTM D4955-89 "Standard Practice for Field Evaluation of Automotive Polish", depending on the product's function and area of use.

In the Function Test (Appendix 8), the results must show that, on average, the test product performs as well or better than the reference product. Furthermore, the product should be safe to use on the relevant materials and show no signs of damaging the surfaces tested. In

the User Test (Appendix 9), at least 80% of the professional users who test the product must find the product acceptably effective or very effective in order for the requirement to be met.

5.9 Licence maintenance

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

O24 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 for customer complaint handling must be in one Nordic language or in English.

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

Background to O24 Customer complaints

Nordic Ecolabelling requires that your company has implemented a customer complaint handling system. To document your company's customer complaint handling system, 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.

O25 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.

- Upload your routine or a description.

Background to O25 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 vehicle care products

The purpose of this section is to clarify which environmental parameters, at which stages of the product lifecycle, the Nordic Ecolabel places requirements on for this specific product group and why.

The relevant environmental impacts found in the life cycle of vehicle care products are set out in a MECO scheme below. 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 hotspots identified, 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.

When assessing the requirements to be set, there is a focus on setting requirements within the Nordic Swan Ecolabel's environmental strategic goals. The areas are biodiversity, climate and energy, chemicals, and resource use/resource efficiency (circular economy).

Based on these analyses, Nordic Ecolabelling recognizes a good potential to reduce important environmental impacts of vehicle care products by setting requirements for:

- raw material sourcing - including requirements for plant materials for production of chemical raw materials (especially palm oil and ethanol)
- ingoing substances - addressing exposure of chemicals harmful to health
- ecotoxicity and biodegradability - addressing impacts to aquatic organisms and ecosystems
- packaging - to address plastic and other packaging raw materials and disposal
- user information - to explain to consumers that they can better protect the environment by washing in a location connected to water treatment
- performance - to address chemical and packaging resource use and disposal (avoiding ineffective products that lead to overdosing, a problem that wastes both raw materials and packaging while increasing air and water pollution)

You will find a summary of the RPS in chapter 1, “Summary”.

Relevance, Potential and Steerability (RPS) scheme

Life cycle stages	Area and assessment of R, P, S (high, medium or low)	Comments
Raw materials		
	Fossil oil for production of chemical raw materials R: High P: Low S: Low RPS: Low	R is high due to a large consumption of fossil-based raw materials and energy in production of chemicals. P+S are low, as there is low potential and steerability for minimizing the use of fossil resources for chemical raw materials, due to the limited availability of renewable alternatives for many raw materials. Also, a shift to renewable raw materials can lead to a burden shift concerning biodiversity (see next row).
	Plant materials (especially palm oil and ethanol) for production of chemical raw materials R: High P: Medium S: High RPS: High	R is high due to non-sustainable extraction of renewable raw materials. P is medium. There is low potential and steerability for minimizing the use of palm oil resources for chemical raw materials, since palm oil is the origin of most renewable raw materials, and the availability of alternative renewable raw materials is currently low. Avoiding palm oil-based ingredients is difficult for consumers since origin of ingredients information is not generally provided. However, there is a high potential for minimizing the negative impacts of extraction of palm oil, ethanol, and other renewables. S is high as requirements for RSPO certified palm oil origin can be set together with due diligence and code of conduct. Requirements for the source of bioethanol can also be set.
	Plastic and other packaging raw materials R: High P: High S: High RPS: High	R is high due to a large consumption of energy and fossil resources. P is high as the use of too much packaging and packaging that is not compatible with recycling is widespread, so there is a potential to limit the total amount of packaging and to promote design for recycling. S is high as requirements can be set for the total amount of packaging, the type of packaging and the combination of packaging materials that enables emptying and recycling.
	Water and electrical consumption for production of raw materials R: High P: Medium S: Low RPS: Medium	R is high due to consumption of energy and fossil resources. P is medium as there is a potential to limit the use of energy to lower emissions from production. S is low as the production facilities requires a certain amount of water and energy use to run, and Nordic Ecolabelling currently lacks information about how this can be reduced or possibilities to induce changes.

Production/distribution		
	Water and electrical consumption for production of the vehicle care product R: Medium P: Medium S: Low RPS: Medium	R is medium due to consumption of water, energy, and fossil resources. We expect that water and electrical consumption is higher as raw materials are processed into intermediate ingredients earlier in the supply chain and lower in final production, but this can vary. P is medium as there is a potential to limit the use of water and of energy to lower emissions from production. S is low as the production facilities requires a certain amount of water and energy use to run, and Nordic Ecolabelling currently lacks information about how and to what extent this can be reduced.
	Water and electrical consumption for production of packaging R: High P: Medium S: Low RPS: Medium	R is high due to consumption of water, energy, and fossil resources to produce packaging. P is medium as there is a potential to limit the use of water and of energy to lower emissions from production. S is low as the production facilities requires a certain amount of water and energy use to run, and Nordic Ecolabelling currently lacks information about how and to what extent this can be reduced.
	Transportation from production to retail and to consumers R: Medium P: High S: Low PRS: Medium	R is medium due to consumption of fossil resources for fuel and particulate matter and emissions from distribution vehicles P is high as there is a potential to limit the use on non-renewable energy and to lower emissions from trucks, maybe also to organize logistics better. Product packaging and concentration can also affect transportation needs. S is low as distribution is carried out by external companies transporting both Nordic Swan Ecolabelled and non-Nordic Swan Ecolabelled products. Changing transportation types can require significant resources. However, requirements on weight-to-utility ratio for packaging and product concentration levels can be set.
Use phase		
	Water and electrical consumption when using the vehicle care product R: High P: Medium S: Low RPS: Medium	R is high due to the use of water and consumption of energy and fossil resources for heating water when using non-RTU products. P is medium as the use of water can be minimized and the temperature of the water can be lowered. S is low as energy resources used for heating water is not often controlled by the users. Instructions/recommendations for use can help, but the steerability over users to limit water use or reduce water temperature is low.
	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 limit or exclude ingredients with negative impact on health, like allergens, CMR substances, endocrine disruptors. Special requirements for foam/spray products, which can be inhaled, can be set. Through user information, there is also a potential to limit overdosing and thereby minimizing exposure. High efficacy can also help to reduce overdosing. S is high as requirements to prohibit or strongly limit problematic substances can be set. The amount of product used can be limited by clear instructions for use and foam/spray nozzles that reduce the formation of inhalable aerosols. Requirements for efficacy can be set.

End of life		
	Product emissions from use (degradability and toxicity to aquatic organisms) R: High P: High S: High RPS: High	R is high as vehicle care products and their ingredients can discharge to the environment directly or after wastewater treatment via treated water discharge and sludge use. Vehicle care products therefore risk harming both aquatic organism and the ecosystem, depending on the intrinsic properties of the ingredients. P is high as there is a potential to reduce the content of environmentally hazardous ingredients like substances toxic to aquatic organism, non-degradable substances, microplastics, endocrine disruptors, etc. S is high as requirements to prohibit or strongly limit problematic substances can be set. User information can direct washing to where drainage connects to wastewater treatment.
	Water and electrical consumption for wastewater treatment R: Medium P: Low S: Low RPS: Low	R is medium due to consumption of energy and fossil resources. P is low as there is no potential for the licensees to limit the use on energy. S is low as the sewage treatment plants are run by the public sector and hence difficult to affect by the producer of vehicle care products.
	Packaging disposal (incineration, reuse or recycling) R: Medium P: High S: High RPS: High	R is medium due to the loss of fossil resources, if the packaging is not recycled. P is high as the use of too much packaging and non-compatible packaging components is widespread, so there is a potential to limit the total amount of packaging and to promote design for recycling. S is high as requirements can be set for the total amount of packaging, the type of packaging and the combination of packaging materials that enables emptying and recycling.

Material, Energy, Chemicals and Other (MECO) scheme

Material, Energy, Chemicals and Other impacts during vehicle care products' lifecycle phases

	Raw material	Production	Use	End of life	Transport
Material	Extraction of oil, gas, metals, and minerals for non-renewable raw materials Agricultural production for renewable raw materials Water consumption		Water consumption in use (if applicable, e.g., for mixing concentrated products) Vehicle wash facility: 5-300 L water/vehicle, of which approx one-third is heated water	Loss of the material value if packaging is incinerated (higher impact) vs. recycled (lower impact)	
Energy	Energy consumption to extract/cultivate and process raw materials for product and packaging (15-30% GWP in LCA - higher water content reduces raw chemical contribution but increases packaging contribution)	Energy consumption to produce product and packaging (ca 5% GWP in LCA for liquids; ca 10% for powder or solid products due to energy for drying)	Energy for heating water for product use (50-75% GWP in LCA, if applicable) Powering vehicle wash equipment ca 0.25 - 2 kWh/car Energy for transport from store to home by car (40-50% GWP in LCA for non-concentrated RTU products; otherwise <5%)	Energy from wastewater treatment and solid waste handling (5-20% GWP in LCA)	Energy use of transport vehicles (ca 5% in LCA) Improved fuel efficiency of clean vehicle due to reduced air drag
Chemicals	Agricultural chemicals including pesticides and fertilizers Exposure to hazardous chemicals in the work environment or nearby communities	Exposure to hazardous chemicals in the work environment or nearby communities	Consumer and professional users' exposure to allergens and other hazardous chemicals Emission of VOCs during product use (if applicable)	Direct discharge and wastewater emissions of chemicals toxic to aquatic organisms Emissions of phosphorous compounds that cause eutrophication	Air pollution from transport vehicles
Other	Biodiversity and ecosystem impacts from resource extraction and agriculture Land right disputes and impacts on local and indigenous communities Raw material production competing with food production		Consumer and professional satisfaction influenced by product quality, effectivity, and shelf life Reduced wastage based on dosing instructions and design Reduction in accidents / improved child safety based on packaging design	Biodiversity and health impacts from hazardous chemicals from sewage sludge leaching to land and water Emissions of microplastics or nanomaterial (due to product's formula or using the product)	Particulate matter from transport vehicles

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7 Areas without requirements

Self-separation

There is no requirement that products should be self-separating. Swedish Naturvårdsverket requires that chemical products used for cleaning and care of vehicles are self-separating when used in facilities using oil separators, e.g. wash installations for vehicles. Naturvårdsverket's requirement stems from a non-harmonized part of the EU standard for oil separators, a requirement that has not been implemented in the other Nordic countries. There is currently no reliable test method to determine whether a product is self-separating when used together with other vehicle care products, as is common practice in wash installations for vehicles. Without a reliable test method, the steerability of a Nordic Ecolabelling requirement for self-separation is low. Furthermore, regulations regarding the quality of discharge water from wash installations are already in place and measuring the oil content of the discharge water is more relevant for water quality impacts than testing individual products for self-separation.

Weight-to-utility ratio

There is no requirement concerning a weight-to-use ratio (WUR) for packaging. The background is that there does not appear to be any significant difference in the packaging

from the different manufacturers. There also does not appear to be any demand for specially designed packaging in the way that there is in other product groups such as cleaning products and cosmetics. The crucial factors are the packaging's resistance to chemicals, physical stresses and leakage, and where necessary, that the packaging meets the requirements for UN labelling. There is little interest in unnecessary packaging material, among both manufacturers and customers. Professional products are usually supplied in large volumes (10, 25 or 200 litres), which makes the environmental impact of the packaging small in relation to the product's other impacts.

8 Future criteria

Nordic Ecolabelling will, either after open consultation or in future generations of the product group, assess the possibilities of implementing the following requirements or changes:

- Specifying additional subcategories for products that currently fall under "other products"
- Creating a category for products that are exclusively used in installations that are connected to water treatment, if it is possible to know/control that
- Adding the possibility to use recycled ethanol in windshield washer fluid (in the criteria after consultation)

9 Criteria version history

Nordic Ecolabelling adopted version 7.0 of the criteria for Vehicle Care Products on DAY MONTH YEAR. The criteria are valid until DAY MONTH YEAR.

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.

Responsibility for Compliance with Applicable Legislation

When applying for the Nordic Swan Ecolabel, the applicant/licensee confirms compliance with all current regulatory requirements related to both the exterior and interior environment in connection with the production and handling of the product(s) covered by the application. Furthermore, the applicant declares that all applicable regulatory requirements within the Nordic region are met for the product(s). Compliance with these regulations is a prerequisite for obtaining a licence.

On-site inspection

In connection with handling of the application, Nordic Ecolabelling normally conducts on-site inspection visit/-s to ensure adherence to the requirements. Scope and timing of on-site inspection is evaluated per product group and adapted to the specific application situation.

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

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 vehicle care products 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 vehicle care 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.

Appendix 1 Declaration from the manufacturer of the vehicle care product

To be submitted with an application for a Nordic Swan Ecolabel licence for vehicle care products. To complete the following declaration, you will need declarations for all raw materials (Appendix 2 or equivalent declaration).

This declaration is based on the best available knowledge at the time of the application, including test results and/or declarations from raw material manufacturers. It is subject to change if new information or scientific findings become available. In such cases, an updated declaration must be submitted.

Product name (including all trade names if sold in several countries)
Product volume(s)
Manufacturer
Supplier/importer
The product's area of use (check all that apply):
Cars
Buses
Trucks and trailers
Boats and ships
Motorcycles, bicycles, equivalent
Trains and other rail transport
Airplanes
The product is sold to:
Professional users or business-to-business *Products are considered for professional use if 80% or more of sales are to professionals or sold business-to-business.*
Consumers (i.e., via retail sales) *Products are considered for consumer use if more than 20% of sales are to consumers.*
The product is intended for:
Manual washing
Automated wash installations
Automatic dosing machines (e.g., for do-it-yourself wash wands)
Other (e.g., windshield washer fluid)
Product's subcategory / function:
Alkaline degreaser
Cold degreaser

Drying aid
Insect cleaner
Microemulsion
Shampoo
Wax / Polish
Wheel / rim cleaner
Windshield washer fluid
Other (please state): _____

The product's dosage, stated as grams / litre of in-use solution: _____

State how this value was determined, based on the recommended dosage on the label/product sheet:

_____

_____

Ingoing substances and impurities are defined below, unless stated otherwise in the requirements.

- **Ingoing substances:** All substances* in the Nordic Swan Ecolabelled/chemical product regardless of amount, including additives (e.g. preservatives and stabilizers) from the raw materials. Substances released from ingoing substances (e.g. biocidal active substances generated by preservatives, such as formaldehyde) are also regarded as ingoing substances. Foil that is not removed before use of the product, and that is water soluble is considered as part of the formulation/recipe.

  **N.B. the difference from the definition of substances in the REACH Regulation (EC) No 1907/2006. Whereas a REACH substance encompasses a chemical element or compound as well as its stabilising additives and process impurities, a substance here refers to each of the constituents separately. The constituents of a UVCB substance (Unknown or Variable composition, Complex reaction products or of Biological materials) are also regarded separately, and all known constituents must be regarded.*

- **Impurities:** Trace levels of pollutants, contaminants and residues from production, including production of raw materials, that remain in the chemical product in concentrations ≤ 100 ppm (≤ 0.0100 w%). For formaldehyde other than as a biocidal active substance and for arylamine, the corresponding concentration is ≤ 50 ppm (≤ 0.0050 w%).

  Examples of impurities: Background environmental pollutants from feedstock, as well as contaminants and residues from production such as reactants (incl. monomers), reagents, catalysts, by-products, scavengers, detergents for production equipment, carry-over from other or previous production lines.

- **Impurities in the raw materials** in concentrations ≥ 10 000 ppm (≥ 1.0000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled/chemical product.

Additional information concerning definitions of ingoing substances and impurities

Limit values: The limit for excluded ingoing substances is 0 ppm (unless otherwise stated), while there's a specific defined limit for impurities. The impurity limit applies separately to each individual excluded substance, from each individual raw material. Concentrations of different impurities with the same excluded classification or substance group characteristics shall not be summed up to meet the impurity limit in the labelled product. Also, concentrations of an individual impurity, originating from different raw materials, shall not be summed.

UVCB substances: UVCB substances (Unknown or Variable composition, Complex reaction products or of Biological materials) have a composition of constituents that is not completely known or is variable from time to time. For UVCB substances, all constituents that are known must be declared in the Nordic Swan Ecolabel raw material appendix based on the best available knowledge. All constituents are considered individually and are subject to the chemical requirements, including for instance those on excluded substances and excluded classifications.

However, in the requirements O12 Long-term environmental effects, O13 Critical dilution volume (CDV), and O14 Content of substances which are not aerobically and/or anaerobically biodegradable, the UVCB substance can be considered as one ingoing substance and placed in a single row in the calculation sheet. If the UVCB substance can be assigned a DID-number, the data on the DID-list must be used. N.B. that for UVCBs that are perfumes, a specific approach applies regarding the requirement on environmentally hazardous substances, as described below.

Perfumes: Perfumes constitute a group of complex raw materials that are often, but not always, UVCBs. All perfume constituents must be declared the same way as described for UVCBs above. A perfume can also be placed in one row in the calculation sheet. However, for requirement O12 Long-term environment effects, a perfume must not be regarded as one ingoing substance, irrespective of whether the perfume is an UVCB or not. Instead, each constituent of the perfume mixture must be regarded in a calculation of the weighted sum of substances classified H410, H411 and H412. For perfumes, specific toxicity and biodegradability data can be used. If data is not available, the data on DID 2549 must be used.

Instructions: Provide information about the vehicle care product in the tables below. Mark your answers with X in the relevant column.

O4 Certified raw materials from oil palms	**Yes**	**No**
Does the product contain palm oil or palm kernel oil? This includes by-products, residues, and waste fractions from palm oil industries, such as palm fatty acid distillate and palm effluent sludge. If "yes," complete this section.		
Is this palm oil/palm kernel oil RSPO certified? Traceability: Mark traceability level below and state the certificate/licence number:_____		

No traceability		
Identity Preserved		
Segregated		
Mass Balance		
O5 Classification of ingoing substances	**Yes**	**No**
Does the product contain ingoing substances or impurities classified with any of the hazard codes below, including all classification variants (e.g. H350 also includes H350i)? If the answer to all the classifications below is No, put an X in the column to the right.		
H317 – Skin sensitising category 1 / 1A / 1B		
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled 1 / 1A / 1B		
H340 – May cause genetic defects, hazard category 1A and 1B		
H341 – May cause genetic defects, hazard category 2		
H350 – May cause cancer, hazard category 1A and 1B		
H351 – Suspected of causing cancer, hazard category 2		
H360 – Toxic for reproduction, hazard category 1A and 1B		
H361 – Toxic for reproduction, hazard category 2		
H362 – Toxic for reproduction, lactation		
H372 - Specific target organ toxicity: Repeated exposure category 1		
H420 – Hazardous to the ozone layer		
EUH380 – ED HH 1		
EUH381 – ED HH 2		
EUH430 – ED ENV 1		
EUH431 – ED ENV 2		
EUH440 – PBT		
EUH441 – vPvB		
EUH450 – PMT		
EUH451 – vPvM		
O6 Excluded substances	**Yes**	**No**
Does the product contain any of the following substances as ingoing substances or impurities?		
Alkylphenols (AP) (e.g. butylated hydroxy anisole (BHA, CAS No. 25013-16-5), butylated hydroxytoluene (BHT, CAS No. 128-37-0), alkylphenol ethoxylates (APEOs) and other alkylphenol derivates (APD))		
Aminopolyphosphonates		
Amphoacetates derivatives of N-hydroxyethyl imidazolines (EC No. 271-792-5, 271-794-6, 931-291-0, 938-645-3, 942-589-5, 943-154-2, 944-415-3, 946-565-5, 947-998-2)		
Aromatic solvents *Solvents are defined in Directive 1999/13/EC: Organic substances with a vapour pressure of at least 0.01 kPa at 20 °C*		

Bisphenols and bisphenol derivatives, defined as 34 bisphenols identified by ECHA for further EU regulatory risk management due to known or potential endocrine disruption or reproductive toxicity. *EC/List No. 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)*		
Colourants		
Endocrine disruptors, potential or identified, listed in "Endocrine Disruptor Lists" List I, II or III		
Ethylenediamine tetraacetate (EDTA, CAS No. 60-00-4) and its salts and Diethylenetriamine pentaacetate (DTPA, CAS No. 67-43-6) and its salts		
Halogenated organic compounds		
Heavy metals and metalloids: Mercury (Hg), chromium VI (Cr), cobalt (Co), zinc (Zn), copper (Cu), nickel (Ni), cadmium (Cd), lead (Pb), arsenic (As), antimony (Sb)		
Isothiazolinones (e.g. methylisothiazolinone (MIT), CAS No. 2682-20-4, metylchloroisothiazolinone (CMIT), C(M)IT/MIT (3:1), CAS No. 55965-84-9, CAS No. 26172-55-4, benzisothiazolinone (BIT), CAS No. 2634-33-5, octylisothiazolinone (OIT), CAS No. 26530-20-1 and dichlorooctylisothiazolinone (DCOIT), CAS No. 64359-81-5)		
Linear alkylbenzene sulphonates (LAS)		
Methyldibromo glutaronitrile (MG), CAS no. 35691-65-7		
Nanomaterials/-particles *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:* *one or more external dimensions of the particle are in the size range 1 nm to 100 nm* *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* *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*		
Nitro musks and polycyclic musk compounds		
NTA (nitrilo triacetic acid, CAS-no. 139-13-9), and its salts		
Organic chlorine compounds, hypochlorites and hypochlorous acid		
PBT and vPvB as defined in REACH Annex XIII, including those under ECHA PBT assessment https://echa.europa.eu/da/pbt		
Per- and polyfluoroalkyl substances (PFAS) *PFAS is defined as any substance that contains at least one fully fluorinated methyl (CF3-) or methylene (-CF2-) carbon atom (without any H/Cl/Br/I attached to it)*		
Quaternary ammonium compounds that are not readily aerobic 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)		
Siloxanes		

Silver, colloidal silver, or nanosilver		
Substances of Very High Concern on the REACH Candidate list of SVHC substances https://www.echa.europa.eu/candidate-list-table		
O7 Microplastics	**Yes**	**No**
Does the product contain polymers?		
If yes, does the product contain polymers that are defined as microplastics*? If the product contains polymers that are not defined as microplastics*, please state how the polymers are excluded from the definition (please include test methods and results if relevant): _____ _____ ** Definition: 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: • 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. • polymers that are biodegradable as proved in accordance with Appendix 15 [to REACH, Regulation (EC) No 1907/2006]. • polymers that have a solubility greater than 2 g/L as proved in accordance with Appendix 16 [to REACH, Regulation (EC) No 1907/2006]. • 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".*		
O9: Fragrances	**Yes**	**No**
Does the product contain fragrances (including fragrance substances in plant extracts)? If"yes," please answer the following questions about fragrances:		
Have fragrances been added in line with IFRA guidelines? The guidelines of the International Fragrance Association (IFRA) can be found at www.ifraorg.org/		
Does the fragrance contain BHT? (see O6)		
Does the product contain fragrance allergens that are judged to be sensitising with the hazard statement H317 and/or H334, or which are listed in Annex III of the Cosmetic Regulation? If yes, please send in perfume specifications.		
Does the product contain the fragrance allergens oak moss extract (Evernia prunastri, CAS No. 90028-68-5), tree moss extract (Evernia furfuracea, CAS No. 90028-67-4) or HICC (CAS No. 31906-04-4)?		

O11: VOC	**Yes**	**No**
Does the product contain VOC? *Volatile organic compounds (VOCs) are organic compounds with a vapor pressure of 0.01 kPa or more at 293.15 K (20°C).*		
O12: Long-term environmental effects	**Yes**	**No**
Does the product contain substances classified as environmentally hazardous with H410, H411 and H412? If yes, please state the amount (% by weight) per classification, and for H410 also state the M-factor: _____		
O14: Ethanol	**Yes**	**No**
For concentrated windshield washer fluid: Are at least 10% of the ethanol (on an annual basis) produced from a residual product in line with the Renewable Energy Directive (EU) 2018/2001?		
For pre-mixed windshield washer fluid: Are at least 90% of the ethanol (on an annual basis) produced from a residual product in line with the Renewable Energy Directive (EU) 2018/2001?		
O17-O22 Packaging and User information requirements	**Yes**	**No**
Do all parts of the packaging meet requirements O17-O22?		
For labels on PET packaging or PP fold-out labels on PE packaging, does the label comply with the requirement: The label must not cover more than 50% of the packaging surface for sizes ≤ 500 ml and 70% for sizes > 500 ml.* (O18) **Instructions and example calculations can be found in section 8 in Appendix 3.*		
For rigid plastic packaging, is there any direct printing on the container apart from date codes, batch codes and UFI (Unique Formula Identifier)? (O18)		
For rigid plastic packaging, is the printing ink used compliant with EuPIA Charter on raw material selection and exclusion for printing inks and related products*? (O18) * https://www.eupia.org/wp-content/uploads/2025/04/Ed8_EP_final.pdf		

If the answer to any of the questions in O5-O12 is Yes, please provide the following information for each relevant substance: CAS No. (where possible), chemical name, concentration (in ppm, % by weight or mg/kg). Also state whether the substance is present as an ingoing substance or impurity.

If the product composition changes, a new declaration confirming compliance with the requirements must be submitted to Nordic Ecolabelling.

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

Appendix 2 Declaration from the manufacturer/supplier of a raw material for a vehicle care product

To be submitted with an application for a Nordic Swan Ecolabel licence for vehicle care products.

This declaration is based on the best available knowledge at the time of the application, including test results. If new information or scientific findings become available, please inform Nordic Ecolabelling 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 of the raw material/ingredient.

Manufacturer/supplier:
Trade name of the raw material:
Function of raw material:

Ingoing substances and impurities are defined below, unless stated otherwise in the requirements.

- **Ingoing substances:** All substances* in the Nordic Swan Ecolabelled/chemical product regardless of amount, including additives (e.g. preservatives and stabilizers) from the raw materials. Substances released from ingoing substances (e.g. biocidal active substances generated by preservatives, such as formaldehyde) are also regarded as ingoing substances. Foil that is not removed before use of the product, and that is water soluble is considered as part of the formulation/recipe.

  **N.B. the difference from the definition of substances in the REACH Regulation (EC) No 1907/2006. Whereas a REACH substance encompasses a chemical element or compound as well as its stabilising additives and process impurities, a substance here refers to each of the constituents separately. The constituents of a UVCB substance (Unknown or Variable composition, Complex reaction products or of Biological materials) are also regarded separately, and all known constituents must be regarded.*

- **Impurities:** Trace levels of pollutants, contaminants and residues from production, including production of raw materials, that remain in the chemical product in concentrations ≤ 100 ppm (≤ 0.0100 w%). For formaldehyde other than as a biocidal active substance and for arylamine, the corresponding concentration is ≤ 50 ppm (≤ 0.0050 w%).

  Examples of impurities: Background environmental pollutants from feedstock, as well as contaminants and residues from production such as reactants (incl.

monomers), reagents, catalysts, by-products, scavengers, detergents for production equipment, carry-over from other or previous production lines.

- **Impurities in the raw materials** in concentrations ≥ 10 000 ppm (≥ 1.0000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled/chemical product.

Additional information concerning definitions of ingoing substances and impurities

Limit values: The limit for excluded ingoing substances is 0 ppm (unless otherwise stated), while there's a specific defined limit for impurities. The impurity limit applies separately to each individual excluded substance, from each individual raw material. Concentrations of different impurities with the same excluded classification or substance group characteristics shall not be summed up to meet the impurity limit in the labelled product. Also, concentrations of an individual impurity, originating from different raw materials, shall not be summed.

UVCB substances: UVCB substances (Unknown or Variable composition, Complex reaction products or of Biological materials) have a composition of constituents that is not completely known or is variable from time to time. For UVCB substances, all constituents that are known must be declared in the Nordic Swan Ecolabel raw material appendix based on the best available knowledge. All constituents are considered individually and are subject to the chemical requirements, including for instance those on excluded substances and excluded classifications.

However, in the requirements O12 Long-term environmental effects, O13 Critical dilution volume (CDV), and O14 Content of substances which are not aerobically and/or anaerobically biodegradable, the UVCB substance can be considered as one ingoing substance and placed in a single row in the calculation sheet. If the UVCB substance can be assigned a DID-number, the data on the DID-list must be used. N.B. that for UVCBs that are perfumes, a specific approach applies regarding the requirement on environmentally hazardous substances, as described below.

Perfumes: Perfumes constitute a group of complex raw materials that are often, but not always, UVCBs. All perfume constituents must be declared the same way as described for UVCBs above. A perfume can also be placed in one row in the calculation sheet. However, for requirement O12 Long-term environment effects, a perfume must not be regarded as one ingoing substance, irrespective of whether the perfume is an UVCB or not. Instead, each constituent of the perfume mixture must be regarded in a calculation of the weighted sum of substances classified H410, H411 and H412. For perfumes, specific toxicity and biodegradability data can be used. If data is not available, the data on DID 2549 must be used.

Instructions:

Please list the ingoing substances in the raw material in the table below and indicate 'yes' or 'no' as to whether each substance is regarded as a UVCB substance.

If the raw material contains impurities that are listed under excluded substances or has any of the classifications mentioned in this appendix, write the amount in the box 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.

Name of raw material ingredient	Chemical name	CAS No.	Amount in weight %	Function of the raw material/ ingredient	Suggested DID No.	UVCB substance? State Yes/No

Please note that:

The DID-list (Detergents Ingredients Database) is available on the Nordic Ecolabelling websites.

Substances defined as surfactants according to the Detergent Regulation (EC) 2026/405, must always be reported with the function “surfactant.”

The information provided in this declaration is shared internally with the Nordic Ecolabelling certification personnel for the purpose of evaluating license applications.

O4 Certified raw materials from oil palms	Yes	No
Does the product contain palm oil or palm kernel oil? This includes by-products, residues, and waste fractions from palm oil industries, such as palm fatty acid distillate and palm effluent sludge. If "yes," complete this section.		
Is this palm oil/palm kernel oil RSPO certified? Traceability: Mark traceability level below and state the certificate/licence number:_____		
No traceability		
Identity Preserved		
Segregated		
Mass Balance		
O5 Classification of ingoing substances	**Yes**	**No**
Does the product contain ingoing substances or impurities classified with any of the hazard codes below, including all classification variants (e.g. H350 also includes H350i)? If the answer to all the classifications below is No, put an X in the column to the right.		
H317 – Skin sensitising category 1 / 1A / 1B		
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled 1 / 1A / 1B		
H340 – May cause genetic defects, hazard category 1A and 1B		
H341 – May cause genetic defects, hazard category 2		
H350 – May cause cancer, hazard category 1A and 1B		
H351 – Suspected of causing cancer, hazard category 2		
H360 – Toxic for reproduction, hazard category 1A and 1B		
H361 – Toxic for reproduction, hazard category 2		
H362 – Toxic for reproduction, lactation		

H372 - Specific target organ toxicity: Repeated exposure category 1		
H420 – Hazardous to the ozone layer		
EUH380 – ED HH 1		
EUH381 – ED HH 2		
EUH430 – ED ENV 1		
EUH431 – ED ENV 2		
EUH440 – PBT		
EUH441 – vPvB		
EUH450 – PMT		
EUH451 – vPvM		
O6 Excluded substances	**Yes**	**No**
Does the product contain any of the following substances as ingoing substances or impurities?		
Alkylphenols (AP) (e.g. butylated hydroxy anisole (BHA, CAS No. 25013-16-5), butylated hydroxytoluene (BHT, CAS No. 128-37-0), alkylphenol ethoxylates (APEOs) and other alkylphenol derivates (APD))		
Aminopolyphosphonates		
Amphoacetates derivatives of N-hydroxyethyl imidazolines (EC No. 271-792-5, 271-794-6, 931-291-0, 938-645-3, 942-589-5, 943-154-2, 944-415-3, 946-565-5, 947-998-2)		
Aromatic solvents *Solvents are defined in Directive 1999/13/EC: Organic substances with a vapour pressure of at least 0.01 kPa at 20 °C*		
Bisphenols and bisphenol derivatives, defined as 34 bisphenols identified by ECHA for further EU regulatory risk management due to known or potential endocrine disruption or reproductive toxicity. *EC/List No. 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)*		
Colourants		
Endocrine disruptors, potential or identified, listed in "Endocrine Disruptor Lists" List I, II or III		
Ethylenediamine tetraacetate (EDTA, CAS No. 60-00-4) and its salts and Diethylenetriamine pentaacetate (DTPA, CAS No. 67-43-6) and its salts		
Halogenated organic compounds		
Heavy metals and metalloids: Mercury (Hg), chromium VI (Cr), cobalt (Co), zinc (Zn), copper (Cu), nickel (Ni), cadmium (Cd), lead (Pb), arsenic (As), antimony (Sb)		
Isothiazolinones (e.g. methylisothiazolinone (MIT), CAS No. 2682-20-4, metylchloroisothiazolinone (CMIT), C(M)IT/MIT (3:1), CAS No. 55965-84-9, CAS No. 26172-55-4, benzisothiazolinone (BIT), CAS No. 2634-33-5, octylisothiazolinone (OIT), CAS No. 26530-20-1 and dichlorooctylisothiazolinone (DCOIT), CAS No. 64359-81-5)		
Linear alkylbenzene sulphonates (LAS)		

Methyldibromo glutaronitrile (MG), CAS no. 35691-65-7		
Nanomaterials/-particles *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:* *one or more external dimensions of the particle are in the size range 1 nm to 100 nm* *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* *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*		
Nitro musks and polycyclic musk compounds		
NTA (nitrilo triacetic acid, CAS-no. 139-13-9), and its salts		
Organic chlorine compounds, hypochlorites and hypochlorous acid		
PBT and vPvB as defined in REACH Annex XIII, including those under ECHA PBT assessment https://echa.europa.eu/da/pbt		
Per- and polyfluoroalkyl substances (PFAS) *PFAS is defined as any substance that contains at least one fully fluorinated methyl (CF3-) or methylene (-CF2-) carbon atom (without any H/Cl/Br/I attached to it)*		
Quaternary ammonium compounds that are not readily aerobic 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)		
Siloxanes		
Silver, colloidal silver, or nanosilver		
Substances of Very High Concern on the REACH Candidate list of SVHC substances https://www.echa.europa.eu/candidate-list-table		
O7 Microplastics	**Yes**	**No**
Does the product contain polymers?		
If yes, does the product contain polymers that are defined as microplastics*? If the product contains polymers that are not defined as microplastics*, please state how the polymers are excluded from the definition (please include test methods and results if relevant): _____ _____ ** Definition: 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: • 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.		

• polymers that are biodegradable as proved in accordance with Appendix 15 [to REACH, Regulation (EC) No 1907/2006]. • polymers that have a solubility greater than 2 g/L as proved in accordance with Appendix 16 [to REACH, Regulation (EC) No 1907/2006]. • 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".*		
O9: Fragrances	**Yes**	**No**
Does the product contain fragrances (including fragrance substances in plant extracts)? If"yes," please answer the following questions about fragrances:		
Have fragrances been added in line with IFRA guidelines? The guidelines of the International Fragrance Association (IFRA) can be found at www.ifraorg.org/		
Does the fragrance contain BHT? (see O6)		
Does the product contain fragrance allergens that are judged to be sensitising with the hazard statement H317 and/or H334, or which are listed in Annex III of the Cosmetic Regulation? If yes, please send in perfume specifications.		
Does the product contain the fragrance allergens oak moss extract (Evernia prunastri, CAS No. 90028-68-5), tree moss extract (Evernia furfuracea, CAS No. 90028-67-4) or HICC (CAS No. 31906-04-4)?		
O11: VOC	**Yes**	**No**
Does the product contain VOC? *Volatile organic compounds (VOCs) are organic compounds with a vapor pressure of 0.01 kPa or more at 293.15 K (20°C).*		
O12: Long-term environmental effects	**Yes**	**No**
Does the product contain substances classified as environmentally hazardous with H410, H411 and H412? If yes, please state the amount (% by weight) per classification, and for H410 also state the M-factor: _____		
O14: Ethanol	**Yes**	**No**
For concentrated windshield washer fluid: Are at least 10% of the ethanol (on an annual basis) produced from a residual product in line with the Renewable Energy Directive (EU) 2018/2001?		
For pre-mixed windshield washer fluid: Are at least 90% of the ethanol (on an annual basis) produced from a residual product in line with the Renewable Energy Directive (EU) 2018/2001?		

If the answer to any of the questions in O5-O12 is Yes, please provide the following information for each relevant substance: CAS No. (where possible), chemical name, concentration (in ppm, % by weight or mg/kg). Also state whether the substance is present as an ingoing substance or impurity.

If the product composition changes, a new declaration confirming compliance with the requirements must be submitted to Nordic Ecolabelling.

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

Appendix 3 Analyses, test methods, and calculations

1A Requirements on the analysis laboratory for testing of ecotoxic effects, biodegradability, and inhalable aerosols

The analysis laboratory shall fulfil the general requirements of standard EN ISO/IEC 17025 or have official GLP status.

1B Requirements on the analysis laboratory for performance

The analysis laboratory shall fulfil the general requirements of standard EN ISO/IEC 17025 or have official GLP status.

The applicant's own laboratory, and external testing institutes that do not meet EN ISO/IEC 17025 or have official GLP status, may be approved to carry out performance tests. In this case, the following conditions must be met:

- The organisation must be ISO 9001 certified or certified according to the International Features Standards (IFS) standard for Household and Personal Care.
- The test laboratory must be covered by the certification, and the performance test must be included in the quality management system.
- Nordic Ecolabelling is to be given access to all the raw data from the performance test.

The applicant's own laboratory may be approved to carry out performance tests even if the test laboratory and the performance test are not covered by ISO 9001 or IFS standard for Household and Personal Care certification. The following conditions must be met:

- The organisation must have a quality assurance system, an ISO 9001 or IFS standard for Household and Personal Care certification. The laboratory and the performance test do not have to be within the certification, but it needs to be described in that system.
- Nordic Ecolabelling is to be given access to all the raw data from the performance test.
- The laboratory must document that the test method used is aimed at differentiating between different vehicle care products, and that the results achieved are reproducible.
- It must be possible for Nordic Ecolabelling to come and observe the performance of a test.

2 Approved test methods

International test methods (OECD Guidelines for Testing of Chemicals, ISBN 92-64-1222144) or equivalent methods must be used for documentation. The relevant test methods are stated in the below sections. If equivalent methods are used, these must be assessed by an independent body and approved by Nordic Ecolabelling to ensure that the results are equivalent.

3 Aquatic toxicity

For acute aquatic toxicity, test methods no. 201, 202, 203, and 212 in the OECD Guideline are used. For chronic aquatic toxicity test methods no. 210, 211, 215 and 229 in the OECD Guideline are used. OECD 201 can be used as chronic test if chronic endpoints are chosen.

4 Bioaccumulation

Unless otherwise proven, a substance is considered bioaccumulating if tested for bioaccumulation on fish according to method OECD 305 A-E or OECD 321 and its bioconcentration factor (BCF) is >100. If no BCF value has been determined, a substance is considered bioaccumulating if its logKow value ≥ 3.0 according to method 107, 117 or 123 in the OECD Guidelines for the Testing of Chemicals or equivalent method. If the maximum measured BCF ≤ 100, the substance is not considered bioaccumulating even if logKow ≥ 3.0.

OECD test method 107 cannot be applied to surfactants which have both fat and water-soluble properties. Based on what is known today, for such substances it must be demonstrated with a high degree of certainty that they and their degradation products do not pose any risk to aquatic organisms over a longer time perspective.

5 Aerobic biodegradability

For readily aerobic biodegradability test method no. 301 (A to F), 306 or 310 in the OECD Guidelines are used. For potential (inherently) biodegradability test method no. 302 (A to C) in the OECD Guidelines are used.

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

6 Anaerobic biodegradability

For anaerobic degradability test method no. 311 in the OECD Guidelines, ISO 11734, or ECOTOC no. 28 (June 1988) are used.

Substances that are not surfactants and which are not included in the DID-list or for which data is missing on DID-list list may be exempt from the requirements on anaerobic degradability if they fulfil all the following requirements:

- Not toxic to aquatic organisms (NOEC/ECx > 0.1 mg/l or E/LC50 > 10 mg/l)
- Readily aerobically biodegradable
- Have low adsorption (A < 25%) or high desorption (D > 25%) or are not bioaccumulating

Testing for adsorption/desorption can be carried out under OECD guidelines 106 or under ISO 18749 "Water quality - Adsorption of substances on activated sludge - Batch test using specific analytical methods”.

7 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.

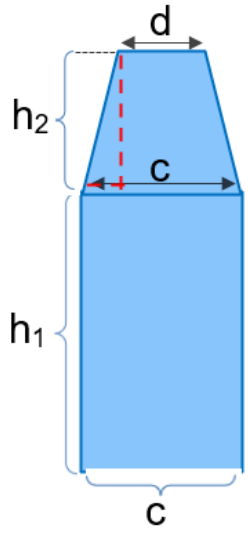
8 Calculation of coverage of label on plastic packaging

Below follows a description of how the calculation of coverage of labels on plastic containers should be carried out. The calculations can be done in Nordic Ecolabelling's calculation sheet for packaging.

Calculation for a non-cylindrical bottle:

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 the packaging are of different size, the maximum percentage shall be fulfilled for each side separately.

The illustration below shows an example of the measurements involved in the calculation of the total area of a non-cylindrical container:



The following formulas can be used to calculate the area:

$$Area\ A_1 = c \cdot h_1$$

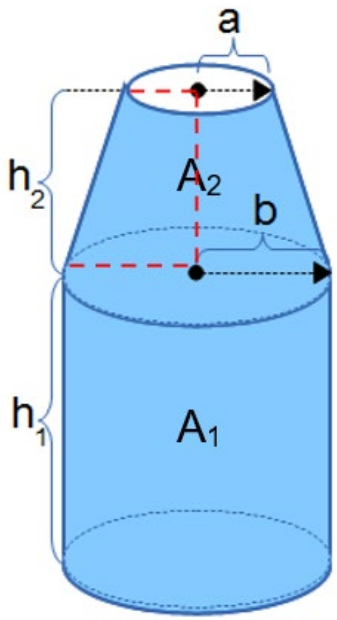
$$Area\ A_2 = \frac{h_2 \cdot (c + d)}{2}$$

$$Total\ area\ A = A_1 + A_2$$

Calculation for a cylindrical bottle:

For a cylindrical container, the calculation shall be based on the three-dimensional profile excluding the bottom and top of the container.

The illustration below shows the measurements involved in the calculation of the total area of a cylindrical container:



The following formulas can be used to calculate the area:

$$Area\ A_1 = 2 \cdot \pi \cdot b \cdot h_1$$

$$Area\ A_2 = \pi \cdot (b + a) \cdot \sqrt{h_2^2 + (b - a)^2}$$

$$Total\ area\ A = A_1 + A_2$$

Appendix 4 Declaration from the manufacturer of ethanol

To be used with an application for a licence for the Nordic Ecolabelling of vehicle care products. To be submitted with an application for a Nordic Swan Ecolabel licence.

This declaration is based on the best available knowledge at the time of the application, including test results. If new information or scientific findings become available, please inform Nordic Ecolabelling 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 of the raw material/ingredient.

Trade name of the ethanol:

Ethanol	**Yes**	**No**
Is the ethanol produced from renewable raw material? *A renewable raw material is defined as a raw material originating from biological material which is renewed continuously in nature within the immediate future, such as cereals and wood (European standard EN 16575:2014).* If yes, which raw materials? _____ _____		
Is the ethanol produced from sugarcane? The requirement does not cover by-products, residues, and waste products from the sugar cane industry itself. The requirement also does not cover residues and waste products generated by households or commercial, industrial, or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose. If yes, is it certified according to Bonsucro standard (EU REDII approved), version 5.1 or later version?		
Is the ethanol produced from genetically modified organisms (GMOs), for example genetically modified maize or sugar beet? *Genetically modified organisms are defined in EU Directive 2001/18. Enzymes and other substances produced by the use of genetically modified microorganisms are not defined as GMOs or material derived from GMOs.*		

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

Appendix 5 User test windshield washer fluids

This appendix must be filled in by the applicant.

The declaration relates to the following product:

Product name
Manufacturer

The user test must meet the following requirements:

1. At least five independent users must test the product for at least two months under relevant conditions.
2. The user must have experience of other windshield washer fluids on the market.
3. The product is to be tested at the dose recommended on the packaging label.
4. The results are to be assessed visually by the user.
5. At least 80% of the users must judge the product to be adequately effective or very effective.
6. The user must fill in Appendix 8. All appendices are to be submitted to Nordic Ecolabelling.
7. A test report describing the user test, including a summary of the results, is to be submitted to Nordic Ecolabelling.

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 6 Form for user test windshield washer fluids

This appendix must be filled in by the applicant.

The declaration relates to the following product:

Product name
Manufacturer

Dosing during the test (grams / litre of in-use solution):

_____

Recommended dosing as stated on the label / packaging (grams / litre of in-use solution):

_____

Test period (minimum two months):

_____

The user's experience of other windshield washer fluids on the market:

☐ No experience

☐ Experience of 1–2 other windshield washer fluids

☐ Experience of 3 or more windshield washer fluids

Overall assessment of the product:

☐ Not effective

☐ Adequately effective

☐ Very effective

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

Appendix 7 Declaration from the manufacturer of the primary packaging

To be used in conjunction with an application for a licence for the Nordic Swan Ecolabelling of vehicle care products.

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 (e.g. bottle, flexible bag / pouch, closure, label))
Weight of packaging part
Packaging name and / or item number (write all the names/numbers this declaration covers)
Packaging material (type of plastic etc.). List all materials included in the packaging component

Plastic packaging (excluding flexible bags / pouches) *Packaging refers to bottles, cans, pots or similar.*	**Yes**	**No**
If the packaging is made from PET (polyethylene terephthalate): Are pigments added?		
Is the packaging dyed with carbon black?		
Are barriers used?		
Are fillers used? If yes, state the concentration and density of the plastic:_____		
Are metal parts included in the packaging? If yes, state the use of the metal parts:_____		
Flexible bags / pouches *Packaging refers to flexible bags / pouches.*	**Yes**	**No**
Is the packaging made from monomaterial, i.e. not laminated with layers of different material?		
Is the packaging dyed with carbon black (except in text and pictograms printed on the bag)?		
Are fillers used? If yes, state the concentration and density of the plastic:_____		

Closures *Closure refers to caps, lids, oblates, seals, and integral dosing devices / pumps.*	**Yes**	**No**
Is oblate or seal included in the closure? If yes, enter material:_____		
Is the closure dyed with carbon black?		
Are barriers used?		
Are fillers used? If yes, state the concentration and density of the plastic:		
Is silicone used in the closure?		
Are metal parts included in the packaging? If yes, state the use of the metal parts:		
Labels and print for rigid plastic packaging	**Yes**	**No**
Is the polymer composition of the label material (excluding adhesive and print) made from either > 99% polyethylene (PE), > 95% polypropylene (PP) or > 98% polyethylene terephthalate (PET)? Please specify the label material and density: _____		
Is the label a fold-out (cross-over) label?		
Is the printing ink used compliant with EuPIA Charter on raw material selection and exclusion for printing inks and related products*? * https://www.eupia.org/wp-content/uploads/2025/04/Ed8_EP_final.pdf		
Recycling design of paper-based packaging	**Yes**	**No**
Does the packaging contain recycled material*? If yes, state the percentage recycled in the wood raw material that is used in the paper/board:_____ * Recycled material is defined in the requirement according to ISO 14021, which applies the following two categories: - "Pre-consumer/commercial" is defined as material that is recovered from the waste stream during a manufacturing process. Materials that are reworked or reground, or waste that has been produced in a process, and can be recycled within the same manufacturing process that generated it, are not considered to be pre-consumer recovered material. - "Post-consumer/commercial" is defined as material generated by households or commercial, industrial, or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose. This includes materials from the distribution chain.		
With reference to the percentage PCR in the wood raw material above: Is the remaining proportion of wood raw material covered by the FSC/PEFC control schemes (FSC controlled wood/PEFC controlled sources)?		
Is the packaging a cardboard packaging?		
Is the packaging a corrugated board packaging?		
Is the packaging laminated with any barrier material? If yes, please state the barrier material type:_____ If yes, is the laminate on one side only?		
Does the packaging contain PVC (polyvinyl chloride) or other types of halogenated plastics?		
Does the packaging contain metal seals or other metal parts?		
Is the packaging material solid coloured?		

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

Appendix 8 Function test

This appendix must be filled in by the applicant.

The declaration relates to the following product:

Product name
Manufacturer

The function test documents the performance of a product by means of a controlled, systematic test. The function test can be done by the applicant in-house or by an external laboratory. Nordic Ecolabelling must approve the test method before the test is carried out.

The function test must meet the following requirements:

1. The test method must be representative of the way the product is used and must confirm all performance claims made on the package, in marketing materials, and/or on the product sheet. This means that the following parameters must replicate the conditions under which the product is intended to be used and/or claimed to be effective: soil type(s), surface types/materials being tested, water temperature, amount of product used, time allowed for product to work, mechanical actions, etc.
2. In the test, the product must be compared with an equivalent product that is already on the market. It is important that products in the same category are compared with each other, so that water-based products, for example, are not compared with solvent-based products and degreasers compared with shampoos.
3. The product must be tested in the lowest concentration recommended on the label / product sheet, or provide an explanation why a higher dosage is used.
4. Required test method for products claiming washing or cleaning effect:
    - Soil types for washing and cleaning products must match performance claims related to the product, if applicable. If no soil type is explicitly stated, realistic soil types should be tested, for example, one or more of the following: asphalt/bitumen, brake dust, rust, road dust, traffic film/traffic dirt, insects, grease, oil, soot, salt/road salt, mineral deposits, biological growth, tree sap, etc., depending on how the product is meant to be used.
    - The soil(s) shall be applied to at least 20 test surfaces (pieces of relevant material or places marked on a vehicle).
    - The test shall be performed using a random selection of soiled test surfaces, i.e., at least 10 surfaces shall be chosen at random for the test product and the same number for the reference product.
    - The test implementation including time allowed for the product to work and any mechanical actions should be realistic for product use and replicable across test samples.
5. The results are to be assessed visually and / or measured with an instrument.

6. Requirement level: the results must show that, on average, the test product performs as well or better than the reference product. Furthermore, the test surfaces must not appear to be damaged from using the product.
7. A test report describing the method, including photos or other documentation of the results, is to be submitted to Nordic Ecolabelling. The test report must also include the product name and the version of the formulation that is specified in the licence application. #A5C9EB

Test conditions	**Description of Test** **(write here or in the test report)**
Soil types (for washing and cleaning products)	
Description of tested surfaces: material(s) and/or object(s) (wheel, car part, boat part, train part, etc.)	
Water temperature	
Dosing of test product (grams / litre of in-use solution (for products to be diluted before use) or other unit)	
Recommended dosing of test product (as stated on the label)	
Time to work (minutes)	
Mechanical actions (sponge, cloth, etc.)	
Reference product (name of product and manufacturer)	
Dosing of reference product (grams / litre of in-use solution (for products to be diluted before use) or other unit)	
Recommended dosing of reference product (as stated on the label)	

Assessment:

☐ Visual (photo)

☐ Measurement with instrument

Results:

☐ Less effective than reference product

☐ Equally as effective as reference product

☐ More effective than reference product

Material compatibility:

☐ Test surfaces are damaged by the test product

☐ Test surfaces are not damaged by the test product

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 9 User test

This appendix must be filled in by the applicant.

The declaration relates to the following product:

Product name
Manufacturer

The user test documents the performance of a product by means of real-life use of the product by independent users. The user test must meet the following requirements:

1. At least five professional users must test the product on at least 10 occasions under relevant conditions.
2. The product is to be tested at the dose recommended on the packaging label.
3. At least 80% of the professional users must judge the product to be adequately effective or very effective.
4. The professional users must fill in Appendix 10. All appendices are to be submitted to Nordic Ecolabelling.
5. A test report describing the user test, including a summary of the results, is to be submitted to Nordic Ecolabelling.

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 10 Form for user test

This appendix must be filled in by the professional user.

The declaration relates to the following product:

Product name
Manufacturer

Dosing during the test (grams / litre of in-use solution):

_____

Recommended dosing as stated on the label / packaging (grams / litre of in-use solution) for:

May – September: _____

October – April: _____

Is the product used in combination with other chemical products?

☐ Yes ☐ No

If yes, what are they? _____

No. of occasions on which the product has been tested (minimum 10): _____ times.

Type of wash installation: _____

Item washed: _____

Overall assessment of the product:

☐ Not effective

☐ Adequately effective

☐ Very effective

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