

Nordic Ecolabelling for
Car, boat and train care products



Consultation for version 6.0 • 16 December 2019 – 28 February 2020

Content

1	General requirements.....	6
2	Requirements concerning constituent substances.....	9
3	Ecotoxicity and biodegradability	15
4	Supplementary requirements for windscreen washer fluid.....	17
5	Packaging and user information	18
6	Performance	20
7	Quality and regulatory requirements.....	21

Appendix 1	Description of the product
Appendix 2	Declaration from the manufacturer of the product
Appendix 3	Declaration from the manufacturer of the raw material
Appendix 4	Test methods and analysis laboratories
Appendix 5	POCP values for VOC
Appendix 6	User test windscreen washer fluids
Appendix 7	Form for user test windscreen washer fluids
Appendix 8	Declaration from the manufacturer of the primary packaging and closures
Appendix 9	Function test
Appendix 10	User test
Appendix 11	Form for user test

013 Car, boat and train care products, consultation, 16 December 2019

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

Addresses

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

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What is a Nordic Swan Ecolabelled car, boat and train care product?

Tough requirements concerning raw materials, chemicals and packaging ensure that Nordic Swan Ecolabelled car, boat and train care products reduce the impact on our environment.

Nordic Swan Ecolabelled car, boat and train care products:

- Meet strict requirements regarding environmentally hazardous chemicals, including requirements targeting ecotoxicity and degradability.
- Comply with tough requirements relating to chemicals that are harmful to health, including a ban on substances that are classified as carcinogenic, mutagenic or reprotoxic.
- Perform effectively and produce the required results.
- Meet tough requirements concerning volatile organic compounds and thus make a minimal contribution to the formation of tropospheric (near ground level) ozone.
- Have packaging that contributes to a circular economy, not least through its design and material choices.
- Have information on the packaging about how to use the product. This includes instructions on washing in a location where the drains are connected to a water treatment plant in order to protect the environment.

Why choose the Nordic Swan Ecolabel?

- The licence holder may use the Nordic Swan Ecolabel trademark for marketing. The Nordic Swan Ecolabel is a very well-known and well-reputed trademark in the Nordic region.
- The Nordic Swan Ecolabel is a simple way of communicating environmental work and commitment to customers.
- The Nordic Swan Ecolabel clarifies the most important environmental impacts and thus shows how a company can cut emissions, resource consumption and waste management.
- Environmentally adapted operations prepare manufacturers for future environmental legislation.
- Nordic Swan Ecolabelling can be seen as providing a business with guidance on the work of environmental improvements.
- The Nordic Swan Ecolabel not only covers environmental issues but also quality requirements, since the environment and quality often go hand in hand. This means that a Nordic Swan Ecolabel licence can also be seen as a mark of quality.

What can carry the Nordic Swan Ecolabel?

Products that have a cleaning function (e.g. degreasers, shampoos and windscreen washer fluids) and/or polishing function (e.g. waxes or polishes) for the care of cars, buses, trucks, boats, ships, trains and other rail transport can be Nordic Swan Ecolabelled.

Both consumer products and products for professional use can be Nordic Swan Ecolabelled.

Drying aids for automated vehicle wash installations can only be Nordic Swan Ecolabelled if they are part of a system together with other Nordic Swan Ecolabelled cleaning or polishing products for automated wash installations. All the products in the system must carry the Nordic Swan Ecolabel.

Only sprays with a foaming nozzle can be Nordic Swan Ecolabelled.

The criteria are not applicable to cleaning/polishing products whose main purpose is something other than the care of cars, buses, trucks, boats, ships, trains and other rail transport.

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.

How to apply

Application and costs

For information about the application process and fees for this product group, please refer to the respective national website. For addresses see page 3.

What is required?

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

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:

☒ Enclose

ℙ Requirement checked on site

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

License 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 extended or adjusted, in which case the licence is automatically extended and the licensee informed.

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

On-site inspection

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

Queries

Please contact Nordic Ecolabelling if you have any queries or require further information. See page 3 for addresses. Further information and assistance (such as calculation sheets or electronic application help) may be available. Visit the relevant national website for further information.

1 General requirements

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the Nordic Swan Ecolabelled car, boat and train care products. Impurities are not regarded as ingoing substances and are exempt from the requirements.

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

- Ingoing substances: all substances in the Nordic Swan Ecolabelled product, including additives (e.g. preservatives and stabilisers) in the raw materials. Substances known to be released from ingoing substances (e.g. formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
- Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials that remain in the raw material/ingredient and/or in the in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0,0100 w-%, 100 mg/kg) in the Nordic Swan Ecolabelled product.
- Impurities in the raw materials exceeding concentrations of 1,0 % are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.

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

O1 Description of the product

The applicant must provide the following information about the product:

- Description of the product's area of use.
 - Whether the product is intended for consumers or professional use.
 - Whether the product is intended for manual washing or automated wash installations, and whether it is part of a system together with other Nordic Swan Ecolabelled cleaning or polishing products for automated wash installations.
 - The product's dosing, stated as grams/litre of working solution. State how this value was arrived at, based on the recommended dosing on the label/product sheet.
- Description of the product in line with Appendix 1.
- Product sheets and labels can be sent in as part of the documentation.

O2 Formulation

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

- Trade name
- Chemical name of main component and any additives (e.g. colourants, preservatives and stabilisers)
- 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 2016 or later, which is used when calculating chemical requirements. The DID list can be obtained from Nordic Ecolabelling's websites, see addresses on page 3.*

- 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)).

O3 Sustainable raw materials

The licence holder must document that they are working on increasing their purchases of renewable raw materials that are sustainable and/or that they require the manufacturer to work on increasing its purchase of sustainable, renewable raw materials for Nordic Swan Ecolabelled car, boat and train care products. This may be done, for example, by promoting certified raw materials, avoiding problematic raw materials, switching from fossil raw materials to sustainable alternatives or increasing the proportion of palm oil that has RSPO certification (Round Table for Sustainable Palm Oil). The targets must be quantifiable, time-based and set by senior management.

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).

- Policy or equivalent documentation stating the licence holder's work on ensuring sustainable, renewable raw materials in Nordic Swan Ecolabelled products, including quantifiable and time-based targets that are set by senior management.

O4 Classification of the product

The product must not have a classification listed in Table 1.

Table 1 Classification of the product

CLP Regulation 1272/2008:		
Hazard class	Code for hazard class and category	Hazard statement code
Toxic to aquatic organisms	Aquatic Acute 1	H400
	Aquatic Chronic 1	H410
	Aquatic Chronic 2	H411
	Aquatic Chronic 3	H412
	Aquatic Chronic 4	H413
Hazardous to the ozone layer	Ozone	H420
Carcinogenicity*	Carc. 1A or 1B	H350
	Carc. 2	H351
May cause genetic defects*	Muta. 1A or 1B	H340
	Muta. 2	H341
Toxic for reproduction*	Repr. 1A or 1B	H360
	Repr. 2	H361
	Lact.	H362
Acute toxicity	Acute Tox. 1 or 2	H300
	Acute Tox. 1 or 2	H310
	Acute Tox. 1 or 2	H330
	Acute Tox. 3	H301
	Acute Tox. 3	H311
	Acute Tox. 3	H331
	Acute Tox. 4	H302
	Acute Tox. 4	H312
	Acute Tox. 4	H332
		Exception: Products for professional use may be classified as H302.
Specific target organ toxicity: single exposure and repeated exposure	STOT SE 1	H370
	STOT SE 2	H371
	STOT RE 1	H372
	STOT RE 2	H373
Skin corrosion or irritation	Skin Corr. 1A, 1B or 1C	H314
		Exception: Professional products for automated wash installations may be classified as H314 if the classification concerns pH.
Aspiration hazard	Asp. Tox. 1	H304
		Exception: Products for professional use may be classified as H304.
Respiratory or skin sensitising**	Resp. Sens. 1, 1A or 1B	H334
	Skin sens. 1, 1A or 1B	H317
Explosive		H240
Extremely flammable		H224
		Exception: Windscreen washer fluid may be classified as H224.
Highly flammable		H225
		Exception: Windscreen washer fluid may be classified as H225.

Please note that the producer is responsible for the classification.

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

*** Products labelled as EUH208 “Contains (name of sensitising substance). May cause an allergic reaction” cannot be Nordic Swan Ecolabelled.*

- Safety data sheet for the product in line with prevailing European legislation (Annex II to REACH (Regulation 1907/2006/EEC)).
- Appendix 2 for the product or equivalent certification duly completed and signed.
- If an exception is made for H302 and/or H304: Confirmation that the product is intended for professional use.
- If an exception is made for H314: Documentation confirming that the classification relates to pH.

2 Requirements concerning constituent substances

O5 Classification of constituent substances

The constituent substances must not have a classification listed in Table 2.

Table 2 Classification of constituent substances

CLP Regulation 1272/2008:		
Hazard class	Code for hazard class and category	Hazard statement code
Carcinogenicity*	Carc. 1A or 1B Carc. 2	H350 H351**
May cause genetic defects*	Muta. 1A or 1B Muta. 2	H340 H341
Toxic for reproduction*	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362
Respiratory or skin sensitising*	Resp. Sens. 1, 1A or 1B Skin sens. 1, 1A or 1B	H334 H317

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

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

**** Exemptions from the classification:*

- *Professional products for automated wash installations 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 O8.*
- *Sensitising preservatives, see separate requirements in O9.*

- ☒ Safety data sheet for each raw material in line with prevailing European legislation (Annex II to REACH (Regulation 1907/2006/EEC)).
- ☒ Appendix 2 for the product and Appendix 3 for all raw materials or equivalent certification duly completed and signed.
- ☒ For professional products for automated wash installations 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.

O6 Organic substances, degradability

All organic constituent substances and their degradation products must be:

- a) Aerobically biodegradable in accordance with OECD guidelines 301 A-F or other equivalent method (surfactants are exempted from the requirement concerning a 10-day window).
- b) Anaerobically biodegradable in accordance with ISO 11734 or other equivalent method.

Other scientifically accepted test methods may be used if the test results are assessed by an independent body and checked by Nordic Ecolabelling.

The following compounds are exempted from the degradability requirement:

- non-chlorinated polymers
- non-chlorinated natural and synthetic waxes*
- preservatives
- fragrances (see requirement O8)
- colourants in windscreen washer fluid
- colourants in professional products
- denaturing agents in ethanol

** Note the definition of and ban on microplastics in requirement 07.*

- ☒ The aerobic and anaerobic biodegradability of all organic substances in the product with reference to the DID list, version 2016 or later. For substances not on the DID list, or where data on the DID list is missing, the associated documentation must be submitted. See Appendix 4 for test methods and analysis laboratories. If a substance is exempted from the degradability requirement, state which exception it falls under.

O7 Substances prohibited from products

- Colourants
Exception: Products for professional use and windscreen washer fluid may contain colourants.
- Linear alkylbenzene sulphonates (LAS)
- Alkylphenol ethoxylates (APEO) and/or alkylphenol derivatives (APD)
- EDTA (ethylenediaminetetraacetic acid) and its salts and DTPA (diethylenetriamine pentaacetate)
- Quarternary ammonium salts that are not readily biodegradable
- Organic chlorine compounds and hypochlorites
- Benzalkonium chloride

- MG (methyldibromo glutaronitrile, CAS no. 35691-65-7)
- MI (methylisothiazolinone, CAS no. 2682-20-4)
- Nitro musks and polycyclic musk compounds
- Phthalates
- Halogenated and/or aromatic solvents
- Fluorine surfactants and other per- and polyfluorinated compounds (PFAS)
- BHT (butylated hydroxytoluene, CAS no. 128-37-0)

Exception: Fragrances may contain < 100 ppm BHT on condition that the level in the end product does not exceed 1 ppm.

- D4 (octamethylcyclotetrasiloxane, CAS no. 556-67-2)
- D5 (decamethylcyclopentasiloxane, CAS no. 541-02-6)
- D6 (dodecamethylcyclohexasiloxane, CAS no. 540-97-6)
- HMDS (hexamethyldisiloxane, CAS no. 107-46-0)

Impurities of D4, D5, D6 and HMDS in silicone raw materials in concentrations of more than 0.10% are always counted as constituent substances.

- Microplastics

Microplastics are defined according to ECHA's working definition used in ECHA's restriction proposal for intentionally added microplastics: material consisting of solid polymer-containing particles, to which additives or other substances may have been added, and where $\geq 1\%$ w/w of particles have (i) all dimensions $1\text{nm} \leq x \leq 5\text{mm}$, or (ii), for fibres, a length of $3\text{nm} \leq x \leq 15\text{mm}$ and length to diameter ratio of >3 .

Polymers that occur in nature that have not been chemically modified (other than by hydrolysis) are excluded, as are polymers that are (bio)degradable as set out in the restriction proposal criteria in Appendix X.

- Endocrine disruptors according to the following:
 - Substances that are considered to be potential endocrine disruptors according to the EU commission's Endocrine Disruptor priority list, category 1 and 2, or future priority lists of the EU commission.
https://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf (Appendix L, page 238 onwards)
 - Substances that have been identified by the Danish Centre on Endocrine Disruptors (CeHoS) as fulfilling or likely fulfilling the WHO definition of an endocrine disruptor.
http://www.cend.dk/files/DK_ED-list-final_2018.pdf (table 8 and 13), or later publications
 - Substances that have been identified as endocrine disruptors according to the scientific criteria in the Biocidal Products Regulation (EU 2017/2100) or Plant Protection Products Regulation (EU 2018/605), respectively.
 - Substances that have been identified as endocrine disruptors by ECHA's ED Expert Group: <https://echa.europa.eu/fi/ed-assessment>

- Substances that have been judged in the EU to be PBT (Persistent, Bioaccumulative and Toxic) or vPvB (very Persistent and very Bioaccumulative), in accordance with the criteria in Annex XIII of REACH, plus substances that have not yet been investigated but that meet these criteria.
- Substances categorised as Substances of Very High Concern (SVHC) and included on the Candidate List: <https://echa.europa.eu/candidate-list-table>.
- Substances in Annex XVII of REACH (list of restrictions).
- Nanomaterials/particles

Nanomaterials/particles are defined in accordance with the European Commission's definition of nanomaterials dated 18 October 2011, "A natural, incidental or purposely manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for at least 50% of the particles in the number size distribution, one or more external dimensions are in the size range of 1–100 nm." Examples are ZnO, TiO2, SiO2, Ag and laponite with particles of nanosize in concentrations exceeding 50%. Polymer emulsions are not considered to be nanomaterial.

- Appendix 2 for the product and Appendix 3 for all raw materials or equivalent certification duly completed and signed.

O8 Fragrances

The requirement also includes fragrance substances in plant extracts.

Fragrances must not be present in consumer products* and professional pre-wash products.

Pre-wash products include alkaline degreasers, cold degreasers, microemulsions, insect removers and wheel rim cleaners.

The following applies for other products for professional use:

- a) Fragrances must be added in line with IFRA's guidelines.

The guidelines of the International Fragrance Association (IFRA) can be found at www.ifraorg.org/

- b) Fragrance substances that are judged to be sensitising with hazard code H317 and/or H334 may only be present to a maximum of 0.0100% (100 ppm) per substance in the product**.
- c) Fragrance substances subject to declaration must not exceed 0.0100% (100 ppm) per substance in the product**.
- d) Fragrance substances in Table 3 must not exceed 0.0100% (100 ppm) per substance in the product.

Table 3 Other fragrance substances may be present to a maximum of 100 ppm

INCI name (or fragrance name in accordance with CosIng)	CAS no.
Cananga Odorata and Ylang-ylang oil	83863-30-3; 8006-81-3
Eugenia Caryophyllus Leaf / Flower oil	8000-34-8

Jasminum Grandiflorum / Officinale	84776-64-7; 90045-94-6; 8022-96-6
Myroxylon Pereirae	8007-00-9;
Santalum Album	84787-70-2; 8006-87-9
Turpentine oil	8006-64-2; 9005-90-7; 8052-14-0
Verbena absolute	02/12/8024
Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.	8007-80- 5/84649-98-9

- e) HICC, chloroatranol, atranol and Lilial are not permitted in the product.

* *Windscreen washer fluid may contain fragrances.*

** *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.*

- Appendix 2 for the product and Appendix 3 for all raw materials or equivalent certification duly completed and signed.
- Fragrance specifications.
- Calculation of the amount of the 26 allergens, substances classified as H334 and/or H317 and substances listed in Table 4 that are present in the end product.
- For professional products for automated wash installations that are exempted from requirements b) and c): Documentation showing the packaging is designed so that the user is at no risk of coming into contact with the product.

09 Preservatives

- a) Preservatives included in the product or in constituent substances must not be bioaccumulative. Preservatives are assessed to be non-bioaccumulative if $BCF < 500$ or $\log Kow < 4$. If both values are available, the value for the highest measured BCF is to be used, see Appendix 4.
- b) Preservatives that are judged to be sensitising with hazard code H317 and/or H334 may only be present in the product to a maximum of 0.0100% (100 ppm). Note that requirement O4 must be met for the product.

Note that MI (methylisothiazolinone, CAS no. 2682-20-4) is excluded from use in requirement O7.

- Appendix 2 for the product and Appendix 3 for all raw materials or equivalent certification duly completed and signed.
- Documentation of BCF or logKow.
- Calculation of the amount of sensitising preservative in the end product.

O10 Phosphorus

Phosphates, phosphonates, phosphonic acid and phosphoric acid must not be present in products for boats and ships.

In other products, phosphates, phosphonates, phosphonic acid and phosphoric acid may not be present in quantities such that the total amount of phosphorus (P) exceeds 2.5 grams/litre of working solution. If the dosing is stated as an interval, the highest recommended dosage is to be used for the calculation.

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. This means that the amount of phosphate in liquid cleaning agents must not exceed 0.2 wt% P.

- Calculation of the amount of phosphate, phosphonate, phosphonic acid and phosphoric acid (calculated as phosphorus (P)) in grams/litre of working solution. Nordic Ecolabelling's calculation sheet may be used. It is available from Nordic Ecolabelling's websites.
- Documentation of the amount of phosphate (wt% P in the product) showing that the product to be sold on the Norwegian market complies with Norwegian legislation.

O11 VOC (volatile organic compounds)

Windscreen washer fluid is exempted from this requirement.

The product may only contain a limited amount of volatile organic compounds (VOC) that can contribute to the formation of photochemical smog, measured as POCP.

- c) The product's content of VOC must be calculated. If a product has a VOC content < 1.2%, the POCP calculation in requirement b) does not have to be performed, since the requirement will be met even in a worst-case scenario.
- d) The maximum content of VOC that can contribute to the formation of photochemical smog in products is 12 g ethylene equivalents/kg product.

$$\frac{\sum m_i \cdot POCP_i + m_2 \cdot POCP_2 + \dots}{m_{\text{product}}} \leq 12 \text{ g } C_2H_2 \text{ equivalents/kg}$$

m_i = mass in grams of VOC_i in the product

$POCP_i$ = VOC_i substance's POCP factor in Appendix 5

m_{product} = the product's mass in kg

Organic substances are defined as VOC if the vapour pressure is > 0.01 kPa at 20°C.

If information about the vapour pressure of an organic substance that has a boiling point of < 250°C at 101.3 kPa (1 atm) is not available, the organic substance is to be included in the POCP calculation.

POCP: Photochemical Ozone Creation Potential (photochemical ozone is a main constituent of smog).

For solvents not included in Appendix 5, the calculation may be based on the POCP values derived from completed tests. Alternatively, the worst case for the VOC group in Appendix 5 may be used.

- Appendix 3 for all raw materials or equivalent certification duly completed and signed.
- Calculation of the product's VOC content. Nordic Ecolabelling's calculation sheet may be used. It is available from our websites.
- POCP calculation in line with the requirement.

3 Ecotoxicity and biodegradability

O12 Long-term environmental effects

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

$$100 \cdot C_{H410} + 10 \cdot C_{H411} + C_{H412} < 0.5$$

where

C_{H410} = concentration of substances with H410 in grams/litre of working solution

C_{H411} = concentration of substances with H411 in grams/litre of working solution

C_{H412} = concentration of substances with H412 in grams/litre of working solution

- f) The use of constituent substances which are classified* with hazard code H400 is limited as follows:

$$C_{H400} < 0.4 \text{ grams/litre of working solution}$$

*Surfactants classified as H412 are exempted from the requirement on the condition that they are readily biodegradable** and anaerobically biodegradable***.*

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

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

*** In accordance with the DID list, version 2016 or later. If the substance is not on the DID list, or data on the DID list is lacking, the substance is documented in accordance with test method no. 301 A-F or no. 310 in the OECD guidelines for testing of chemicals, or other equivalent test methods.*

**** In accordance with the DID list, version 2016 or later. If the substance is not on the DID list, or data on the DID list is lacking, the substance is documented in accordance with ISO 11734, ECETOC no. 28 (June 1988), OECD 311, where biodegradability of at least 60% is achieved under anaerobic conditions.*

- Summary of the product's content in % by weight of substances classified as H400, H410, H411 and H412.

- ☒ Appendix 2 for the product and Appendix 3 for all raw materials or equivalent certification duly completed and signed.
- ☒ Calculation according to the above formula showing that requirement a) is fulfilled. Nordic Ecolabelling’s calculation sheet may be used. It is available from our websites.
- ☒ Report on surfactants that are to be exempted from the requirement (quantity, classification, biodegradability).
- ☒ Calculation to show that requirement b) is fulfilled. Nordic Ecolabelling’s calculation sheet may be used. It is available from our websites.

O13 CDV (product’s critical dilution volume)

Windscreen washer fluid is exempted from this requirement.

The product’s critical dilution volume (CDV) must not exceed the maximum values stated in Table 4.

Table 4 Max values for CDV_{chronic} / litre working solution per product type

Product type	Max value for CDV _{chronic} / litre working solution
Alkaline degreaser	150,000
Cold degreaser	250,000
Microemulsion	250,000
Shampoo	100,000
Drying aid	30,000
Wax	125,000
Wheel/rim cleaner	250,000
Insect cleaner	250,000
Other products	25,000

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

$$CDV_{\text{chronic}} = \sum CDV_i = \sum (\text{dose}_i \times DF_i \times 1000 / TF_{i \text{ chronic}})$$

dose_i = the constituent volume of each individual substance “i”, in grams/litre of working solution

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

$TF_{i \text{ chronic}}$ = chronic toxicity factor for substance “i”, in accordance with the DID list

If $TF_{i \text{ chronic}}$ is lacking, $TF_{i \text{ acute}}$ can be used.

CDV is calculated based on the highest stated working solution (grams/litre of working solution) on the label.

Reference to the DID list, version 2016 or later. For substances not on the DID list, the parameters must be calculated based on the guidance in part B of the DID list, and the related documentation must be submitted.

- ☒ Calculation of CDV_{chronic} for the product. Nordic Ecolabelling’s calculation sheet may be used. It is available from our websites.
- ☒ Appendix 3 for all raw materials or equivalent certification duly completed and signed.

4 Supplementary requirements for windscreen washer fluid

The requirements in this section apply only to windscreen washer fluid.

O14 Ethanol

Ethanol contained in windscreen washer fluid must meet the following requirements:

- a) The ethanol must be based on 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 50% must be produced from a residual product in line with the Renewable Energy Directive (EU) 2018/2001¹.

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) The ethanol must not be based on sugar cane.

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.

- Declaration of the type of renewable raw material used.
- Documentation showing that the residual product meets the definition of residual product in the Renewable Energy Directive (EU) 2018/2001.

O15 Performance and frost protection

The 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 Appendices 6 and 7.

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 Appendices 6 and 7.
- 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.

¹ 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.

5 Packaging and user information

This chapter contains requirements concerning plastic packaging and user information.

016 Recycling design of plastic packaging and closures (excluding pouches)

Plastic packaging must have a design that facilitates material recovery. This means that:

- Packaging must be made from either a polyethylene (PE) or polypropylene (PP) monomaterial.
- Packaging and closures must not be dyed with Carbon Black.
Exception: 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.
- Barriers are not permitted.
- 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, closures or labels.
Exception: Metal springs in pump bottles.
- Polystyrene (PS), polyethylene terephthalate (PET) and polyvinyl chloride (PVC) or plastic based on other types of halogenated plastics may not be used in labels.
- PET-G (polyethylene terephthalate glycol-modified) must not be used in labels/shrink sleeve labels.
- Labels/shrink sleeve labels must not cover more than more than 60% of the packaging surface. An exemption is made for labels/shrink sleeve labels that are the same plastic as the packaging.

The calculation of the percentage is to be based on the two-dimensional profile of the packaging. If the label is of a different size on the front and the back of the packaging, the 60% requirement must be met for each side separately. Only the areas that are visible to the NIR detector when the packaging is placed on the sorting conveyor need to be included in the calculation. This means that the sides of the packaging and the upper and lower area should not be included in the calculation. Similarly, the calculation for cylindrical packaging is to be based on the areas that are visible to the NRI detector when the packaging is lying in a worst-case position on the sorting conveyor.

Packaging refers to bottles, cans, pots or similar. Closure refers to caps/lids and integral dosing devices/pumps.

Note that Nordic Ecolabelling will be conducting a project on labels to see whether more label-related requirements should be included in the criteria. A decision will be taken and an implementation plan presented in March 2021.

- ☒ Packaging specification (including bottle/can/pot, labels and closure) or certification showing which plastic has been used and the colour of the packaging and closure.
- ☒ Appendix 8 or equivalent certification duly and signed.
- ☒ Calculation showing that the density limit has not been exceeded.
- ☒ Information on the size of the label in relation to the packaging.

O17 Recycling design of pouches

Pouches must have a design that facilitates material recovery. This means that:

- Packaging and closures must be made from either a polyethylene (PE) or polypropylene (PP).
- The packaging must be a monomaterial, i.e. not laminated with layers of different materials. Barrier coatings must only use EVOH (ethylene vinyl alcohol) and make up max 2% of the total weight.
- Packaging and closures must not be dyed with Carbon Black.

Exception:

- *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.
- Polystyrene (PS), polyethylene terephthalate (PET) and polyvinyl chloride (PVC) or plastic based on other types of halogenated plastics must not be present in labels.

Here, packaging means pouches. Closure means caps and lids.

- ☒ 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 8 or equivalent certification duly and signed.
- ☒ A calculation showing that the density limit has not been exceeded.

O18 User information

The product's label must include the information below. In the case of products for professional use, 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 concentrated windscreen washer fluid.
- How the packaging should be sorted/recycled in each Nordic country in which it is sold. Text or symbols may be used.

- For consumer products: Encouragement to wash in a place where the water drains into a sewerage system connected to a water treatment plant. Suggested text: *To protect the environment when washing – choose a place where the water drains into a sewerage system connected to a water treatment plant.*

Copy of label and/or product sheet.

O19 Packaging for foam products

- a) Sprays that contain propellants are not allowed.
- b) Foam products: all spray products 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 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)². 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.

6 Performance

Windscreen washer fluid is not subject to requirement O20. See section 6 for requirements relating to windscreen washer fluid.

O20 Performance

The product must perform at least as effectively as equivalent products on the market. The product’s performance must be documented as stated below:

- In the case of consumer cleaning products, their performance must be documented with a function test as set out in Appendix 9.

² 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.

- With cleaning products for professional use, performance is to be documented with either:
 - c) a function test in line with Appendix 9 or
 - d) a user test in line with Appendices 10 and 11.
 - 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”.
 - The performance of polishing products for non-manual use is to be documented with a user test as set out in Appendices 10 and 11.
 - For drying aids, rinsing aids, spray waxes and combiwaxes that form part of a system together with other Nordic Swan Ecolabelled cleaning or polishing products for automated wash installations, performance is to be documented via a user test in accordance with Appendices 10 and 11.
- For consumer cleaning products: Function test in line with Appendix 9.
 - For cleaning products for professional use: Function test in accordance with Appendix 9 or user test in accordance with Appendices 10 and 11.
 - For polishing products for manual use: Test report in line with the standard ASTM D4955-89 “Standard Practice for Field Evaluation of Automotive Polish”.
 - For polishing products for non-manual use: User test in line with Appendices 10 and 11.
 - For drying aids, rinsing aids, spray waxes and combiwaxes that form part of a system together with other Nordic Swan Ecolabelled cleaning or polishing products for automated wash installations: User test in line with Appendices 10 and 11.

7 Quality and regulatory requirements

Quality and regulatory requirements are general requirements that are always included in Nordic Ecolabelling’s product criteria. The purpose of these is to ensure that fundamental quality assurance and applicable environmental requirements from the authorities are dealt with appropriately. They also ensure compliance with Nordic Ecolabelling’s requirements for the product throughout the period of validity of the licence.

To ensure compliance with Nordic Ecolabelling requirements, the following procedures must be implemented.

O21 Responsible person and organisation

The company shall appoint individuals who are responsible for ensuring the fulfilment of the Nordic Ecolabelling requirements, for marketing and for finance, as well as a contact person for communications with Nordic Ecolabelling.

- Organisational chart showing who is responsible for the above.

O22 Documentation

The licensee must archive the documentation that is sent in with the application, or in a similar way maintain information in the Nordic Ecolabelling data system.

🔗 Checked on site as necessary.

O23 Quality of the car, boat or train care product

The licensee must guarantee that the quality of the Nordic Swan Ecolabelled product does not deteriorate during the validity period of the licence.

☒ Procedures for archiving claims and, where necessary, dealing with claims and complaints regarding the quality of the Nordic Swan Ecolabelled car, boat or train care product.

🔗 The claims archive is checked on site.

O24 Planned changes

Written notice must be given to Nordic Ecolabelling of planned changes in products and markets that have a bearing on Nordic Ecolabelling requirements.

☒ Procedures detailing how planned changes in products and markets are handled.

O25 Unplanned nonconformities

Unplanned nonconformities that have a bearing on Nordic Ecolabelling requirements must be reported to Nordic Ecolabelling in writing and journalled.

☒ Procedures detailing how unplanned nonconformities are handled.

O26 Traceability

The licensee must be able to trace the Nordic Swan Ecolabelled car, boat or train care product along the production chain. A manufactured/sold product should be traceable back to the occasion (time and date) and location (specific factory) of its production and, in relevant cases, also the machine/production line on which it was produced. In addition, it should be possible to connect the product with the actual raw material used.

☒ Description of/procedures for the fulfilment of the requirement.

O27 Legislation and regulations

The licensee shall ensure compliance with all applicable local laws and provisions at all production facilities for the Nordic Swan Ecolabelled product, e.g. with regard to safety, working environment, environmental legislation and site-specific terms/permits.

☒ Duly signed application form.

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.svanen.se/regulations/ or at www.nordic-ecolabel.org/regulations/

Follow-up inspections

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

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

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

Criteria version history

Nordic Ecolabelling adopted version X.X of the criteria for XX on DAY MONTH YEAR. The criteria are valid until DAY MONTH YEAR.

New criteria

- New
- Even more

Appendix 1 Description of the product

The declaration relates to the following product/product system:

Product name
Product system
Manufacturer
Supplier/importer

The product's area of use:

- Cars
- Buses
- Trucks
- Boats
- Ships
- Trains and other rail transport

The product is intended for:

- Consumers
- Professional users
- Manual washing
- Automated wash installations

Is the product part of a system, together with other Nordic Swan Ecolabelled cleaning or polishing products for automated wash installations?

Yes No

The product's dosing, stated as grams/litre of working solution:

State how this value was arrived at, based on the recommended dosing on the label/product sheet:

Place and date	Company name/stamp
Person responsible	Signature of responsible individual
Phone	E-mail

Appendix 2 Declaration from the manufacturer of the product

To be used in conjunction with an application for a licence for the Nordic Swan Ecolabelling of car, boat and train care products. To complete the following declaration, you will need declarations for all raw materials (Appendix 3 or equivalent declaration).

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

Product name: _____

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the Nordic Swan Ecolabelled car, boat and train care products. Impurities are not regarded as ingoing substances and are exempt from the requirements.

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

- *Ingoing substances: all substances in the Nordic Swan Ecolabelled product, including additives (e.g. preservatives and stabilisers) in the raw materials. Substances known to be released from ingoing substances (e.g. formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.*
- *Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials that remain in the raw material/ingredient and/or in the in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0,0100 w-%, 100 mg/kg) in the Nordic Swan Ecolabelled product.*
- *Impurities in the raw materials exceeding concentrations of 1,0 % are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.*

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

O4: Classification of the product		
Is the product classified with any of the hazard phrases below? Including all combinations of stated exposure routes and stated specific effect. For example, H350 also covers classification H350i.	Yes	No
H400 – Toxic to aquatic life, hazard category 1	<input type="checkbox"/>	<input type="checkbox"/>
H410 – Toxic to aquatic life	<input type="checkbox"/>	<input type="checkbox"/>
H411 – Toxic to aquatic life	<input type="checkbox"/>	<input type="checkbox"/>
H412 – Toxic to aquatic life	<input type="checkbox"/>	<input type="checkbox"/>
H413 – Toxic to aquatic life	<input type="checkbox"/>	<input type="checkbox"/>
H420 – Hazardous to the ozone layer	<input type="checkbox"/>	<input type="checkbox"/>
H350 – May cause cancer, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H351 – Suspected of causing cancer, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H340 – May cause genetic defects, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H341 – May cause genetic defects, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H360 – Toxic for reproduction, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H361 – Toxic for reproduction, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H362 – Toxic for reproduction, effects on or through breastfeeding (supplementary category)	<input type="checkbox"/>	<input type="checkbox"/>
H300 – Acute toxicity	<input type="checkbox"/>	<input type="checkbox"/>
H310 – Acute toxicity	<input type="checkbox"/>	<input type="checkbox"/>
H330 – Acute toxicity	<input type="checkbox"/>	<input type="checkbox"/>
H301 – Acute toxicity	<input type="checkbox"/>	<input type="checkbox"/>
H311 – Acute toxicity	<input type="checkbox"/>	<input type="checkbox"/>
H331 – Acute toxicity	<input type="checkbox"/>	<input type="checkbox"/>
H302 – Acute toxicity	<input type="checkbox"/>	<input type="checkbox"/>
H312 – Acute toxicity	<input type="checkbox"/>	<input type="checkbox"/>
H332 – Acute toxicity	<input type="checkbox"/>	<input type="checkbox"/>
H370 – Specific target organ toxicity: single exposure and repeated exposure	<input type="checkbox"/>	<input type="checkbox"/>
H371 – Specific target organ toxicity: single exposure and repeated exposure	<input type="checkbox"/>	<input type="checkbox"/>
H372 – Specific target organ toxicity: single exposure and repeated exposure	<input type="checkbox"/>	<input type="checkbox"/>
H373 – Specific target organ toxicity: single exposure and repeated exposure	<input type="checkbox"/>	<input type="checkbox"/>
H314 – Skin corrosion or irritation	<input type="checkbox"/>	<input type="checkbox"/>
H304 – Aspiration hazard	<input type="checkbox"/>	<input type="checkbox"/>
H334 – Respiratory or skin sensitising	<input type="checkbox"/>	<input type="checkbox"/>
H317 – Respiratory or skin sensitising	<input type="checkbox"/>	<input type="checkbox"/>
H240 – Explosive	<input type="checkbox"/>	<input type="checkbox"/>
H224 – Extremely flammable	<input type="checkbox"/>	<input type="checkbox"/>
H225 – Highly flammable	<input type="checkbox"/>	<input type="checkbox"/>

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

O5: Classification of constituent substances		
Does the product contain substances classified with any of the hazard phrases below? Including all combinations of stated exposure routes and stated specific effect. For example, H350 also covers classification H350i.	Yes	No
H350 – May cause cancer, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H351 – Suspected of causing cancer, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H340 – May cause genetic defects, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H341 – May cause genetic defects, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H360 – Toxic for reproduction, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H361 – Toxic for reproduction, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H362 – Toxic for reproduction, effects on or through breastfeeding (supplementary category)	<input type="checkbox"/>	<input type="checkbox"/>
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled 1/1A/1B	<input type="checkbox"/>	<input type="checkbox"/>
H317 – Skin sensitising category 1/1A/1B	<input type="checkbox"/>	<input type="checkbox"/>

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

O7: Substances prohibited from products		
Does the product contain any of the following substances?	Yes	No
Colourants	<input type="checkbox"/>	<input type="checkbox"/>
Linear alkylbenzene sulphonates (LAS)	<input type="checkbox"/>	<input type="checkbox"/>
Alkylphenol ethoxylates (APEO) and/or alkylphenol derivatives (APD)	<input type="checkbox"/>	<input type="checkbox"/>
EDTA (ethylenediaminetetraacetic acid) and its salts and DTPA (diethylenetriamine pentaacetate)	<input type="checkbox"/>	<input type="checkbox"/>
Quarternary ammonium salts that are not readily biodegradable	<input type="checkbox"/>	<input type="checkbox"/>
Organic chlorine compounds and hypochlorites	<input type="checkbox"/>	<input type="checkbox"/>
Benzalkonium chloride	<input type="checkbox"/>	<input type="checkbox"/>
MG (methyl dibromo glutaronitrile acid, CAS no. 35691-65-7)	<input type="checkbox"/>	<input type="checkbox"/>
MI (methylisothiazolinone acid, CAS no. 2682-20-4)	<input type="checkbox"/>	<input type="checkbox"/>
Nitro musks and polycyclic musk compounds	<input type="checkbox"/>	<input type="checkbox"/>
Phthalates	<input type="checkbox"/>	<input type="checkbox"/>
Halogenated and/or aromatic solvents	<input type="checkbox"/>	<input type="checkbox"/>

Fluorine surfactants and other per- and polyfluorinated compounds (PFAS)	<input type="checkbox"/>	<input type="checkbox"/>
BHT (butylated hydroxytoluene, CAS no. 128-37-0)	<input type="checkbox"/>	<input type="checkbox"/>
D4 (octamethylcyclotetrasiloxane acid, CAS no. 556-67-2)	<input type="checkbox"/>	<input type="checkbox"/>
D5 (decamethylcyclopentasiloxane acid, CAS no. 541-02-6)	<input type="checkbox"/>	<input type="checkbox"/>
D6 (dodecamethylcyclohexasiloxane acid, CAS no. 540-97-6)	<input type="checkbox"/>	<input type="checkbox"/>
HMDS (hexamethyldisiloxane, CAS no. 107-46-0)	<input type="checkbox"/>	<input type="checkbox"/>
Microplastics <i>Microplastics are defined in line with ECHA's working definition, as used in its proposal to restrict intentionally added microplastics: a material consisting of solid polymer-containing particles, to which additives or other substances may have been added, and where $\geq 1\%$ w/w of particles have (i) all dimensions $1\text{nm} \leq x \leq 5\text{mm}$, or (ii), for fibres, a length of $3\text{nm} \leq x \leq 15\text{mm}$ and length to diameter ratio of > 3.</i> <i>Polymers that occur in nature that have not been chemically modified (other than by hydrolysis) are excluded, as are polymers that are (bio)degradable, as stated in the criteria for the restriction proposal in Appendix X.</i>	<input type="checkbox"/>	<input type="checkbox"/>
Endocrine disruptors in line with the following: <ul style="list-style-type: none"> Substances considered to be potential endocrine disruptors according to the European Commission's Endocrine Disruptor priority list, category 1 and 2, or future priority lists from the European Commission. https://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf (Appendix L, page 238 onwards) Substances that have been identified as meeting or potentially meeting WHO's definition of an endocrine disruptor by the Danish Centre on Endocrine Disruptors (CeHoS). http://www.cend.dk/files/DK_ED-list-final_2018.pdf (Tables 8 and 13), or later publications. Substances identified as hormone disruptors according to the scientific criteria in the Biocidal Products Regulation (EU 2017/2100) or the Plant Protection Products Regulation (EU 2018/605). Substances identified as endocrine disruptors by ECHA's ED Expert Group: https://echa.europa.eu/fi/ed-assessment 	<input type="checkbox"/>	<input type="checkbox"/>
Substances that have been judged in the EU to be PBT (Persistent, Bioaccumulative and Toxic) or vPvB (very Persistent and very Bioaccumulative), in accordance with the criteria in Annex XIII of REACH, plus substances that have not yet been investigated but that meet these criteria.	<input type="checkbox"/>	<input type="checkbox"/>
Substances categorised as Substances of Very High Concern (SVHC) and included on the Candidate List: https://echa.europa.eu/candidate-list-table .	<input type="checkbox"/>	<input type="checkbox"/>
Substances in Annex XVII of REACH (list of restrictions)	<input type="checkbox"/>	<input type="checkbox"/>
Nanomaterials/particles <i>Nanomaterials/particles are defined in accordance with the European Commission's definition of nanomaterials dated 18 October 2011, "A natural, incidental or purposely manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for at least 50% of the particles in the number size distribution, one or more external dimensions are in the size range of 1–100 nm." Examples are ZnO, TiO2, SiO2, Ag and Iaponite with particles of nanosize in concentrations exceeding 50%. Polymer emulsions are not considered to be nanomaterial.</i>	<input type="checkbox"/>	<input type="checkbox"/>

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

O8: Fragrances	Yes	No																		
Does the product contain fragrances (including fragrance substances in plant extracts)?	<input type="checkbox"/>	<input type="checkbox"/>																		
If yes, have fragrances been added in line with IFRA guidelines? The guidelines of the International Fragrance Association (IFRA) can be found at www.ifraorg.org/	<input type="checkbox"/>	<input type="checkbox"/>																		
If yes, are any of the fragrances judged to be sensitising with hazard code H317 and/or H334?	<input type="checkbox"/>	<input type="checkbox"/>																		
If yes, does the product include any fragrance substances that are subject to declaration?	<input type="checkbox"/>	<input type="checkbox"/>																		
If yes, are any of the fragrances present listed in the table below?	<input type="checkbox"/>	<input type="checkbox"/>																		
<table border="1"> <thead> <tr> <th>INCI name (or fragrance name in accordance with CosIng)</th> <th>CAS no.</th> </tr> </thead> <tbody> <tr> <td>Cananga Odorata and Ylang-ylang oil</td> <td>83863-30-3; 8006-81-3</td> </tr> <tr> <td>Eugenia Caryophyllus Leaf / Flower oil</td> <td>8000-34-8</td> </tr> <tr> <td>Jasminum Grandiflorum / Officinale</td> <td>84776-64-7; 90045-94-6; 8022-96-6</td> </tr> <tr> <td>Myroxylon Pereirae</td> <td>8007-00-9;</td> </tr> <tr> <td>Santalum Album</td> <td>84787-70-2; 8006-87-9</td> </tr> <tr> <td>Turpentine oil</td> <td>8006-64-2; 9005-90-7; 8052-14-0</td> </tr> <tr> <td>Verbena absolute</td> <td>02/12/8024</td> </tr> <tr> <td>Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.</td> <td>8007-80-5/84649-98-9</td> </tr> </tbody> </table>	INCI name (or fragrance name in accordance with CosIng)	CAS no.	Cananga Odorata and Ylang-ylang oil	83863-30-3; 8006-81-3	Eugenia Caryophyllus Leaf / Flower oil	8000-34-8	Jasminum Grandiflorum / Officinale	84776-64-7; 90045-94-6; 8022-96-6	Myroxylon Pereirae	8007-00-9;	Santalum Album	84787-70-2; 8006-87-9	Turpentine oil	8006-64-2; 9005-90-7; 8052-14-0	Verbena absolute	02/12/8024	Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.	8007-80-5/84649-98-9		
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Santalum Album	84787-70-2; 8006-87-9																			
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Verbena absolute	02/12/8024																			
Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.	8007-80-5/84649-98-9																			
If yes, is HICC, chloroatranol, atranol or Lilial present?	<input type="checkbox"/>	<input type="checkbox"/>																		

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

O8: Preservatives	Yes	No
Does the product contain any preservatives?	<input type="checkbox"/>	<input type="checkbox"/>
If yes, state the name, the quantity (%) of the preservative and the BCF or logKow:		
If yes, are any of the preservatives judged to be sensitising with hazard code H317 and/or H334?	<input type="checkbox"/>	<input type="checkbox"/>

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

O12: Long-term environmental effects	Yes	No
Does the product contain any substances classified as harmful to the environment with the risk code H400, H410, H411 or H412? Note that in order to assess the classification, all the available data must have been evaluated, including data in ECHA databases.	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Place and date	Company name/stamp
Person responsible	Signature of responsible individual
Phone	E-mail

Appendix 3 Declaration from the manufacturer of the raw material

To be used in conjunction with an application for a licence for the Nordic Swan Ecolabelling of car, boat and train 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.

Name of raw material: _____

Function of raw material: _____

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

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the Nordic Swan Ecolabelled car, boat and train care products. Impurities are not regarded as ingoing substances and are exempt from the requirements.

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

- *Ingoing substances: all substances in the Nordic Swan Ecolabelled product, including additives (e.g. preservatives and stabilisers) in the raw materials. Substances known to be released from ingoing substances (e.g. formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.*
- *Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials that remain in the raw material/ingredient and/or in the in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0,0100 w-%, 100 mg/kg) in the Nordic Swan Ecolabelled product.*
- *Impurities in the raw materials exceeding concentrations of 1,0 % are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.*

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

Constituent substances in the raw material (chemical name, CAS no., quantity in wt%):

Proposed DID nos. for the raw material including all constituent substances:

O5: Classification of constituent substances		
Does the raw material contain substances classified with any of the hazard phrases below? Including all combinations of stated exposure routes and stated specific effect. For example, H350 also covers classification H350i.	Yes	No
H350 – May cause cancer, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H351 – Suspected of causing cancer, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H340 – May cause genetic defects, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H341 – May cause genetic defects, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H360 – Toxic for reproduction, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H361 – Toxic for reproduction, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H362 – Toxic for reproduction, effects on or through breastfeeding (supplementary category)	<input type="checkbox"/>	<input type="checkbox"/>
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled 1/1A/1B	<input type="checkbox"/>	<input type="checkbox"/>
H317 – Skin sensitising category 1/1A/1B	<input type="checkbox"/>	<input type="checkbox"/>

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

O7: Substances prohibited from products		
Does the the raw material contain any of the following substances?	Yes	No
Colourants	<input type="checkbox"/>	<input type="checkbox"/>
Linear alkylbenzene sulphonates (LAS)	<input type="checkbox"/>	<input type="checkbox"/>
Alkylphenol ethoxylates (APEO) and/or alkylphenol derivatives (APD)	<input type="checkbox"/>	<input type="checkbox"/>
EDTA (ethylenediaminetetraacetic acid) and its salts and DTPA (diethylenetriamine pentaacetate)	<input type="checkbox"/>	<input type="checkbox"/>
Quarternary ammonium salts that are not readily biodegradable	<input type="checkbox"/>	<input type="checkbox"/>
Organic chlorine compounds and hypochlorites	<input type="checkbox"/>	<input type="checkbox"/>
Benzalkonium chloride	<input type="checkbox"/>	<input type="checkbox"/>
MG (methyltribromo glutaronitrile acid, CAS no. 35691-65-7)	<input type="checkbox"/>	<input type="checkbox"/>
MI (methylisothiazolinone acid, CAS no. 2682-20-4)	<input type="checkbox"/>	<input type="checkbox"/>
Nitro musks and polycyclic musk compounds	<input type="checkbox"/>	<input type="checkbox"/>
Phthalates	<input type="checkbox"/>	<input type="checkbox"/>
Halogenated and/or aromatic solvents	<input type="checkbox"/>	<input type="checkbox"/>
Fluorine surfactants and other per- and polyfluorinated compounds (PFAS)	<input type="checkbox"/>	<input type="checkbox"/>
BHT (butylated hydroxytoluene, CAS no. 128-37-0)	<input type="checkbox"/>	<input type="checkbox"/>
D4 (octamethylcyclotetrasiloxane acid, CAS no. 556-67-2)	<input type="checkbox"/>	<input type="checkbox"/>
D5 (decamethylcyclopentasiloxane acid, CAS no. 541-02-6)	<input type="checkbox"/>	<input type="checkbox"/>
D6 (dodecamethylcyclohexasiloxane acid, CAS no. 540-97-6)	<input type="checkbox"/>	<input type="checkbox"/>
HMDS (hexamethyldisiloxane, CAS no. 107-46-0)	<input type="checkbox"/>	<input type="checkbox"/>
Microplastics <i>Microplastics are defined in line with ECHA's working definition, as used in its proposal to restrict intentionally added microplastics: a material consisting of solid polymer-containing particles, to which additives or other substances may have been added, and where $\geq 1\%$ w/w of particles have (i) all dimensions $1\text{nm} \leq x \leq 5\text{mm}$, or (ii), for fibres, a length of $3\text{nm} \leq x \leq 15\text{mm}$ and length to diameter ratio of > 3.</i> <i>Polymers that occur in nature that have not been chemically modified (other than by hydrolysis) are excluded, as are polymers that are (bio)degradable, as stated in the criteria for the restriction proposal in Appendix X.</i>	<input type="checkbox"/>	<input type="checkbox"/>
Endocrine disruptors in line with the following: <ul style="list-style-type: none"> Substances considered to be potential endocrine disruptors according to the European Commission's Endocrine Disruptor priority list, category 1 and 2, or future priority lists from the European Commission. https://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf (Appendix L, page 238 onwards) Substances that have been identified as meeting or potentially meeting WHO's definition of an endocrine disruptor by the Danish Centre on Endocrine Disruptors (CeHoS). http://www.cend.dk/files/DK_ED-list-final_2018.pdf (Tables 8 and 13), or later publications. Substances identified as hormone disruptors according to the scientific criteria in the Biocidal Products Regulation (EU 2017/2100) or the Plant Protection Products Regulation (EU 2018/605). Substances identified as endocrine disruptors by ECHA's ED Expert Group: https://echa.europa.eu/fi/ed-assessment 	<input type="checkbox"/>	<input type="checkbox"/>
Substances that have been judged in the EU to be PBT (Persistent, Bioaccumulative and Toxic) or vPvB (very Persistent and very Bioaccumulative), in accordance with the criteria in Annex XIII of REACH, plus substances that have not yet been investigated but that meet these criteria.	<input type="checkbox"/>	<input type="checkbox"/>
Substances categorised as Substances of Very High Concern (SVHC) and included on the Candidate List: https://echa.europa.eu/candidate-list-table .	<input type="checkbox"/>	<input type="checkbox"/>
Substances in Annex XVII of REACH (list of restrictions)	<input type="checkbox"/>	<input type="checkbox"/>
Nanomaterials/particles	<input type="checkbox"/>	<input type="checkbox"/>

Nanomaterials/particles are defined in accordance with the European Commission's definition of nanomaterials dated 18 October 2011, "A natural, incidental or purposely manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for at least 50% of the particles in the number size distribution, one or more external dimensions are in the size range of 1–100 nm." Examples are ZnO, TiO₂, SiO₂, Ag and laponite with particles of nanosize in concentrations exceeding 50%. Polymer emulsions are not considered to be nanomaterial.

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

O8: Fragrances	Yes	No																
Does the raw material contain fragrances (including fragrance substances in plant extracts)?	<input type="checkbox"/>	<input type="checkbox"/>																
If yes, have fragrances been added in line with IFRA guidelines? The guidelines of the International Fragrance Association (IFRA) can be found at www.ifraorg.org/	<input type="checkbox"/>	<input type="checkbox"/>																
If yes, are any of the fragrances judged to be sensitising with hazard code H317 and/or H334?	<input type="checkbox"/>	<input type="checkbox"/>																
If yes, does the product include any fragrance substances that are subject to declaration?	<input type="checkbox"/>	<input type="checkbox"/>																
If yes, are any of the fragrances present listed in the table below?	<input type="checkbox"/>	<input type="checkbox"/>																
<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">INCI name (or fragrance name in accordance with CosIng)</th> <th style="text-align: left;">CAS no.</th> </tr> </thead> <tbody> <tr> <td>Cananga Odorata and Ylang-ylang oil</td> <td>83863-30-3; 8006-81-3</td> </tr> <tr> <td>Eugenia Caryophyllus Leaf / Flower oil</td> <td>8000-34-8</td> </tr> <tr> <td>Jasminum Grandiflorum / Officinale</td> <td>84776-64-7; 90045-94-6; 8022-96-6</td> </tr> <tr> <td>Myroxylon Pereirae</td> <td>8007-00-9;</td> </tr> <tr> <td>Santalum Album</td> <td>84787-70-2; 8006-87-9</td> </tr> <tr> <td>Turpentine oil</td> <td>8006-64-2; 9005-90-7; 8052-14-0</td> </tr> <tr> <td>Verbena absolute Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.</td> <td>02/12/8024 8007-80- 5/84649-98-9</td> </tr> </tbody> </table>	INCI name (or fragrance name in accordance with CosIng)	CAS no.	Cananga Odorata and Ylang-ylang oil	83863-30-3; 8006-81-3	Eugenia Caryophyllus Leaf / Flower oil	8000-34-8	Jasminum Grandiflorum / Officinale	84776-64-7; 90045-94-6; 8022-96-6	Myroxylon Pereirae	8007-00-9;	Santalum Album	84787-70-2; 8006-87-9	Turpentine oil	8006-64-2; 9005-90-7; 8052-14-0	Verbena absolute Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.	02/12/8024 8007-80- 5/84649-98-9		
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Santalum Album	84787-70-2; 8006-87-9																	
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Verbena absolute Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.	02/12/8024 8007-80- 5/84649-98-9																	
If yes, is HICC, chloroatranol, atranol or Liliol present?	<input type="checkbox"/>	<input type="checkbox"/>																

If the answer to any of the above questions is Yes, state the CAS no. (where possible), chemical name and level (in ppm, % by weight or mg/kg). Also state

whether the substance is contained in the form of an impurity or an added substance.

O8: Preservatives	Yes	No
Does the raw material contain any preservatives?	<input type="checkbox"/>	<input type="checkbox"/>
If yes, state the name, the quantity (%) of the preservative and the BCF or logKow:		
If yes, are any of the preservatives judged to be sensitising with hazard code H317 and/or H334?	<input type="checkbox"/>	<input type="checkbox"/>

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

O12: Long-term environmental effects	Yes	No
Does the raw material contain any substances classified as harmful to the environment with the risk code H400, H410, H411 or H412? Note that in order to assess the classification, all the available data must have been evaluated, including data in ECHA databases.	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Place and date	Company name/stamp
Person responsible	Signature of responsible individual
Phone	E-mail

Appendix 4 Test methods and analysis laboratories

1 Requirement for analysis laboratory

Sampling is to be performed in a manner that ensures representative samples. The analysis laboratory/testing institute must be impartial and competent.

If accreditation is not specifically required, the sampling and/or analysis laboratory must fulfil the general requirements of standard ISO 17025 on the competence of testing and calibration laboratories or have official GLP status.

The applicant's own testing laboratory may be approved for a function test if:

- The manufacturer has a quality management system encompassing sampling and analysis and has been certified to the ISO 9000 series.
- The test method for the function test is covered in the quality management system.
- Nordic Ecolabelling is given access to all the raw data from the test.

2 Exotoxological test methods

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

3 Acute aquatic toxicity

For acute aquatic toxicity, test methods nos. 201, 202, 203 or 229 in the OECD Guideline for the Testing of Chemicals (ISBN 92-64-1222144) or DIN 38412-33 are to be used. Other scientifically accepted test methods may be used if the test results are assessed by an independent body and checked by Nordic Ecolabelling.

4 Chronic aquatic toxicity

For chronic aquatic toxicity, test method no. 211 (*Daphnia magna*) and 210, 215 or 229 (fish) in the OECD Guideline for the Testing of Chemicals is to be used. Other scientifically accepted test methods may be used if the test results are assessed by an independent body and checked by Nordic Ecolabelling.

OECD 201 (algae) may be used as a chronic test for algae, if chronic endpoints are chosen.

5 Bioaccumulation

If the bioaccumulative properties of a substance can be tested on fish in line with OECD test 305 A-E and its bioconcentration factor (BCF) is > 500 , the substance is considered to be bioaccumulative. If the BCF value is not available, a substance is considered to be bioaccumulative if its $\log K_{ow} \geq 4.0$ according to 107, 117 or 123 in the OECD Guidelines for the Testing of Chemicals (ISBN 92-64-1222144) or equivalent, unless proven to be otherwise. If the highest measured $BCF \leq 500$, the substance is considered to be bioaccumulative even if its $\log K_{ow} \geq 4.0$.

The OECD's test 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.

Data models (such as BioWin) are accepted, but if the results of the model calculations are close to the limit values or Nordic Ecolabelling has contradictory data, more certain information may be required.

6 Aerobic degradability

For ready biological degradability, test method no. 301 (A- F) or 310 in the OECD Guidelines for the Testing of Chemicals (ISBN 92-64-1222144) is to be used. Testing using the 10-day window is not required for surfactants.

Other scientifically accepted test methods may be used if the test results are assessed by an independent body and checked by Nordic Ecolabelling.

7 Anaerobic degradability

For anaerobic degradability, ISO 11734, ECETOC no. 28 (June 1988) or 301 in the OECD Guidelines for the Testing of Chemicals (ISBN 92-64-1222144) is to be used. Other scientifically accepted test methods may be used if the test results are assessed by an independent body and checked by Nordic Ecolabelling.

For a substance to be considered anaerobic, > 60% mineralisation is required after max 60 days (equates to > 60% ThOD/ThCO₂ or > 70% DOC reduction).

Substances that are not surfactants and are not on the DID list, or for which data on the DID list is lacking, may be exempted from the anaerobic degradability requirement if they are aerobically biodegradable and not toxic to aquatic life (lowest chronic median NOEC/EC_x > 0.1 mg/l or acute IC₅₀/EC₅₀/LC₅₀ > 10 mg/l), and if one of the following criteria is also met:

- Readily biodegradable and has low adsorption (A < 25%)
- Readily biodegradable and has high desorption (D > 25%)
- Readily biodegradable and not potentially bioaccumulative

To determine adsorption/desorption, use method 106 in the OECD Guidelines or ISO CD 18749 "Water quality – Adsorption of substance activated sludge".

8 DID list

The DID list is a common list for the EU Ecolabel and Nordic Ecolabelling. The list is drawn up in collaboration with stakeholders both from consumer and environmental organisations and from industry. It contains information on toxicity and biodegradability for a number of substances that might be used for products in the chemical technical field. The substances on the DID list are not an expression of the substances that are contained in ecolabelled products.

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 separate DID list can be requested from the ecolabelling organisation or via the website for the respective country, see page 3 of the criteria document.

For these criteria, the DID list issued in 2016 or later versions apply.

Calculation sheets can be used to calculate the critical dilution volume (CDV) in requirement O11. These are available from Nordic Ecolabelling and can be downloaded from all of the Nordic secretariats' websites.

If data for chronic toxicity is not available, acute data and the associated safety factor may be used to estimate the chronic toxicity factor. If a substance is not included on the DID list, or if data is lacking on the DID list, the method in part B of the DID list must be used.

Appendix 5 POCP values for VOC

The tables below contain POCP values for various solvents. The calculation is based on the EDIP 2003 method from LCA Center Denmark³. The values in the table are taken from the “British trajectory model”.

Alkanes	0.4 +/- 0.1 (worst case = 0.5)
Methane	0.007 1
Ethane	0.1
Propane	0.5
n-butane	0.5
i-butane	0.4
n-pentane	0.3
i-pentane	0.3
n-hexane	0.5
2-methylpentane	0.5
3-methylpentane	0.4
2,2-dimethyl-butane	0.31
2,3-dimethyl-butane	0.41
n-heptane	0.5
2-methylhexane	0.51
3-methylhexane	0.51
n-octane	0.5
2-methylheptane	0.5
n-nonane	0.4
2-methyloctane	0.5
n-decane	0.4
2-methylnonane	0.4
n-undecane	0.4
n-dodecane	0.3
Methylcyclohexane	0.5

Alkenes	0.5 +/- 0.2
Ethylene	1.0
Propylene	0.6
1-butene	0.5
2-butene (trans)	0.4
2-pentene (trans)	0.4
2-methylbut-1-ene	0.2
2-methylbut-2-ene	0.5
3-methylbut-1-ene	0.5
Isobutene	0.6
Isoprene	0.6

Alkynes	0.4
Acetylene	0.4

Aromatics	
Benzene	0.4
Toluene	0.5
o-xylene	0.2
m-xylene	0.5
p-xylene	0.5
Ethylbenzene	0.5
1,2,3-trimethylbenzene	0.3
1,2,4-trimethylbenzene	0.3
1,3,5-trimethylbenzene	0.3
o-ethyltoluene	0.4
m-ethyltoluene	0.4
p-ethyltoluene	0.4
n-propylbenzene	0.5
Isopropylbenzene	0.5

Aldehydes	0.3 +/- 0.2
Formaldehyde	0.3
Acetaldehyde	0.2
Propionaldehyde	0.2
Butyraldehyde	0.2
Isobutyraldehyde	0.3
Valeraldehyde	0.3
Acrolein	0.8
Benzaldehyde	-

Ketones	0.2 +/- 0.1
Acetone	0.1
Methyl ethyl ketone	0.2
Methyl i-butyl ketone	0.3

³ LCA Center Denmark (2007): EDIP characterisation factors for photochemical ozone formation (High NOx).

Alcohols	0.2 +/- 0.02
Methanol	0.2
Ethanol	0.2
Isopropanol	0.2
Butanol	0.2
Isobutanol	0.3
Butan-2-diol	0.3

Chloralkanes	0.01 +/- 0.01
Dichloromethane	0.02
Chloroform	0.004
Methyl chloroform	0.002

Ethers	0.4 +/- 0.1
Dimethyl ether	0.3
Propylene glycol methyl ether	0.5

Esters	0.2 +/- 0.1
Methyl acetate	0.1
Ethyl acetate	0.3
Isopropylacetate	0.2
n-butyl acetate	0.3
Isobutyl acetate	0.4
Propylene glycol methyl ether acetate	0.2

Chloralkenes	0.2 +/- 0.3
Trichloroethylene	0.1
Tetrachloroethylene	0.01
Allyl chloride	0.5

Appendix 6 User test windscreen washer fluids

This appendix must be filled in by the applicant.

The declaration relates to the following product/product system:

Product name
Product system
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 windscreen 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 9. 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/stamp
Person responsible	Signature of responsible individual
Phone	E-mail

Appendix 7 Form for user test windscreen washer fluids

This appendix must be filled in by the user.

The declaration relates to the following product/product system:

Product name
Product system
Manufacturer

Dosing during the test (grams/litre of working solution):

Recommended dosing as stated on the label/packaging (grams/litre of working solution): _____

Test period (minimum two months):

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

- No experience
- Experience of 1–2 other windscreen washer fluids
- Experience of 3 or more windscreen washer fluids

Overall assessment of the product:

- Not effective
- Adequately effective
- Very effective

Place and date	
User's name	User's signature
Phone	E-mail

Appendix 8 Declaration from the manufacturer of the primary packaging and closures

The appendix will appear in the final version of the criteria.

Appendix 9 Function test

This appendix must be filled in by the applicant.

The declaration relates to the following product/product system:

Product name
Product system
Manufacturer

The function test must meet the following requirements:

1. The method must be representative of the way the product is used in reality. This means that the dirt, object being washed, water temperature, amount of product used, time allowed for product to work, mechanical actions etc. must replicate the conditions under which the product is intended to be used.
2. In the test, the product must be compared with clean water and 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. Sampling is to be performed in a manner that ensures representative samples. For test method requirements, see Appendix 4. Note that these requirements only apply to consumer products and not product series for automated wash installations.
4. The results are to be assessed visually and/or measured with an instrument.
5. Nordic Ecolabelling must approve the test method before the test is carried out.
6. A test report describing the method, including photos or other documentation of the results, is to be submitted to Nordic Ecolabelling.

Test conditions	
Type of dirt	
Washed object (wheel, car part, boat part, train part, etc.)	
Water temperature	
Dosing of test product (grams/litre of working solution)	
Recommended dosing of test product (as stated on the label/packaging)	
Time to work (minutes)	

Mechanical actions (sponge, cloth, etc.)	
Reference product (name of product and manufacturer)	
Dosing of reference product (grams/litre of working solution)	
Recommended dosing of reference product (as stated on the label/packaging)	

Assessment:

- Visual (photo)
- Measurement with instrument

Results:

- Less effective than reference product
- Equally as effective as reference product
- More effective than reference 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/stamp
Person responsible	Signature of responsible individual
Phone	E-mail

Appendix 10 User test

This appendix must be filled in by the applicant.

The declaration relates to the following product/product system:

Product name
Product system
Manufacturer

The user test must meet the following requirements:

1. At least five professional users must test the product/product system on at least 10 occasions under relevant conditions.
2. The product/product system is to be tested at the dose recommended on the packaging label.
3. At least 80% of the professional users must judge the product/product system to be adequately effective or very effective.
4. The professional users must fill in Appendix 13. 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/stamp
Person responsible	Signature of responsible individual
Phone	E-mail

Appendix 11 Form for user test

This appendix must be filled in by the professional user.

The declaration relates to the following product/product system:

Product name
Product system
Manufacturer

Dosing during the test (grams/litre of working solution):

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

May – September: _____

October – April: _____

Is the product/product system used in combination with other chemical products?

Yes No

If yes, what are they? _____

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

Type of wash installation: _____

Item washed: _____

Overall assessment of the product/product system:

Not effective

Adequately effective

Very effective

Place and date	Company name/stamp
Person responsible	Signature of responsible individual
Phone	E-mail