# Nordic Ecolabelling for Laundry detergents for professional use



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# 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 info@ecolabel.dk www.svanemaerket.dk

#### Finland

Ecolabelling Finland joutsen@ecolabel.fi www.joutsenmerkki.fi

#### Sweden

Ecolabelling Sweden info@svanen.se www.svanen.se Iceland Ecolabelling Iceland svanurinn@uos.is www.svanurinn.is

Norway Ecolabelling Norway info@svanemerket.no www.svanemerket.no This document may only be copied in its entirety and without any type of change. It may be quoted from provided that Nordic Ecolabelling is stated as the source.

# What is a Nordic Swan Ecolabelled Laundry detergent for professional use?

Tough requirements concerning chemicals and packaging ensure that Nordic Swan Ecolabelled laundry detergents for professional use reduce the impact on our environment. Nordic Swan Ecolabelled laundry detergents for professional use:

- Meet ambitious requirements regarding environmentally hazardous chemicals, including requirements on ecotoxicity and biodegradability.
- Comply with tough requirements relating to chemicals that are harmful to health, including a ban on substances that are classified as carcinogenic, toxic to reproduction, can damage genetic material or are allergenic/sensitising. And various specifically problematic substances such as identified and potential endocrine disruptors on up-to-date lists from EU and national authorities.
- Promote increased use of sustainable renewable raw materials.
- Do not contain fragrances and optical brighteners.
- Are effective from 40 °C or lower for light and medium soiling and 60°C or lower for heavy soiling.
- Have packaging that contributes to a circular economy, not least through its design and material choices, with larger packaging being reused.

## Why choose the Nordic Swan Ecolabel?

- The licensee 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 suitable operations prepare the licensee for future environmental legislation.
- Nordic 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, together with water, are intended to wash textiles clean for professional users and/or large-scale consumers can be Nordic Swan Ecolabelled.

Large-scale consumers include for example hotels, hospitals and multi-family residentials with shared laundry rooms, with somewhat larger washing machines than those in normal households. For multi-family residentials with shared laundry rooms, the dosing must be automated.

The criteria include both complete powder and liquid laundry detergents and multi-component systems. A multi-component system is a detergent system where different sub-components build up a complete detergent, a stock solution, or a washing program for automatic dosing.

In cases where the ingredients/raw materials are mixed in an automated process in direct connection to the washing machine, the ingredients/raw materials are considered as sub-components in a multi-component system.

Fabric softeners and stain removers can only be Nordic Swan Ecolabelled if they are part of a multi-component system.

Only products that are effective from 40°C or lower for light and medium soiling and 60°C or lower for heavy soiling and that are primarily intended for washing in soft water (0-6 °dH) can be Nordic Swan Ecolabelled.

The criteria include all products that come into contact with the textiles during washing. However, special impregnating agents with, for example, water-repellent or flame-retardant functions, colours for dyeing textiles and products where microorganisms have been deliberately added are not included in the product group definition.

Products that, wholly or partly, are intended for consumers and sold in grocery stores, cannot be Nordic Swan Ecolabelled in line with these criteria. For these products, the criteria for Nordic Ecolabelling of laundry detergents and stain removers applies.

Products within the scope of the Biocides Regulation 528/2012 cannot be Nordic Swan Ecolabelled.

# How to apply

#### Application and costs

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

#### What is required?

The application consists of a 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

**ρ** 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.

#### 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 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 or contact information. Further information and assistance (such as calculation sheets or electronic application help) may be available. Visit the relevant national website for further information.

### 1 Environmental requirements

The environmental requirements are divided into two parts:

**1.1 General requirements** that must be fulfilled by all products and all subcomponents in a multi-component system. **1.2 Total content of environmentally harmful substances** that apply to the total environmental impact of a complete laundry detergent or a multi-component system.

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the Nordic Swan Ecolabelled laundry detergent for professional use. 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.

#### 1.1 General requirements

#### O1 Description of the product

The applicant must provide the following information about the laundry detergent or the multi-component system:

- Description of the product's area of use.
- If it is a multi-component system, an overview of the ingoing subcomponents.

• Recommended dosing for light, medium and heavy soiling in ml or grams per kg laundry. For multi-component systems, the dosing must be stated for each sub-component.

• The recommended washing temperature\* for the different degrees of soiling. The product must fulfill the efficiency test in requirement O18 at the recommended washing temperature.

- The product's volume or weight.
- All trade names if the product is sold in multiple countries.

\* Note that only products that are effective from 40°C or lower for light and medium soiling and 60°C or lower for heavy soiling can be Nordic Swan Ecolabelled.

- Description of the product in line with Appendix 1.
- Copy of label and/or product sheet can be sent in as part of the documentation.

#### O2 Formulation

The applicant must provide a complete formulation for the laundry detergent or the multi-component system. For multicomponent systems, the formulation must be given for all the separate sub-components. The formulation must contain the information below for each ingoing raw material. If a raw material contains of two or more substances, each substance must be declared.

- Trade name
- Chemical name of main component and any additives (e.g., preservatives and stabilisers)
- Amount (both with and without solvents, e.g., water)
- CAS no. / EC no.
- Function
- DID no.\* 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 contact information on page 3.

The complete formulation of the laundry detergent or the multi-component system as set out in the requirement. Nordic Ecolabelling's calculation sheet must be used. It is available from Nordic Ecolabelling's websites.

Safety data sheet for each raw material that is compiled in accordance with current European legislation (Annex II to REACH, Regulation (EC) No 1907/2006).

#### O3 Classification of the product

The product must not be classified in accordance with hazard classes described in the table below.

Classification of chemical products CLP Regulation 1272/2008:			
Hazard statement	Hazard class and category	Hazard code	
Hazardous to the aquatic	Aquatic Acute 1	H400	
environment*, **	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	
Germ cell mutagenicity***	Muta. 1A or 1B	H340	
	Muta. 2	H341	
Reproductive toxicity***	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	

#### Table 1Classification of the product

	Acute Tox 3	H331
	Acute Tox 4	H312
	Acute Tox 4	H332
Specific target organ toxicity,	STOT SE 1	H370
single or repeated exposure****	STOT SE 2	H371
	STOT RE 1	H372
	STOT RE 2	H373
Aspiration hazard****	Asp. Tox. 1	H304
Respiratory or skin	Resp. Sens. 1, 1A or 1B	H334
sensitisation*****	Skin Sens. 1, 1A or 1B	H317
		EUH208 ("Contains <name of sensitising substance&gt;. May produce an allergic reaction.")</name 

\* Products containing peracetic acid and hydrogen peroxide used as bleaching agent may be classified and labelled as H410, H411 or H412, if the classification and labelling are triggered by the presence of these substances. If the products are subject to show a warning symbol / CLP Pictogram due to legislation, they are not allowed to show the Nordic Swan Ecolabel on the packaging, but only use the following text: Part of an ecolabelled multi-component system. See section "Regulations for the Nordic Ecolabelling of products" for more information.

\*\* Sub-components that are mixed in an automated process in direct connection to the washing machine may be classified and labelled as H412 if the classification and labelling are triggered by enzyme content.

\*\*\* The classifications concern all classification variants. For example, H350 also covers classification H350i.

\*\*\*\* Products may be classified and labelled as H304, H311, H312, H332, H371 or H373, if the classification and labelling are triggered by the content of oxalic acid, peracetic acid or hydrogen peroxide. If the products are subject to show a warning symbol / CLP Pictogram due to legislation, they are not allowed to show the Nordic Swan Ecolabel on the packaging, but only use the following text: Part of an ecolabelled multi-component system. See section "Regulations for the Nordic Ecolabelling of products" for more information.

\*\*\*\*\* Products may be classified and labelled as H317 or H334 if the classification and labelling are triggered by enzyme content. However, this assumes that the enzymes are in liquid form or in solid form as granulates.

Products labelled with EUH208 ("Contains <name of sensitising substance>. May produce an allergic reaction.") can be Nordic Swan Ecolabelled only if the sensitising substance is an enzyme. Please note the additional requirement for enzymes in O6.

Please note that the producer/supplier is responsible for the classification.

Product label or safety data sheet for the product in line with prevailing
 European legislation (Annex II to REACH Regulation, 1907/2006/EC).

#### O4 Classification of ingoing substances

Ingoing substances in product must not be classified in accordance with hazard classes described in the table below.

Classification of chemical products CLP Regulation 1272/2008:		
Hazard statement	Hazard class and category	Hazard code
Carcinogenicity*	Carc. 1A or 1B	H350
	Carc. 2	H351

		1
Germ cell mutagenicity*	Muta. 1A or 1B	H340
	Muta. 2	H341
Reproductive toxicity*	Repr. 1A or 1B	H360
	Repr. 2	H361
	Lact	H362
Respiratory or skin	Resp. Sens. 1, 1A or 1B	H334
sensitisation**	Skin Sens. 1, 1A or 1B	H317
Endocrine disruption for human	ED HH 1	EUH380
health***	ED HH 2	EUH381
Endocrine disruption for the	ED ENV 1	EUH430
environment***	ED ENV 2	EUH431
Persistent, Bioaccumulative and Toxic properties***	РВТ	EUH440
Very Persistent, Very Bioaccumulative properties***	vPvB	EUH441
Persistent, Mobile and Toxic properties	PMT	EUH450
Very Persistent, Very Mobile properties	vPvM	EUH451

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

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

\*\* Enzymes that are in liquid form or in solid form as granulates (including stabilisers in the enzyme raw material) and preservatives may be classified and labelled as H334 or H317. Please note that MI (methylisothiazolinone), CAS no. 2682-20-4 must not be present in the product according to requirement O7.

Note that titanium dioxide in solid mixtures (e.g. in enzymes) is prohibited by this requirement, in effect from 2021-10-01. A transition period until 31 March 2025 applies.

\*\*\* See also O7 for additional criteria for potential or identified endocrine disruptors and PBT/vPvB substances

- Safety data sheet for all ingoing substances (in all products) in line with prevailing European legislation (Annex II to REACH Regulation, 1907/2006/EC).
- Completed and signed declaration from the manufacturer of the product (Appendix 2)
- Completed and signed declaration from the raw material supplier (Appendix 3)
- O5 Surfactants

All surfactants must be readily biodegradable according to test method No 301 A-F or No 310 in OECD guidelines for testing of chemicals or other equivalent test methods evaluated by an independent body and controlled by Nordic Ecolabelling.

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

Reference to the DID list dated 2016 or later versions. For substances not on the DID list, or where data on the DID list is missing, the associated documentation must be submitted. See Appendix 4 for test requirements.

#### O6 Enzymes

Enzymes may only be present in the product in liquid form or as granulate capsules.

Enzymes in spray products must comply with safe limit for exposure. The exposure limit should be below the Derived No Effect Level, DNEL for consumers and professionals, 15 ng/m<sup>3</sup>.<sup>1</sup>

In cases where enzymes are sub-components in a multi-component system and are mixed in direct connection to the washing machine, the process must be automated and there must be safety measures in place that prevent employees from being exposed to enzymes.

- Declaration from the enzyme manufacturer or information on safety data sheet/product data sheet.
- For enzyme-containing spray products: Risk assessment according to AISE:s "Exposure measurements of enzymes for risk assessment of household cleaning spray products (AISE, July 2020)".

#### O7 Prohibited substances

The following substances are excluded from use in products:

- Alkylphenol ethoxylates (APEO) and/or alkylphenol derivatives (APD)
- Benzalkonium chloride, CAS-no. 8001-54-5

• 34 bisphenols<sup>2</sup> that have been identified by ECHA for further EU regulatory risk management that are known or potential endocrine disruptors for the environment or for human health, or that can be identified as toxic for reproduction.

- Boric acid, borates and perborates
- Colourants
- DADMAC (dialkyldimethylammonium chloride), CAS-no. 68424-95-3
- DTPA (diethylenetriamine pentaacetate), CAS-no. 67-43-6
- EDTA (ethylenediaminetetraacetic acid), CAS-no. 13235-36-4, and its salts
- Fragrances
- Halogenated flame retardants
- LAS (linear alkylbenzene sulphonates)
- MI (methylisothiazolinone), CAS no. 2682-20-4
- Microplastics

• Exemption: Polycarboxylates

Microplastics are defined here as particles of insoluble macromolecular plastic less than 5 mm in size, achieved through one of the following processes:

a) Polymerization, such as polyaddition or polycondensation, or a similar process that uses monomers or other precursors.

<sup>&</sup>lt;sup>1</sup> <u>https://www.aise.eu/documents/document/20210401175430-</u>

a i s e enzyme spray protocol revision july 2020.pdf

<sup>&</sup>lt;sup>2</sup> EC/List No. 201-245-8 (BPA), 201-025-1 (BPB), 401-720-1 (4,4'-lsobutylethylidenediphenol), 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).

- b) Chemical change of natural or synthetic macromolecules.
- c) Microbial fermentation.

Note that Nordic Ecolabelling follows the development of ECHA's restriction proposal and its definition, and we reserve the right to change the definition above once the definition in the restriction proposal has been fixed. An appropriate transition period will be granted.

• Nanomaterials/-particles

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

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

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

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

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

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

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

- Optical brighteners
- Organic chlorine compounds, hypochlorites and hypochlorous acid *Exemption: Preservatives may contain organic chlorine compounds.*
- PFAS (per- and polyfluoroalkyl substances)
- Phosphates

Exemption: Phosphates used to stabilize  $H_2O_2$ , are allowed in concentration < 0,0100 w-% in the final product.

• Phtalates

• Potential or identified endocrine disruptors according to any of the EU member state initiative "Endocrine Disruptor Lists" List I; II; and III.

o <u>https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu</u>

 $o\ \underline{https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption}$ 

o <u>https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-</u> <u>disruptors-by-participating-national-authorities</u>

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

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

• Siloxanes D4, D5, D6 and HMDS

• Substances categorized as Substances of Very High Concern (SVHC) and included on the Candidate List: <u>https://echa.europa.eu/candidate-list-table</u>.

• 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.

Triclosan

 $\bowtie$ 

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

#### O8 Certified raw materials

Palm oil, palm kernel oil and derivatives of palm oil or palm kernel oil must have RSPO certification. The approved traceability systems are Mass Balance, Segregated or Identity Preserved.

Sugarcane must be certified to Bonsucro standard (EU REDII approved), version 5.1 or later version.

The requirement does not apply to raw materials that make up less than 1% of the product.

- Declaration from the raw material producer that no palm oil, palm kernel oil, palm oil/palm kernel oil derivatives or sugarcane are present in the raw material. Appendix 3 can be used.
- A valid RSPO Supply Chain certificate from the raw material's producer or supplier.
- Invoices or delivery notes from the raw material supplier showing with which traceability system the purchased palm oil is certified.
- 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 the Nordic Swan Ecolabelled product.
- 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.

#### 1.2 Total content of environmentally harmful substances

The requirements in this chapter apply to complete laundry detergents or the total quantity of wash chemicals in multi-component systems that are used to wash 1 kg of laundry (g/kg laundry). The requirements are based on the highest recommended dosing per degree of soiling stated on the product label or accompanying product sheet. The table below shows a common division of laundry categories according to degree of soiling.

Light soiling	Medium soiling	Heavy soiling
Bedlinen and towels from hotels and other overnight accommodation establishments Duvets and pillows Mats Cloth hand towel rolls	Work clothes Institution/trade/service Laundry from hospitals and nursing homes and similar institutions, e.g. bedding, mattress covers, operation sheets, barrier sheets, and patient clothing. Mops	Work clothes Industry/kitchen/ butchering and equivalent use Kitchen equipment Clothes and towels Industry clothing Restaurant Cloths/napkins and similar for use in restaurants, industrial kitchens, etc.

#### Table 3 Examples of laundry categories according to degree of soiling

#### O9 CDV

The critical dilution volume (CDV) of the laundry detergent or the multicomponent system may not exceed the following limit values.

#### Table 4 Limit values for CDV<sub>chronic</sub>

Degree of soiling	CDV <sub>chronic</sub> (litres/kg laundry)
Light	10 000
Medium	18 000
Heavy	28 000

The calculation of the CDV-value must be based on the highest recommended dosing stated on the product label or accompanying product sheet per degree of soiling.

 $\operatorname{CDV}$  is calculated using the following formula for all substances in the product:

 $CDV_{chronic}$  =  $\sum$   $CDV_{i}$  =  $\sum$  (dose\_i x DF\_i x 1000 / TF\_i chronic), where

dosei = the input quantity of the indiviual substance in g/kg laundry

 $\mathrm{DF}_i$  = biodegradation factor for substance "i", in accordance with the DID list

 $TF_{\rm i}$  chronic = chronic toxicity factor for substance "i", in accordance with the DID list

If  $TF_i \mbox{ chronic is lacking, } TF_i \mbox{ acute can be used.}$ 

Because of the degradation of the substances in the wash process, separate rules apply for the following two substances:

- Hydrogen peroxide (H2O2) is not to be included in calculation of CDV.
- Peracetic acid (CH3CO3H) is to be included in the calculation as acetic acid.

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 product's CDV<sub>chronic</sub>. Nordic Ecolabelling's calculation sheet must be used. It is available from Nordic Ecolabelling's websites.
- Appendix 3 for all raw materials or equivalent certification duly completed and signed.

#### O10 Biodegradability – aerobic and anaerobic (aNBO and anNBO)

The total content of organic substances that are either not aerobically or anaerobically biodegradable in the laundry detergent or the multi-component system must not exceed the following limit values stated.

#### Table 5Limit values for aNBO and anNBO

Degree of soiling	aNBO (g/kg Laundry)	anNBO (g/kg laundry)
Light	0,40	0,40
Medium	0,70	0,70
Heavy	1,00	1,00

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

Iminodisuccinate (DID No. 2555) and cumene sulfonates (DID No. 2540) are excluded from the calculation of an NBO.

Polycarboxylates (DID No. 2507 and 2508) are excluded from the calculation of a NBO and an NBO.

Note that all surfactants must be aerobically and anaerobically biodegradable under requirement O5.

See also the exemption from the requirement of anaerobic biodegradability for substances which are not surfactants (Appendix 4, item 7, Anaerobic biodegradability).

- 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 the product's content of organic substances that are either not aerobically or anaerobically biodegradable. Nordic Ecolabelling's calculation sheet must be used. It is available from Nordic Ecolabelling's websites.

#### O11 Phosphonates/phosphonic acid

Total phosphonates/phosphonic acid in the laundry detergent or the multicomponent system may not exceed the following limit values.

#### Table 6 Limit values for content of phosphonates/phosphonic acids

Degree of soiling	Phosphonates/phosphonic acids (g/kg laundry)
Light	0,075
Medium	0,10
Heavy	0,15

Calculation of total quantity of phosphonates/phosphonic acids, expressed as g/kg laundry.

#### 1.3 Packaging and user information

Nordic Ecolabelling sets strict requirements on packaging to ensure good possibilities for material recovery and circular economy.

The packaging requirements target the primary packaging<sup>\*</sup> (e.g. container, closure and label). Only the packaging types described in requirement O12-O16 can currently be used. Bag-in-box packaging must meet the requirements for flexible plastic bags (O14) and rigid plastic packaging (O12) or paper-based packaging (O15) depending on the material of the box.

\* In accordance with EU Directive 94/62/EC on packaging and packaging waste, the term "primary packaging" is defined as packaging conceived so as to constitute a sales unit to the final user or consumer at the point of sale.

#### O12 Rigid plastic packaging: Design for recycling

Primary packaging smaller than 200 litres must have a design that enables material recovery.

Products delivered in a plastic package that is part for a take-back system are exempt from the requirement. Instead requirement O16 Reuse of packaging must be fulfilled.

Container means bottle, box, can etc.

Closure means cap, lid, pump, spout, oblate, seal, membrane etc.

Label means "traditional label", shrink film label/sleeve, direct print etc. (see O15 for details on label requirements).

- The packaging must contain at least 90% plastic (polyethylene (PE), polypropylene (PP) or polyethylene terephthalate (PET)).
- The individual components of the container and closure must be made from monomaterial\* of either polyethylene (PE), polypropylene (PP) or polyethylene terephthalate (PET).

Exemption:

Coloured PP packaging components may have up to 5% PE if they come from the masterbatch.

Membranes, oblates and seals may be made of thermoplastic elastomer (TPE) based on styrene-ethylene-butylene-styrene thermoplastic elastomer (SEBS), expanded polyethylene (EPE), aluminium, paper and plastic of non-monomaterial (but it must be PE, PP and/or PET).

• It is not allowed to add pigments to PET.

Exemptions:

- Coloured, recycled PET-granulate where the pigment originates from the recycled material is allowed.
- Pigments that are added to UV blockers and that do not make up more than 10 ppm of the container.
- Carbon black pigments must not be added to container or closure.
- Fillers (such as CaCO<sub>3</sub>) must not be included in PE or PP containers or closures at a level that the density of the plastic exceeds 0.995g/cm<sup>3</sup>.
- Barriers are not allowed in plastic packaging.
- Metal must not be part of the container or closure.

#### Exemptions:

- Metal springs.
- Metal mesh in lids.
- Silicone is not allowed in closures.

Exemption: Lubricant in spray bottle triggers.

\* Recycled plastic, which is purchased as a type of polymer, e.g. PP, considered monomaterial.

Packaging specifications (including all components as container and closure, label etc.) or certificate showing the materials used, component weights, density of PE or PP components, whether components contain PCR material and which pigments have been added. Appendix 5 can be used as part of the documentation.

#### O13 Labels for rigid plastic packaging: Design for recycling

Labels on packages smaller than 20 litres must have a design that enables material recovery.

Products covered by rules for dangerous goods are exempted this requirement.

Label means "traditional label", shrink film label/sleeve, direct print etc.

• Containers in polyethene (PE) and polypropene (PP): The following label materials are permitted:

- Polyolefin plastic labels (PE and PP) as well as PET or PET-G labels with density < 1.0 g/cm<sup>3</sup>. For labels of different material than the packaging, the suitability must be substantiated in accordance with Recyclass' Washing quick test procedure. For film labels applied on HDPE & PP containers, version 1.0<sup>3</sup>.
- $\circ~$  Paper labels without fibre loss. The suitability must be substantiated in accordance with Recyclass' Washing quick test procedure: For paper labels applied on HDPE & PP containers, standard laboratory practice, version  $1.0^4.$

• Containers in polyethylene terephthalate (PET) must have a label with a density < 1.0 g/cm<sup>3</sup>, or a paper label without fibre loss.

 $\circ \quad \mbox{Paper labels without fibre loss: The suitability must be substantiated in accordance with Recyclass' Washing quick test procedure: For paper labels applied on HDPE & PP containers, standard laboratory practice, version <math display="inline">1.0, {}^5.$ 

Note: PET-G is not allowed in labels on PET containers. For the time being, cPET labels are also not permitted. Nordic Ecolabelling will consider allowing cPET-labels with the appropriate specifications, if cPET labels become endorsed by EPBP (The European PET Bottle Platform) for PET bottles and/or by RecyClass (www.recyclass.eu).

• Polyvinyl chloride (PVC) and other halogenated plastics must not be used in labels.

<sup>&</sup>lt;sup>3</sup> https://recyclass.eu/wp-content/uploads/2022/04/RecyClass-Washing-QT-Procedure-for-Film-Labelsapplied-on-HDPE-and-PP-Containers-v1.1.pdf (Accessed on 2021-06-23).

<sup>&</sup>lt;sup>4</sup> https://recyclass.eu/wp-content/uploads/2022/04/RecyClass-Washing-QT-Procedure-for-Film-Labelsapplied-on-HDPE-and-PP-Containers-v1.1.pdf (Accessed on 2021-06-11).

<sup>&</sup>lt;sup>5</sup> https://recyclass.eu/wp-content/uploads/2022/04/RecyClass-Washing-QT-Procedure-for-Film-Labelsapplied-on-HDPE-and-PP-Containers-v1.1.pdf (Accessed on 2021-06-11).

• Metallized labels/shrink film labels are not permitted. *Exception: Metal foil in RFID labels.* 

• For labels of different material than the packaging: Labels must not cover more than 60% of the container. The calculation of the percentage shall be based on the two-dimensional profile of the container i.e., the area of the top and bottom of the packaging and the sides of a box/container/bottle/can shall not be included in the calculation. If the label on the front of pack and back of pack are of different size, the maximum percentage of 60% shall be fulfilled for each side separately. For a cylindrical bottle, the calculation can also be based on the three-dimensional profile exclusive bottom and top of the bottle.

• Direct print on the container is not permitted except for date codes, batch codes and UFI (Unique Formula Identifier).

- Label specifications showing the material used and density. Appendix 5 can be used as part of the documentation.
- If plastic labels of different material than the container is used on PE or PP containers. Test report from a laboratory fulfilling the conditions in Appendix 4, showing that the label is approved.
- If paper labels are used: Test report from a laboratory fulfilling the conditions in Appendix 4, showing that the label is approved.
- Declarations that PVC and other halogenated plastics, aluminium and other metals have not been used. Appendix 5 can be used.
- For labels of different material than the packaging: Calculation of label size compared to the surface of the container.
- Declaration from the applicant that direct print is not used except for date codes, batch codes and UFI. Appendix 2 can be used.

#### O14 Flexible plastic pouches: Design for recycling

Flexible plastic pouches must have a design that enables material recovery. *Container means flexible plastic pouches, inclusive spout fixed to the plastic pouch.* 

Closure means e.g. cap, lid, pump, spout, oblate, seal. Please note that a spout that is fixed to the container, counts as part of the container.

• The packaging must contain at least 90% plastic (polyethylene (PE), polypropylene (PP) or polyethylene terephthalate (PET)).

• The individual components of the container and closure must be made from either PE (polyethylene), PP (polypropylene) or PET (polyethylene terephthalate).

Exceptions:

- O-ring of EPDM or other elastomers is allowed in values.
- Membranes, oblates and seals may be made of thermoplastic elastomer (TPE) based on styrene-ethylene-butylene-styrene thermoplastic elastomer (SEBS), aluminium, paper and plastic of non-monomaterial (but it must be PE, PP and/or PET).

• The container must be made of monomaterial, i.e., not laminated with layers of different materials. Barrier coatings can only be of EVOH (ethylene vinyl alcohol) and constitute max 5% of the total weight.

Exception: Flexible plastic pouches intended for products covered by the ADR Regulation may contain multimaterials of PE, PP, PET and/or PA for a transitional period until 31 December 2023.

- Carbon black pigments must not be added to container or closure.
- Fillers (such as CaCO<sub>3</sub>) must not be included in PE or PP containers or closures at a level that the density of the plastic exceeds 0.995g/cm<sup>3</sup>.
- Metal must not be part of the container or closure.

Exception: Metal springs.

- Silicone is not allowed in closures.
- $\bowtie$

Packaging specifications (including all components as container and closure, label etc.) or certificate showing the materials used, density of PE or PP components and whether carbon black has been added. Appendix 5 can be used as part of the documentation.

#### O15 Paper-based packaging: Design for recycling

#### Cardboard packaging

- Cardboard packaging must contain at least 90% paper/paperboard.
- The wood raw 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).

Exception: Metal rivets for attaching plastic handles to heavier cardboard packaging (> 4.5 kg) for powder detergents.

- Paper labels are permitted. Other types of labels are not permitted. The label glue must be water soluble.
- Coloured cardboard is not permitted. Exception: White solid coloured cardboard.

2. Corrugated board packaging

- Corrugated board packaging must contain at least 90% paper/paperboard.
- A minimum of 50% 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.
- Coloured corrugated board packaging is not permitted. *Exception: White solid coloured cardboard.*

\* Recycled material is defined in accordance with ISO 14021 in the following two categories:

Material in the pre-consumer phase. Material that has been taken from the waste flow during the manufacturing process. The exception is the re-use of material that is generated in a process, e.g. waste that can be recycled within the same process that generated it.

Material in the post-consumer phase. Material generated by households or by trade, industry or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose. This includes the return of materials from the distribution chain. Description of the packaging from the packaging producer showing:

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 5 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 5 can be used.
- Declarations that aluminium and other metals have not been used. Appendix 5 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.

#### O16 Reuse of packaging

The licensee must either offer to take back primary packaging that is 200 litres or larger or inform the customer that reuse of the packaging is possible via local reuse companies.

Primary packaging less than 200 litres must also fulfil this requirement if they do not fulfil O12.

- If the licensee offers to take back the packaging from the customer: Copy of the offer and a description of how the packaging is taken back and reused.
- If the customer is informed about that reuse of the packaging is possible via local reuse companies: Copy of how the information is communicated.

#### O17 User information

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

• That the product only is intended for professional users and/or large-scale consumers.

• The product's area of use.

• Washing temperature and dosing in accordance with the information stated in requirement O1.

• For plastic packaging smaller than 200 litres: How the packaging should be sorted for recycling in each Nordic country in which it is sold. The Nordic-wide pictogram system from 2020 can be used\*.

\* The pictograms can be found at: https://danskaffaldsforening.dk/the-danishpictograms-waste-sorting https://sortere.no/avfallssymboler https://www.avfallsverige.se/gemensamtskyltsystem/ \* Copy of label and/or product sheet.

Copy of label and/or product sheet.

#### 1.4 Performance

#### O18 Washing efficiency

The laundry detergent or the multi-component system must be satisfactory efficient at the recommended washing temperature and dosage in soft water.

The efficiency of the laundry detergent or the multi-component system must be documented in the form of a user test that meets the requirements below:

- 1. If the application relates to a multi-component system, all the subcomponents must be included in the test.
- 2. At least five independent professional users must test the product under relevant conditions.
- 3. The product must be tested at the recommended washing temperature\* and dosage on the packaging label or accompanying product sheet. If the dosing is stated in intervals for each separate degree of soiling, the worst-case dosing, i.e. the lowest dosing or lower, must be used.
- 4. At least 80% of the users must judge the product to be adequately effective or very effective for all parameters.
- 5. The user must fill in Appendix 6. All appendices are to be submitted to Nordic Ecolabelling.
- 6. A test report must be drawn up, describing the user test and including a summary of the results.

\* Note that only products that are effective from 40°C or lower for light and medium soiling and 60°C or lower for heavy soiling can be Nordic Swan Ecolabelled.

- Appendix 6 from all users who have tested the product.
- Test report describing the user test, including summary of the results.

#### 1.5 Licence maintenance

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

#### O19 Customer complaints

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

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

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

#### O20 Traceability

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

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

Please upload your routine or a description.

# Regulations for the Nordic Ecolabelling of products

When the Nordic Swan Ecolabel is used on 093 Laundry detergents for professional use the licence number and a descriptive subtext shall be included as follows:

- For laundry detergents: Laundry detergent for professional use
- For sub-components in a multi-component system: **Part of a multi- component system**

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

#### Note!

Sub-components that, in accordance with applicable legislation, are classified as hazardous to the aquatic environment or toxic in contact with skin – and therefore require a CLP hazard pictogram – are not permitted to display the Nordic Swan Ecolabel on the packaging. Instead, they may only carry the following text: 'Part of an ecolabelled multi-component system.'

# Follow-up inspections

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

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

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

# Criteria version history

Nordic Ecolabelling adopted version 4.0 of the criteria for laundry detergents for professional use on 16 August 2023. The criteria are valid until 31 December 2027.

Nordic Ecolabelling decided on 12 March 2024 to clarify that coloured packaging components made of PP may have up to 5% PE if it comes from masterbatch and that recycled plastic, which is bought in as a type of polymer, e.g. PP, considered monomaterial (O12). On April 16, 2024, it was decided to extend the transition period for TiO<sub>2</sub> in requirements for classification of constituent substances (O4). The new version is called 4.1.

Nordic Ecolabelling decided on 24 June 2025 to adjust requirement O3 by also exempting products classified as H311, provided that the classification and

labelling are solely due to the presence of oxalic acid, peracetic acid, or hydrogen peroxide. The new version is called 4.2.

# Appendix 1 Description of the laundry detergent / multi-component system

The declaration relates to the following laundry detergent / multi-component system:

Laundry detergent	
Multi-component system	
Manufacturer	
Supplier / importer	

Describe the product's area of use:

If it is a multi-component system, state the ingoing sub-components\* in the table below.

Name of sub-component	Type of sub-component

\* In case of extension with a sub-component in a multi-component system, please state which multi-component system the sub-component is a part of.

Please fill in the recommended washing temperature and dosing in the table below.

Degree of soiling	Washing temperature	Dosing* g/kg laundry
Light		
Medium		
Heavy		

\* For multi-component systems, the dosing must be stated for each sub-component.

State the product's volume or weight:

State all trade names if the product is sold in multiple countries.

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

To be used in conjunction with an application for a licence for the Nordic Swan Ecolabelling of laundry detergents for professional use. 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 laundry detergents for professional use. 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.

O3 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		
H410 – Toxic to aquatic life		
H411 – Toxic to aquatic life		
H412 – Toxic to aquatic life		
H413 – Toxic to aquatic life		
H420 – Hazardous to the ozone layer		
H350 – May cause cancer, hazard category 1A and 1B		
H351 – Suspected of causing cancer, hazard category 2		
H340 – May cause genetic defects, hazard category 1A and 1B		
H341 – May cause genetic defects, hazard category 2		
H360 – Toxic for reproduction, hazard category 1A and 1B		
H361 – Toxic for reproduction, hazard category 2		
H362 – Toxic for reproduction, effects on or through breastfeeding (supplementary category)		
H300 – Acute toxicity		
H310 – Acute toxicity		
H330 – Acute toxicity		
H301 – Acute toxicity		
H311 – Acute toxicity		
H331 – Acute toxicity		
H312 – Acute toxicity		
H332 – Acute toxicity		
H370 – Specific target organ toxicity: single exposure and repeated exposure		
H371 – Specific target organ toxicity: single exposure and repeated exposure		
H372 – Specific target organ toxicity: single exposure and repeated exposure		
H373 – Specific target organ toxicity: single exposure and repeated exposure		
H304 – Aspiration hazard		
H334 – Respiratory or skin sensitising		
H317 – Respiratory or skin sensitising		
EUH208 ("Contains <name of="" sensitising="" substance="">. May produce an allergic reaction.")</name>		

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.

O4 Classification of i	ngoing 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.			No
H350 – May cause ca	ncer, hazard category 1A and 1B		
H351 – Suspected of o	ausing cancer, hazard category 2		
H340 – May cause ge	netic defects, hazard category 1A and 1B		
H341 – May cause ge	netic defects, hazard category 2		
H360 – Toxic for repro	duction, hazard category 1A and 1B		
H361 – Toxic for repro	duction, hazard category 2		
H362 – Toxic for repro	duction, effects on or through breastfeeding (supplementary category)		
H334 – May cause alle	ergy or asthma symptoms or breathing difficulties if inhaled 1 / 1A / 1B		
H317 – Skin sensitisin	g category 1 / 1A / 1B		
EUH380 ED HH 1 EUH381 ED HH 2	- Endocrine disruption for human health		
EURIST EDAITZ			
EUH430 ED ENV 1 EUH431 ED ENV 2			
EUH440 PBT	- Persistent, Bioaccumulative and Toxic properties***		
EUH441 vPvB	- Very Persistent, Very Bioaccumulative properties***		
EUH450 PMT EUH451 vPvM	- Persistent, Mobile and Toxic properties		
	- Very Persistent, Very Mobile properties		

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
Alkylphenol ethoxylates (APEO) and/or alkylphenol derivatives (APD)		
Benzalkonium chloride, CAS-no. 8001-54-5		
Bisphenols and bisphenol derivatives: 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).		
Boric acid, borates and perborates		
Colourants		
DADMAC (dialkyldimethylammonium chloride), CAS-no. 68424-95-3		
DTPA (diethylenetriamine pentaacetate), CAS-no. 67-43-6		
EDTA (ethylenediaminetetraacetic acid), CAS-no. 13235-36-4, and its salts		
Fragrances		
Halogenated flame retardants		
LAS (linear alkylbenzene sulphonates)		
MI (methylisothiazolinone acid), CAS-no. 2682-20-4		
<ul> <li>Microplastics</li> <li>Microplastics are defined here as particles of insoluble macromolecular plastic less than 5 mm in size, achieved through one of the following processes:</li> <li>a) Polymerisation, such as polyaddition or polycondensation, or a similar process that uses monomers or other precursors.</li> <li>b) Chemical change of natural or synthetic macromolecules.</li> <li>c) Microbial fermentation.</li> <li>Note that Nordic Ecolabelling follows the ECHA's restriction proposal and its definition, and we reserve the right to change the definition above once the definition in the restriction proposal has been fixed. An appropriate transition period will be granted.</li> </ul>		
<ul> <li>Nanomaterials/particles</li> <li>Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01):</li> <li>'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 numberbased size distribution fulfil at least one of the following conditions:</li> <li>(a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm;</li> <li>(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;</li> <li>(c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimension is smaller than 1 nm</li> </ul>		
NTA (nitrilotriacetic acid), CAS-no. 139-13-9, and its salts		
Optical brighteners		
Organic chlorine compounds, hypochlorites and hypochlorous acid		
PFAS (per- and polyfluoroalkyl substances)		
Phosphates		

Phtalates	
Potential or identified endocrine disruptors according to any of the EU member state initiative "Endocrine Disruptor Lists" List I; II; and/or III <u>https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu</u> <u>https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption</u> <u>https://edlists.org/the-ed-lists/list-ii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities</u>	
Substances on the List II sublist "Substances no longer on list"? <u>https://edlists.org/the-ed-lists/substances-no-longer-on-list-ii</u> If Yes, please write chemical name and CAS-no. below. Nordic Ecolabelling will evaluate the circumstances on a case-by-case basis, through the background information indicated for the substance on the sublist.	
Quaternary ammonium compunds, which are not aerobic or anaerobic biodegradable	
Siloxanes D4, D5, D6 and HMDS	
Substances categorised as Substances of Very High Concern (SVHC) and included on the Candidate List: https://echa.europa.eu/candidate-list-table.	
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.	
Triclosan	

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.

O13 Labels for rigid plastic packaging: Design for recycling	Yes	No
Is there any direct print on the container except for date codes, batch codes and UFI (Unique Formula Identifier)?		

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 laundry detergents for professional use

To be used in conjunction with an application for a licence for the Nordic Swan Ecolabelling of laundry detergents for professional use.

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 dishwasher detergents for professional use. 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.

Ingoing substances in the raw material/ingredient (chemical name, CAS-number, amount in weight-%):

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

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

Suggested DID-numbers for the raw material/ingredient(s), including all declared ingoing substances (The DID list can be obtained from

https://api.svanemerket.no/api/docs/CriteriaDocuments/ProductGroup/080?fileTy pe=35&language=e

(See "DID 2016 (English)" a little further down the page)

O4 Classification of ingoing 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			
H351 – Suspected of causing cancer, hazard category 2			
H340 – May cause genetic defects, hazard category 1A and 1B			
H341 – May cause genetic defects, hazard category 2			

H360 – Toxic for reproduction, hazard category 1A and 1B			
H361 – Toxic for reproduction, hazard category 2			
H362 – Toxic for reproduction, effects on or through breastfeeding (supplementary category)			
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled 1 / 1A / 1B			
H317 – Sk	in sensitising	category 1 / 1A / 1B	
EUH380 EUH381	ED HH 1 ED HH 2	- Endocrine disruption for human health	
EUH301	ED HH Z		
EUH430 EUH431	ED ENV 1 ED ENV 2	- Endocrine disruption for the environment	
EUH431	ED ENV 2		
EUH440	PBT	- Persistent, Bioaccumulative and Toxic properties***	
EUH441	vPvB	- Very Persistent, Very Bioaccumulative properties***	
EUH450	PMT	- Persistent, Mobile and Toxic properties	
EUH451	vPvM	- Very Persistent, Very Mobile properties	

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	
Alkylphenol ethoxylates (APEO) and/or alkylphenol derivatives (APD)			
Benzalkonium chloride, CAS-no. 8001-54-5			
Bisphenols and bisphenol derivatives: 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).			
Boric acid, borates and perborates			
Colourants			

Laundry detergents for professional use

DADMAC (dialkyldimethylammonium chloride), CAS-no. 68424-95-3	
DTPA (diethylenetriamine pentaacetate), CAS-no. 67-43-6	
EDTA (ethylenediaminetetraacetic acid), CAS-no. 13235-36-4, and its salts	
Fragrances	
Halogenated flame retardants	
LAS (linear alkylbenzene sulphonates)	
MI (methylisothiazolinone acid), CAS-no. 2682-20-4	
<ul> <li>Microplastics</li> <li>Microplastics are defined here as particles of insoluble macromolecular plastic less than 5 mm in size, achieved through one of the following processes:</li> <li>a) Polymerisation, such as polyaddition or polycondensation, or a similar process that uses monomers or other precursors.</li> <li>b) Chemical change of natural or synthetic macromolecules.</li> <li>c) Microbial fermentation.</li> <li>Note that Nordic Ecolabelling follows the ECHA's restriction proposal and its definition, and we reserve the right to change the definition above once the definition in the restriction proposal has been fixed. An appropriate transition period will be granted.</li> </ul>	
Nanomaterials/particles Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01): 'Nanomaterial' means a natural, incidental or manufactured material consisting of solid particles that are present, either on their own or as identifiable constituent particles in aggregates or agglomerates, and where 50 % or more of these particles in the number- based size distribution fulfil at least one of the following conditions: (a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm; (b) the particle has an elongated shape, such as a rod, fibre or tube, where two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm; (c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.	
NTA (nitrilotriacetic acid), CAS-no. 139-13-9, and its salts	
Optical brighteners	
Organic chlorine compounds, hypochlorites and hypochlorous acid	
PFAS (per- and polyfluoroalkyl substances)	
Phosphates	
Phtalates	
Potential or identified endocrine disruptors according to any of the EU member state initiative "Endocrine Disruptor Lists" List I; II; and/or III <u>https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu</u> <u>https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption</u> <u>https://edlists.org/the-ed-lists/list-ii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities</u>	
Substances on the List II sublist "Substances no longer on list"? <u>https://edlists.org/the-ed-lists/substances-no-longer-on-list-ii</u> If Yes, please write chemical name and CAS-no. below. Nordic Ecolabelling will evaluate the circumstances on a case-by-case basis, through the background information indicated for the substance on the sublist.	

Quaternary ammonium compunds, which are not aerobic or anaerobic biodegradable	
Siloxanes D4, D5, D6 and HMDS	
Substances categorised as Substances of Very High Concern (SVHC) and included on the Candidate List: https://echa.europa.eu/candidate-list-table.	
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.	
Triclosan	

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 Certified raw materials	Yes	No
Are palm oil, palm kernel oil, derivatives of these or sugarcane used in the raw material/ingredient?		
If yes, is the renewable raw material sustainability certified?		
If yes, please state the raw material sustainability certification system:		
For palm oil, palm kernel oil or derivatives of these: If a raw material sustainability certification system is used, state the level of traceability (shown in a Chain of Custody certificate where applicable).		
No traceability		
Identity preserved		
Segregated		
Mass balance		
Book & Claim		

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

The following applies to tests regarding ecotoxic effects and performance tests.

The analysis laboratory must fulfil the general requirements of standard ISO 17025 or have official GLP status.

#### 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 logKow  $\geq$  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 not considered to be bioaccumulative even if its logKow  $\geq$  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 no. 310 in OECD guidelines for testing of chemicals shall 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.

#### 7 Anaerobic degradability

For anaerobic degradability, ISO 11734, ECETOC no. 28 or OECD 311 shall 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 / ECx > 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 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 Declaration from the manufacturer of the primary packaging component

To be used in conjunction with an application for a licence for the Nordic Ecolabelling of laundry detergents for professional use.

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

Producer/distributor

Part of the packaging (container, closure, label)

Packaging material (type of plastic, cardboard etc.) List all materials included in the packaging component and the percentage of each material.

O12 Rigid plastic packaging: Design for recycling		No
Is the component made of monomaterial? If no, please state material:		
If made of polyethylene terephthalate (PET): Have any pigments/colours been added?		
Has carbon black been added to the component?		
Are any barriers used in the component?		
Are fillers used in the components? If yes, please state the density of the packaging component [g/cm³]:		
Does the component contain metal parts? If yes, please specify the type of metal part:		
For closures: Does the component contain silicone?		

O13 Labels for rigid plastic packaging: Design for recycling	Yes	No
For non-polyolefin plastic labels applied to PE or PP containers: Please state the density of the	ne label:	
Note: Density in g/cm <sup>3</sup> .		
For labels applied to PET containers: Please state the density of the label:		
Note: Density in g/cm <sup>3</sup> .		
Is there polyvinyl chloride (PVC) or other halogenated plastics present in the labels?		
Does the label contain metal?		
If yes, please specify the type of metal part:		

O14 Flexible plastic pouches: Design for recycling	Yes	No
Is the component made of monomaterial?		
Are any barriers used in the component?		
If yes, please state barrier type and percentage (weight %):		
Has carbon black been added to the component?		
Are fillers used in the components? If yes, please state the density of the packaging component [g/cm <sup>3</sup> ]:		
Does the component contain metal seals or other metal parts? If yes, please specify the type of metal part:		
For closures: Does the component contain silicone?		

O15 Paper-based packaging: Design for recycling	Yes	No
Does the packaging contain recycled material*?		
<ul> <li>* Recycled material is defined in accordance with ISO 14021 in the following two categories.</li> <li>Material in the pre-consumer phase. Material that has been taken from the waste flow during the manufacturing process. The exception is the re-use of material that is generated in a process, e.g. waste that can be recycled within the same process that generated it. Material in the post-consumer phase. Material generated by households or by trade, industry or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose. This includes the return of materials from the distribution chain.</li> <li>If yes, please state the percentage recycled in the wood raw material that is used in the paper/board:</li> </ul>		
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?		
Is there polyvinyl chloride (PVC) or other halogenated plastics present in the labels?		
Does the packaging contain metal parts?		
Is the packaging material solid coloured?		

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

## Appendix 6 Form for user test

This appendix must be filled in by the user.

The declaration relates to the following laundry detergent / multi-component system:

Name of the laundry detergent or the multi-component system

Manufacturer

#### Washing temperature och dosing

Please fill in the washing temperature and dosing in the table below.

Degree of soiling	Washing temperature	Dosing* g/kg laundry
Light		
Medium		
Heavy		

\* For multi-component systems, the equivalent dosage is stated for each subcomponent.

#### **Test period**

Start date: \_\_\_\_\_

End date: \_\_\_\_\_

#### Information about test site

Brief description of the test site where the washing test was carried out (type of machine, wash temperature, other information of relevance for the wash result):

#### Evaluation of the laundry detergent / multicomponent system

Please fill in the table below.

Parameter	Not effective / not satisfactory	Adequately effective / adequately satisfactory	Very effective / very satisfactory
Dosability			
Chemical wear			
Ability to be rinsed out			
Solubility			
Ability to wash clean light soiled laundry			
Ability to wash clean medium soiled laundry			
Ability to wash clean heavily soiled laundry			
Ability to remove stains			
Ability to bleach (if relevant)			
Greying of white laundry (if relevant)			
Colour fastness			
Colouring			
Effect of fabric conditioner on drying, ironing and mangling			

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