

Nordic Ecolabelling for

Paints and varnishes



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Content

What is a Nordic Swan Ecolabelled paint or varnish?	4
Why choose the Nordic Swan Ecolabel?	4
What can carry the Nordic Swan Ecolabel?	5
How to apply	6
1 Definitions	7
1.1 General requirements	9
1.2 Chemical requirements	10
1.3 Binder requirements	21
1.4 Quality requirements	24
1.5 Quality requirements for indoor paints and varnishes	25
1.6 Quality requirements for outdoor paints and varnishes	28
1.7 Quality requirements for industrial paints and varnishes	30
2 Requirements concerning packaging, labelling, consumer information and recycling	33
3 Licence maintenance	34
Regulations for the Nordic Ecolabelling of products	35
Follow-up inspections	35
Criteria version history	35
New criteria	35
Appendix 1 Declaration from the manufacturer of the paint or varnish	36
Appendix 2 Declaration from the manufacturer of the raw material	45
Appendix 3 Example of recipe structure	52
Appendix 4 Declaration from the manufacturer of raw materials used in in acrylic/alkyd resins	53
Appendix 5 Requirements on the analysis laboratory	54

This document is the original document. In case of dispute in other languages, 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 paint or varnish?

A Nordic Swan Ecolabelled paint or varnish have reduced environmental impact throughout its lifecycle. Through strict requirements the product group is a better choice for users and the environment.

With long shelf lives and strict quality requirements, Nordic Ecolabel requirements for paints or varnishes help reduce resource use. The requirements further promote circular economy and reduces the climate impact of paints and varnishes.

Nordic Swan Ecolabelled paint or varnish:

- Meet strict quality requirements to promote long-lasting, durable, and efficient paints and varnishes which leads to less use of resources in a lifecycle perspective.
- Meet strict requirements regarding environmentally hazardous chemicals.
- Meet strict health requirements for chemicals. It means that the paint/varnish does not contain substances that can cause cancer, damage genes or reproductive capacity.
- Free from phthalates, fluorinated substances and identified and potential endocrine disruptors on up-to-date lists from EU and national authorities.
- Meet strict requirements for emissions from harmful substances. This is positive for the indoor environment.
- Reduced energy consumption for production of paint – this ensures energy efficiency and reduces the climate impact.
- Meet strict requirements for the manufacturing of raw materials with high climate impact such as titanium dioxide and cement/hydraulic binders.
- Has packaging that includes recycled material - which contributes to a circular economy.
- Implement a policy to ensure increased use of renewable raw materials that originate from sustainably produced and controlled sources.

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 indoor and outdoor paints and varnishes 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?

The product group of paints and varnishes shall comprise; decorative paints and varnishes, floor coatings and floor paints, paint products which are tinted by distributors at the request of consumer (non-professional) or professional decorators, tinting systems, decorative paints in liquid, powder or paste formulas which may have been pre-conditioned, tinted or prepared by the manufacturer to meet consumer's needs, including wood paints, wood and decking stains, masonry coatings and metal finishes primers and undercoats of such product systems as defined in and related products intended for use by consumers and professional users falling under the scope of Directive 2004/42/CE¹ (“the paints directive”) of the European Parliament and of the Council.

The product group also comprises of industrial paints and varnishes that are used and manufactured for industrial applications, such as painting furniture/panels for indoor and outdoor use.

The product group shall not comprise the following products:

- Anti-fouling coatings
- Preservation products for wood impregnation
- Paints primarily intended for vehicles
- Product which primary function is not to form a film over the substrate, e.g., oils and waxes
- Fillers as defined by EN ISO 4618
- Road-marking paints

¹ Directive 2004/42/CE <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32004L0042>

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 addresses 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
-  Upload
-  State data in electronic application
-  Requirement checked on site

To be awarded a Nordic Swan Ecolabel licence:

- All obligatory requirements must be fulfilled.
- Nordic Ecolabelling must inspect the 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 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 Definitions

For the purpose of this document, the following definitions shall apply, partly from EN ISO 4618 and article 2 in the EU-Ecolabel criteria document².

Definition	Description
Paint	Pigmented coating material, supplied in a liquid, paste or powder form, which, when applied to a <i>substrate</i> , forms an opaque dried <i>film</i> having protective, decorative or specific technical properties and after application dries to a solid, adherent, and protective coating.
Varnish	<i>Coating material</i> which when applied to a <i>substrate</i> forms a solid transparent <i>film</i> having protective, decorative or specific technical properties.
Ingoing substances	All substances in the Nordic Swan Ecolabelled product regardless of amount, including additives (e.g., preservatives and stabilizers) in the raw materials. Substances known to be released from ingoing substances (e.g., formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
Impurities	Residuals, pollutants, contaminants etc. from production, incl. production of raw materials, that remain in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0.0100 w%). Impurities in the raw materials exceeding concentrations of 1000 ppm (0.1000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product. Examples of impurities are residues of the following: residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines. The impurity limit of 100 ppm (0.0100 w%) applies to each individual substance that is excluded, i.e., Impurities with the same classification in different raw materials shall not be summed up to comply with the limit. The same contaminants in different raw materials also do not need to be summed.
Wood preservative	Product containing a <i>biocide</i> with primary purpose intended to inhibit the development of wood-destroying and/or wood-staining organisms in the wood to which it is applied.
Wood stain	Penetrating composition containing a <i>dyestuff</i> that changes the <i>colour</i> of a wood surface, usually transparent and leaving no surface <i>film</i> , the <i>solvent</i> which may be oil, denaturated alcohol, or water.
Lasure	<i>Coating material</i> , solvent- or water-based, containing small amounts of a suitable <i>pigment</i> and/or <i>extender</i> and used to form a transparent or semi-transparent <i>film</i> for decoration and/or protection of the <i>substrate</i> .

² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021D1871&qid=1665411241922>

Powder coating	<i>Coating material</i> in powder form which, after fusing and possibly <i>curing</i> , gives a continuous <i>film</i> .
Tinting system	Method for preparing coloured paints by mixing a base with coloured tints.
Masonry coating	<i>Coating material</i> that produces a decorative and protective film for use on concrete, paintable brickwork, blockwork, rendering, calcium silicate board or fibre-reinforced cement.
Binding primers	<i>Coating</i> designed to stabilise loose substrate particles or impart hydrophobic properties.
UV curable paint system	Hardening of <i>coating material</i> by exposure to artificial ultra-violet radiation.
Alkyd resin (binder)	<i>Synthetic resin</i> resulting from the polycondensation of fatty acids (or oils) and carbonic acids with polyols.
Acrylic resin (binder)	<i>Synthetic resin</i> resulting from the polymerization or copolymerization of acrylic and/or methacrylic monomers, frequently together with other monomers.
Hydraulic binder	The chemical combination of lime, burnt clay or other pozzolanic material and water to form a stable compound as a result of hydration.
Anti-foaming agent	<i>Additive</i> that prevents foaming or reduces the foaming tendency of a <i>coating material</i> .
Anti-skinning agent	<i>Additive</i> that is added to the coating material to prevent skinning during production or storage of the coating material.
Preservative / Biocide	<i>Additive</i> added to a <i>coating material</i> to prevent organisms responsible for microbiological degradation from attacking a substrate, a <i>coating material</i> , or a <i>film</i> thereof.
In-can preservatives	<i>Biocide</i> used to prevent growth of microorganisms during storage of a water-based <i>coating material</i> or stock solution.
Dry-film preservatives	Products used for the preservation of films or coatings by the control of microbial deterioration or algal growth in order to protect the initial properties of the surface of materials or objects.
White and light coloured	Paints are those with a tri-stimulus (Y-value) > 70%.
Gloss paints	Are those which at an angle of incidence of 60° show a reflectance of ≥ 60.
Mid sheen paints	(Also referred to as semi-gloss, satin, semi matt) are those which at an angle of incidence of 60° or at 85° show a reflectance of < 60 and ≥ 10.
Matt paints	Are those which at an angle of incidence of 85° show a reflectance of < 10.
Dead matt paints	Are those which at an angle of incidence of 85° show a reflectance of < 5.
Transparent	And 'semi-transparent' means a film with a contrast ratio of < 98% at 120µ wet film thickness.
Opaque	Means a film with a contrast ratio of > 98% at 120µ wet film thickness.
Spreading rate	Surface area that can be covered by a given quantity of <i>coating material</i> to give a dried <i>film</i> of requisite thickness.
Blistering	<i>Convex</i> deformation in a <i>film</i> , arising from local detachment of one or more of the constituent <i>coats</i> .
Cracking	Rupturing of a dry <i>film</i> or <i>coat</i> .
Chalking	<i>Appearance</i> of a loosely adherent powder on the surface of a <i>film</i> or <i>coat</i> arising from the degradation of one or more of its constituents.
Flaking	Detachment of small parts of a <i>coating</i> due to loss of <i>adhesion</i> .

Nanomaterial	A nanomaterial is 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 is in the size range 1-100 nm.
Volatile organic compound	Volatile organic compound (VOC) means any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101,3 kPa.
Semi volatile organic compound	Semi volatile organic compound (SVOC) means any organic compound having a boiling point greater than 250 °C and less than 370 °C measured at a standard pressure of 101,3 kPa.
Identity preserved	Certified product(s) from a certified site is kept separate from other sources throughout supply chain.
Segregated	Certified product from different certified sources is kept physically separate from non-certified product through each stage of the supply chain.
Mass balance	Certified physical product is not separated from and may be mixed with non-certified physical product at any stage in the production process, provided that the quantities are controlled.
Book & Claim	Certified products are completely decoupled from sustainability data.

1.1 General requirements

01 Information about the product

The applicant must give detailed information on the indoor or outdoor paint and varnish product to which the application relates. The following information is required:

- Describe the product and its application method with subcategory denotation according to Directive 2004/42/EC.
- If the product forms part of a component system that jointly ensures the functioning of the product, the entire product must be Nordic Ecolabelled and not simply parts of it (e.g., a tinting system comprising a base and coloured tints or two-component varnishes comprising a base and a hardener). The requirement thus refers to the individual product and not to products in the same range (a range is here e.g., systems for exterior painting comprising primer, undercoat, and paint).
- Formulation detailing complete composition with a specification of all ingoing substances (see definition of raw materials and ingoing substances in Chapter 2.2). The description must include:
 - The trade name of the raw materials
 - Type of binder
 - The function of each raw material
 - Specification for product type of preservative, e.g. in-can or film preservative.
 - The chemical name and CAS no. (if possible) of the ingoing substances
 - Content in % per ingoing substance in the product

Description of the product in accordance with the definition of what may be Nordic Ecolabelled.

- ☒ Description of how the product is to be used to achieve functionality, and what application method it is intended for.
- ☒ Formulation detailing complete composition with a specification of all raw materials and ingoing substances, as set out in Appendix 3.

1.2 Chemical requirements

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

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

Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials, that remain in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0.0100 w%).

Impurities in the raw materials exceeding concentrations of 1000 ppm (0.1000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.

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

The impurity limit of 100 ppm (0.0100 w%) applies to each individual substance that is excluded, i.e., Impurities with the same classification in different raw materials shall not be summed up to comply with the limit. The same contaminants in different raw materials also do not need to be summed.

O2 Classification of the product

The final product must not be classified and labelled according to Table 1.

Table 1 Classification of the product

Classification of chemical products CLP Regulation 1272/2008:		
Classification	Hazard class and category	Hazard code
Hazardous to the aquatic environment	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
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

Classification of chemical products CLP Regulation 1272/2008:		
Classification	Hazard class and category	Hazard code
	Acute Tox. 4	H302
	Acute Tox. 4	H312
	Acute Tox. 4	H332
Specific target organ toxicity: single or repeated exposure	STOT SE 1 or 2	H370
	STOT SE 1 or 2	H371
	STOT RE 1 or 2	H372
	STOT RE 1 or 2	H373
Skin corrosion/irritation	Skin Corr. 1A, 1B or 1C	H314
Aspiration hazard	Asp. Tox. 1	H304
Skin sensitisation	Skin Sens. 1, 1A or 1B	H317
Respiratory sensitisation	Resp. Sens. 1, 1A or 1B	H334
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
Explosives	Unst. Expl.	H200
	Expl. 1.1	H201
	Expl. 1.2	H202
	Expl. 1.3	H203
	Expl. 1.4	H204
	Expl. 1.5	H205
	Expl. 1.6	H206
Oxidizing liquids and solids	Ox. Liq. 1 to 3	H271
	Ox. Sol. 1 to 3	H272
Organic peroxides and self-reactive substances and mixtures	Org. Perox. A to EF	H240
	Org. Perox. A to EF	H241
	Org. Perox. A to EF	H242
Extremely flammable aerosol and liquids	Aerosol 1	H222
	Flam. Liq. 1	H224

Exemptions:

- H317 for outdoor paints and varnishes and industrial paints if the classification is due to the content of dry film preservatives.
- H412 for outdoor paints and varnishes and industrial paints if the classification is due to the content of preservatives.
- H400, H410 and H411 if the classification is due to metallic zinc in two-component products in anti-corrosion paints for industry and infrastructure.

Note that the responsibility for correct classification lies with the manufacturer.

- Safety data sheet in accordance with Annex II of REACH (Regulation 1907/2006) for each product in the application.

O3 Classification of ingoing substances

The product must not contain ingoing substances that are classified according to the Table 2.

Table 2 Classification of ingoing substances

Classification of ingoing substances CLP Regulation 1272/2008:		
Classification	Hazard class and category	Hazard code
Carcinogenicity	Carc. 1A or 1B Carc. 2	H350, H350i H351
Germ cell mutagenicity	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362
Respiratory sensitisation	Resp. Sens. 1, 1A or 1B	H334
Specific target organ toxicity: single exposure or repeated exposure	STOT SE 1 STOT RE 1	H370 H372

Exemptions:

- Preservatives classified as H370 and H372.
- Formaldehyde (CAS no. 50-00-0) as an impurity, see separate requirements O6.
- Respirable crystalline silica/quartz classified as H372 with a maximum content of 1% in raw materials, see separate requirement O10.
- Glyoxal (CAS no. 107-22-2) if the pH in the final product is above 8.
- Trimethylolpropane (TMP) (CAS no. 77-99-6), maximum content of 1% in pigments. Time-limited exemption valid until 2025-05-31.
- Titanium dioxide (CAS no. 13463-67-7).
- Bisphenol A (CAS no. 67-56-1) up to 5 ppm in epoxy paints.

- Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of each raw material. Documentation of exemptions for each substance is done in appendix 1 and 2, together with a statement as to why the substance is present in the product/raw material and other documentation if appropriate.
- Safety data sheet for all raw materials in line with Annex II to REACH (Regulation (EC) No 1907/2006).

O4 Environmentally harmful substances

Ingoing substances classified as environmentally harmful with hazard phases H410, H411 and/or H412, according to CLP Regulation (1272/2008), are limited in the product according to the following formula.

$$M \cdot 100 \cdot H410 + 10 \cdot H411 + H412 \leq 6\%$$

Where:

H410 is the concentration of substances classified with H410 in percent

H411 is the concentration of substances classified with H411 in percent

H412 is the concentration of substances classified with H412 in percent

Where M is the multiplying factor for H410 as stated in CLP.

If information about a substance's harmfulness to the environment (in the form of data concerning toxicity and degradability or toxicity and bioaccumulation) is not available, the substance is treated as environmentally harmful – H410, and multiplication factor 1000.

For tinting systems, a worst-case calculation is done with the colour with most tinting paste and the base paint with most environmentally hazardous substances.

Exemptions:

- Preservatives are exempted from the requirement, however, requirement O2 and O5 must still be fulfilled.
- Zinc oxide used as stabilizer for preservatives may be exempted in maximum 400 ppm in the final product. Any amount above 400 ppm will be added to the calculation in reference to the above formula.
- Metallic zinc is exempted in two-component products in anti-corrosion paints for industry and infrastructure.

- ☒ Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of each raw material.
- ☒ Safety data sheet for all constituent substances in line with Annex II to REACH (Regulation (EC) No 1907/2006).
- ☒ Calculation clearly showing that the requirement is fulfilled.

O5 Preservatives

- Only preservatives compliant with product-type 6 and product-type 7 according to Regulation (EU)528/2012 (The Biocidal Products Regulation) can be used.
- The amount of preservative/combination of preservatives is limited in the final product including tinting paste according to the tables 3 and 4 and the final classification of the product according to O2 and classification of constituent substances according to O3.

The amount of preservatives may be reported in one of the following ways:

- The amount of preservatives must not exceed the maximum theoretical amount at the time of the production. The limit value in the tables below and the amount shall be calculated based on the added preservatives and the maximum amount in the raw materials.
- Alternatively, the amount of preservatives can be measured analytically by high-performance liquid chromatography (HPLC) or similar methods and shall be based on the maximum amount in the final paint with the same limit values as the tables below.

For tinting systems, a worst-case calculation must be performed for the colour with most tinting paste and the base paint with highest content of preservative and isothiazolinone compounds.

Table 3 Concentration limits for preservatives in indoor paints and varnishes in the final product.

Indoor paints and varnishes		
Product type	Isothiazolinones	Preservatives total
Indoor paints and varnishes*	600 ppm (0.0500% w/w)	900 ppm (0.0900% w/w)
Wet room paints*)**	600 ppm (0.0500% w/w)	1600 ppm (0.1600% w/w)

Note that Dithio-2,2'-bis-benzmethylamide (DTBMA) is to be included in the total amount of isothiazolinones.

** Paints, varnishes, base paints with tinting paste etc.*

*** Indoor paints intended for use in areas with high humidity, including kitchens and bathrooms.*

Table 4 Concentration limits for preservatives in indoor/outdoor industrial paints and varnishes and outdoor paints and varnishes.

Industrial and outdoor paints and varnishes		
Product type	Isothiazolinones*	Preservatives total
Indoor industrial paint and varnish	600 ppm (0.0500% w/w)	1500 ppm (0.1500% w/w)
Outdoor industrial paint and varnish	1500 ppm (0.1500% w/w)	4500 ppm (0.4500% w/w)
Outdoor paint and varnish	1500 ppm (0.1500% w/w)	4500 ppm (0.4500% w/w)
Anti-corrosion paint for industry and infrastructure	100 ppm (0.0100% w/w)	200 ppm (0.0200% w/w)

Note that Dithio-2,2'-bis-benzmethylamide (DTBMA) is to be included in the total amount of isothiazolinones.

** Reaction mass of 5-chloro-2-methyl-1,2-thiazol-3(2H)-one and 2-methyl-1,2-thiazol-3(2H)-one; [CMIT/MIT] (CAS no. 55965-84-9), 2-methyl-2H-isothiazol-3-one; [MIT] (CAS no. 2682-20-4), 2-methyl-1,2-benzothiazol-3(2H)-one; [MBIT] (CAS no. 2527-66-4) are limited to 15 ppm each.*

- Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of each raw material.
- Report of results from analysis by HPLC or similar method showing that the requirement concerning preservatives is fulfilled.
- Calculation clearly showing that the requirement concerning preservatives is fulfilled.

O6 Formaldehyde

Indoor paints and varnishes:

- The emissions of formaldehyde of the final product must not exceed 0.06 mg/m³ measured in the air of a test chamber according to EN 16516.

Outdoor paints and varnishes and industrial paints:

The level of free formaldehyde in the final product must not exceed 25 ppm (0.0025% by weight, 25 mg/kg) measured by HPLC or similar methods*.

** The Merckoquant method can also be used, but the level must then be max 20 ppm.*

For tinting systems, the colour with the tinting paste and the base paint predicted to contain the highest theoretical amount of formaldehyde (worst case) shall also be determined and measured.

- Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of each raw material.
- Test report according to EPA 8315A, VdL-RL03, Merckoquant method, HPLC, EN 16516 or other equivalent test method for the products showing that requirement is met.
- Documentation showing that the test laboratory fulfils the requirement in appendix 4.

O7 Residual monomers in polymers

For each polymer present in the product >1% the quantity of residual monomers and its classifications must be stated. There cannot be more than 100 ppm of each classification in Table 5.

For tinting systems, a worst-case calculation is done with the colour with the most tinting paste and the base paint with most residual monomers.

Table 5 Classification of residual monomers

Classification according to CLP Regulation 1272/2008:		
Classification	Hazard class and category	Hazard code
Carcinogenicity	Carc. 1A or 1B Carc. 2	H350, H350i H351
Mutagenic	Muta. 1A or 1B Muta. 2	H340 H341
Germ cell mutagenicity	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362
Respiratory sensitisation	Resp. Sens. 1, 1A or 1B	H334
Specific target organ toxicity: single exposure or repeated exposure	STOT SE 1 or 2	H370
	STOT SE 1 or 2	H371
	STOT RE 1 or 2	H372
	STOT RE 1 or 2	H373

The quantity of residual monomers is to be stated for newly produced polymers.

Exemptions:

- Vinyl acetate (CAS no. 108-05-4) as residual monomer in polymers up to 500 ppm.

Declaration in line with Appendix 2 from the manufacturer of each raw material.

O8 Heavy metals

The following heavy metals or heavy metal compounds must not be present in the product or in its raw materials:

- Cadmium
- Lead
- Chromium VI
- Mercury
- Arsenic
- Barium
- Selenium
- Antimony

Traces of the above-mentioned metals from residuals can be included up to 100 ppm (100 mg/kg, 0.0100% by weight) per single metal in the raw material.

Exemptions:

- Barium sulphate and other equally insoluble barium compounds.
- Antimony in pigments contained in a TiO₂ rutile lattice on the following terms: test results must prove that the molecular structure is inert, and that the environmental and health effects of the pigment are on the same level as, or better than, the results for C.I Pigment Brown 24 CAS

no. 68186-90-3 and C.I Pigment Yellow 53 CAS no. 8007-18-9 in the report: UNEF Publications, OECD SIDS Initial Assessment Profile (www.inchem.org).

- ☒ Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of the raw material.
- ☒ For pigment that contains antimony integrated into a TiO₂ rutile lattice, documentation must be submitted to show that the molecular structure is inert, and that the environmental and health effects of the pigment are on the same level as, or better than, the results for C.I Pigment Brown 24 CAS no. 68186-90-3 and C.I Pigment Yellow 53 CAS no. 8007-18-9 in the report: UNEF Publications, OECD SIDS Initial Assessment Profile (www.inchem.org).

09 Titanium dioxide

The following applies if the product contains more than 3.0% by weight of titanium dioxide (TiO₂) (CAS no. 13463-67-7):

- Energy consumption:

The raw material manufacturer must fulfil requirement a) concerning overall energy consumption to produce TiO₂ pigments based on the specific process used at the manufacturing plant. If both chloride and sulphate processes are used to manufacture the pigments for the Nordic Swan Ecolabelled paint or varnish, the energy consumption for both processes shall be fulfilled in accordance with the requirement. The raw material manufacturer must also fulfil either requirement b) or c), in conjunction with requirement a).

- a) The overall energy demand to produce TiO₂ pigments at the manufacturing plant, which include ore preparation to calcination, finishing and effluent treatment with the use of externally purchased electricity, steam and gas and heavy fuel oils and coal must not exceed the values below:

Table 6 Maximum energy demand for the different processes to produce TiO₂ pigments

Overall energy consumption expressed as giga joules per tonne TIO2-pigments	
Manufacturing process	Limit
Sulphate process	20 GJ/t
Chloride process	15 GJ/t

- b) The manufacturing plant has its own renewable electricity production from solar PV panels that is planned to cover at least 20% of the total yearly electricity demand* or,
- c) Implementation of energy management system for the manufacturing plant in accordance with ISO 50001 or performed an energy audit in accordance with ISO 50002 or EN 16247-1. Based on the analysis, the company must present an action plan to reduce energy consumption (ISO 50002 or EN 16247-1).

* Based on the average electricity use over the last 3 years.

- Emissions:

Emissions from the production of TiO₂ shall not exceed the values given in Table 7 and 8 for the sulphate process and the chloride process, respectively.³

³ Derived from the Best Available Techniques for the Production of Basic Inorganic Chemicals (BREF) (August 2007).

Table 7 Emission limits from the production of TiO₂ using the sulphate process.

Emission limits from the production of TiO ₂	
Sulphate process	Limit
SOx expressed as SO ₂ :	7.0 kg/tonne TiO ₂
Sulphate waste:	500 kg/tonne TiO ₂

Table 8 Emission limits from the production of TiO₂ using the chloride process.

Emission limits from the production of TiO ₂	
Chloride process	Limit
When using natural ore:	103 kg chloride waste/tonne TiO ₂
When using synthetic ore:	179 kg chloride waste/tonne TiO ₂
When using slag ore:	329 kg chloride was/tonne TiO ₂

If more than one type of ore is used, the values apply proportionately to the ore type used.

- Occupational exposure:

The raw material manufacturer must meet the requirements for powder handling according to O10.

- Declaration, see Appendices 1 and 2, from the manufacturer of the product and the manufacturer of each raw material.
- Energy report containing total energy consumption per tonne of titanium dioxide produced on annual basis. . An energy report prepared for other purposes such as internal, external, or corporate reporting requirements will also be accepted.
- Documentation detailing the planned renewable electricity production in relation to total electricity use.
- ISO 50001 certificate for the manufacturing plant or documentation showing energy-assessments according to ISO 50002 or 16247-1.
- A description and calculation from the titanium dioxide-manufacturer showing that the requirement for emissions is fulfilled.
- Description of how powdered raw materials are handled during the production process.

O10 Powdered raw materials

Raw materials in powder form must be added in a closed system, in a suspension or by means of a method that promotes a “low-dust” working environment e.g., using protective equipment which heavily reduce the dust or completely remove the dust from the raw materials (e.g., exhaust ventilation, personal protective equipment and clear safety instructions).

- Description of how powdered raw materials are handled during the production process.

O11 Nanomaterials/-particles

- Nanomaterials/-particles must not be added or be present in the product.

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.

Exemptions:

- Pigments. Nano-TiO₂ is not considered a pigment.
- Naturally occurring inorganic fillers in accordance with annex V point 7 in REACH.
- Synthetic amorphous silica (SAS). This exemption applies to non-modified SAS. Chemically modified colloidal silica can be included in the products if the silica particles form aggregates in the final product. Any surface treatment of nanoparticles must fulfil requirement O3 (Classification of constituent chemical substances) and requirement O12 (Prohibited substances).
- Unmodified calcium carbonate (grounded calcium carbonate, GCC) and precipitated calcium carbonate (PCC).
- Polymer dispersions.

Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of each raw material.

O12 Prohibited substances

The product must not contain ingoing substances that are:

- Substances categorised as Substances of Very High Concern (SVHC) and included on the EU Candidate List.
- Substances evaluated by the EU to be persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB), in accordance with the criteria in Annex XIII of REACH and substances that have not yet been investigated, but which meet these criteria.
- Endocrine disruptors: Substances on the EU member state initiative "Endocrine Disruptor Lists", List I, II and III, see the following links:
 - <https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu>
 - <https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption>
2,2-dibromo-2-cyanoacetamide (DBNPA) used for disinfecting washing water in the supply chain and production of the paint or varnish is exempted from the requirement as it is not constituent or part of the manufacturing of the ecolabelled product.
 - <https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities>

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."

- Organotin compounds.
 - Phthalates (*Esters of phthalic acid (orthophthalic acid / phthalic acid / 1,2- benzene dicarboxylic acid).*)
 - 34 bisphenols⁴ 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.
 - Alkylphenols, alkylphenol ethoxylates (APEO) and other alkylphenol derivatives (APD).
 - Halogenated organic compounds. Exemptions for:
 - Preservatives that fulfil O5.
 - Paint pigments that meet the EU's requirement concerning colourants in food packaging under Resolution AP (89) point 2.5.
 - Driers in oxidative drying paints, see also O3 regarding classifications.
 - Isocyanates. Exemption for water-borne polyisocyanates with a chain length of more than 10, where the concentration of isocyanates with a chain length of less than 10 as an impurity is documented.
 - Fragrances.
- Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of each raw material.
- If halogenated organic pigments are used, a declaration is required from the pigment supplier confirming that the pigment meets the EU's requirement concerning colourants in food packaging under Resolution AP (89) point 2.5.
- If water-borne polyisocyanates with a chain length of more than 10, where the concentration of isocyanates with a chain length of less than 10 as an impurity are used, send documentation showing this.

O13 Emissions of Volatile and Semi-Volatile Organic Compounds in indoor paints and varnishes

For Indoor paints and varnishes, the emissions of carcinogenic VOC, Total Volatile Organic Compounds (TVOCs) and Total Semi-Volatile Organic Compounds (SVOCs) must not exceed limits given in Table 9.

Test method: Emission testing after 28-days according to EN 16516 or EN 16402 or other equivalent test methods.

For tinting systems, the emissions of VOCs and SVOCs shall be determined for the colour with most tinting paste and the base paint with highest theoretical amount of VOC and SVOC from the contribution of raw materials.

The test laboratory must fulfil the requirements in appendix 5.

⁴ 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).

Table 9 Emission limits for the final product for indoor paints and varnishes

Emission limits for the final product for indoor paints and varnishes after 28 days			
Product description (with subcategory denotation according to Directive 2004/42/EC)	1A and 1B carcinogenic VOC*	TVOC	TSVOC
a. b. d. e. f. g. h. i. j. l. All indoor products	≤ 0,001 mg/m ³	≤ 0,3 mg/m ³	≤ 0,1 mg/m ³

* Carcinogenic 1A and 1B VOCs listed in Annex H of EN 16516.

- Test report in accordance with EN 16516, EN 16402 or other equivalent standardised test conditions and determination methods.
- Documentation showing that the test laboratory fulfils the requirements in appendix 5

O14 Content of Volatile and Semi-volatile Organic Compounds in outdoor paints and varnishes and industrial paints

For outdoor paints and varnishes and industrial paints, the content of VOC and SVOC must:

- not exceed the limits given in Table 10 and Table 11.

For tinting systems, the content of VOCs and SVOCs shall be determined for the colour with most tinting paste and the base paint with highest content of VOC and SVOC.

The VOC and SVOC content for outdoor paints and varnishes and industrial paints shall be determined either by testing the final product or by calculation based on the raw materials in accordance with test methods given in ISO 11890-2.

The test laboratory must fulfil the requirements in appendix 5.

Products with the Nordic Swan Ecolabel may display the text 'reduced VOC content' and the VOC content in g/l next to the Ecolabel if they wish.

Table 10 VOC and SVOC content limits in its ready-to-use form for outdoor paints

VOC and SVOC content limits in its ready-to-use form		
Product description (with subcategory denotation according to Directive 2004/42/EC)	VOC limits (g/L ready to use)	SVOC limits (g/l ready to use)
c. Exterior walls of mineral substrate	25	40
d. Exterior trim and cladding paints for wood and metal	75	60
e. Exterior trim varnishes and wood stains, including opaque wood stains	65	60
f. Exterior minimal build wood stains	50	40
g. Primers	10	40
h. Binding primers	10	40
i. On pack performance coatings	80	60
j. Two-pack reactive performance coatings for specific end use such as floors	65	60

Table 11 VOC content limits in its ready-to-use form for industrial paints

VOC and SVOC content limits in its ready-to-use form for industrial products		
Industrial products falling under the scope of directive 2010/75/EU	VOC limits (g/L ready to use)	SVOC limits (g/l ready to use)
Industrial paints and varnishes*	75	-
Industrial paints and varnishes for outdoor use*	75	-
Anti-corrosion paints	0	-

* Industrial powder paints and powder varnishes are exempted from the requirement.

- Declaration in line with Appendices 1 or 2 from the manufacturer of the product or the manufacturer of each raw material, respectively.
- Test report or calculation showing that the content level of VOC and SVOC in the final product in table 10 and table 11 is fulfilled, based on the test of the final product or on all ingoing raw materials using test methods given in ISO 11890-2.
- Documentation showing that the test laboratory fulfils the requirements in appendix 5.

O15 Volatile Aromatic Compounds

Volatile aromatic compounds (VAC) must not be actively added to the product but may occur as residuals to a total maximum of 100 ppm (0.01% w/w, 100 mg/kg) in the final product.

Volatile aromatic compounds are volatile organic compounds where one or more benzene rings are contained within the molecule.

- Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of each raw material.
- Calculation of the level of volatile aromatic compounds in the product (based on data for all ingoing raw materials).

1.3 Binder requirements

The requirements in this section goal is to promote raw materials with less climate impact, reduced energy consumption, energy efficiency, transition from fossil to sustainable raw materials, renewable energy – and subsequently, reduced emissions of greenhouse gases. The requirement is divided in three parts, as there are different binders that can be used for indoor and outdoor paints and varnishes, where the specific binder type in question must fulfil the requirement where relevant below. Description by chemical type of binder shall be derived from that component of the binder which is decisive for the characteristic properties of the final coating system.

O16 Acrylic resins (binders)

The following requirements must be fulfilled if the product contains acrylic resins:

1. The licence holder shall have procedures showing how it works with strategic goals to increase their purchase and use of acrylic resins made from renewable raw materials used in Nordic Swan Ecolabelled paints and varnishes. The goals must be quantitative and time-based, and they shall be

determined by the company's management. The strategic goals must be assessed at least once a year by management.

2. The licence holder shall inform Nordic Ecolabelling on:
 - Proportion of acrylic resins made from renewable raw materials used in Nordic Swan Ecolabelled paints and varnishes.
3. If renewable raw materials (or feedstock) are used in acrylic resins, they must guarantee legal compliance with certification requirements for the sustainable production of biomass in accordance with EU's Renewable Energy Directive (2018/2001/EC) known as EU REDII⁵. Renewable raw materials from palm oil must not be used in the acrylic resin. The requirement also includes by-products, residues, and waste fractions from palm oil industries, such as palm fatty acid distillate and palm effluent sludge.
4. Information on:
 - Type of renewable raw material used in the acrylic resins (e.g., crops, sugarcane, source of bio-naphtha),
 - Whether the renewable raw materials are derived from primary feedstock or residue or waste,
 - Whether the renewable raw materials are certified according to any sustainability standards,
 - Level of traceability (*Identity Preserved, Segregated, Mass Balance, Book & Claim*) as defined in section 4.2 on both the renewable raw materials used in the production of acrylic monomers and the acrylic resin itself.

Doc 1 and 2 must be documented by the license holder:

- Doc 1:** Enclosed procedures for policy or equivalent documentation of the license holders work with environmental goals, showing fulfilment of the requirement. Minutes from the management's annual assessment on complying with strategic goals.
- Doc 2:** Information on the proportion of acrylic resins made from renewable raw materials used in the Nordic Swan Ecolabelled paints and varnishes.

Doc 3 and 4 must be documented by the manufacturer of the acrylic resin binders.

- Doc 3:** Documentation such as valid certificates or certificate identifier on the safety data sheet showing that the renewable raw materials used in acrylic resins comply with EU's Renewable Energy Directive (EU REDII).
- Doc 4:** Declaration in line with Appendix 4 signed by the manufacturer of the acrylic resins.

O17 Alkyd resins

Fatty acids and polyols in alkyd resins used in Nordic Swan Ecolabelled paints and varnishes must be;

- a) Made from renewable raw materials and,

⁵ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0082.01.ENG&toc=OJ:L:2018:328:TOC (visited June 2022)

- b) Documented of type of renewable raw material used in the alkyd resins (e.g., castor oil, soybean oil, tall oil, rapeseed oil, source of methanol/acetaldehyde) and,
- c) Renewable raw materials (or feedstock) used in alkyd resins must guarantee legal compliance with certification requirements for the sustainable production of biomass in accordance with EU REDII. Renewable raw materials from palm oil must not be used in the Nordic Swan Ecolabelled paints and varnishes. The requirement also includes by-products, residues, and waste fractions from palm oil industries, such as palm fatty acid distillate and palm effluent sludge.

To determine the share of renewable raw materials in alkyd polymers, mass balance-based traceability according to EU’s Renewable Energy Directive (EU REDII) is accepted – however, not the use of trade in certificates, so called “Book and claim”.

If imported renewable feedstocks are used, they must be certified by one of the European Commission’s approved voluntary certification schemes for documentation of the EU’s sustainability criteria under the Renewable Energy Directive (2018/2001/EC).

If nationally produced renewable feedstocks are used, they must comply with the official regulations of each Nordic country for documentation of the EU’s sustainability criteria under the Renewable Energy Directive (2018/2001/EC).

- Documentation showing that the fatty acids and polyols in alkyd polymers are made from renewable raw materials.
- Documentation such as valid certificates showing that the renewable raw materials comply with EU’s Renewable Energy Directive (EU REDII).
- Declaration in line with Appendix 4 signed by the manufacturer of the alkyd polymer.

O18 Cement/Hydraulic binder

If the paint contains cement according to EN 197-1 or EN 14647 or EN 998-1 or whitewash containing other hydraulic binders, the producer of cement clinker or alternative hydraulic binder must fulfil the following requirements.

- The total global warming potential (GWP) from cradle-to-gate shall not exceed the values given below.

Table 12 Cement and alternative hydraulic binder specific CO₂-emissions.

Product specific GWPot for the system boundaries cradle to gate, A1-A3	
Cement/hydraulic binder type	GWP
White cement clinker	0.973tCO ₂ e/tonne white cement clinker
Grey cement clinker	0.722tCO ₂ e/tonne grey cement clinker
Lime	0.746tCO ₂ e/tonne lime

- Product-Specific Type III EPD in accordance with ISO 21930, ISO 14025, ISO 14040, and ISO 14044 showing that the GWP limit is met.
- Documentation from the license holder showing that the specific cement or hydraulic binder is used in the product.

1.4 Quality requirements

For quality requirements for different paints and varnishes, an overview of the tests required per type of paint and/or varnish has been added, as viewed in Table 13. For full information regarding each quality requirement and paint type, see the specific requirements in the sections starting from 2.5.

For all the following tests all test laboratories must fulfil the general requirements according to standard EN ISO/IEC 17025 or be an official GLP approved laboratory. Alternatively, the companies own laboratory can work as a test laboratory if the laboratory is included by the company quality system, see appendix 5.

Table 13 Performance requirements for different types of paints and varnishes (industrial not included)

Performance requirements for different types of paints and varnishes with subcategory denotation according to Directive 2004/42/EC								
Requirement	Indoor paint (a, b)	Outdoor paint (c)	Trim and cladding (d)	Thick decorative coating indoor and outdoor (l)	Varnish and woodstain (e, f)	One and two pack performance and floor covering paint (i, j)	Primer (g)	Undercoat and primer (h)
O21 Spreading rate <i>(only for white and light-coloured paints, including the white base paint used in tinting systems) – ISO 6504/1. Not applicable to varnishes, lasures, transparent adhesion primers or any other transparent coating.</i>	8 m ² /L 4 m ² /L (elastomeric paint)	-	Indoor products 8 m ² /L	1 m ² /L	-	Indoor products 8 m ² /L	6 m ² /L (without having specific properties) 8 m ² /L (with opacity)	6 m ² /L (without specific properties) 8 m ² /L (with opacity)
O22 Resistance to water – ISO 2812-3	-	-	-	-	Resistant to water	Resistant to water	-	-
O23 Adhesion – EN ISO 4624 and EN ISO 2409	-	-	-	-	-	Score 2	1,5 MPa (masonry paint) Score 2 (transparent, metal and wood primers)	1,5 MPa (masonry paint) Score 2 (transparent, metal and wood primers)
O24 Abrasion – EN ISO	-	-	-	-	-	70 mg weight loss	-	-
O25 Weathering – EN 16473-3/EN 927-6	-	1 000 h 2 000 h (wood paint)	1 000 h (outdoor)	1 000 h (outdoor)	1 000 h (outdoor) 2 000 h (wood stain and wood varnish)	1 000 h (outdoor)	-	-
O25 Water vapour permeability ⁽¹⁾ – EN ISO 7783	-	Class II or better (masonry or concrete)	-	Class II or better (masonry or concrete)	-	-	-	-

Performance requirements for different types of paints and varnishes with subcategory denotation according to Directive 2004/42/EC								
Requirement	Indoor paint (a, b)	Outdoor paint (c)	Trim and cladding (d)	Thick decorative coating indoor and outdoor (l)	Varnish and woodstain (e, f)	One and two pack performance and floor covering paint (i, j)	Primer (g)	Undercoat and primer (h)
O25 Liquid water permeability (1) EN 1062-3	Where claims are made Class III (masonry and concrete) All other products Class II or better (masonry and concrete)	-	Class II or better (masonry or concrete)	-	-	-	-	-
O25 Fungal growth – EN 927, ISO 15457, EN ISO 4628-1	-	Class 0 (wood paints) Class 2 or lower (masonry paints)	Class 0 (outdoor wood products)	Class 1 or lower (outdoor)	-	-	-	-

1.5 Quality requirements for indoor paints and varnishes

O19 White pigment content

Indoor wall and ceiling paints for which Class 1 and 2 wet scrub resistance* claims are made shall have a white pigment content (white inorganic pigments with a refractive index higher than 1.8) per m² of dry film equal to or lower than that described in Table 13, with 98 % opacity.

All other paints shall have a white pigment content (white inorganic pigments with a refractive index higher than 1.8) per m² of dry film equal to or lower than that described in Table 14, with 98 % opacity.

For tinting systems this requirement only applies to the base paint with the highest white pigment content or for the paint in a paint series with the highest white pigment content.

* *Wet scrub resistance is here defined in accordance with EN 13300 and EN ISO 11998, see requirement O19.*

Table 14 Relationship between wet scrub resistance and TiO₂ content for indoor wall and ceiling paints with claims of wet scrub resistance.

White pigment content	
Wet scrub resistance	Indoor limit (g/m ²)
Class 1	40
Class 2	36

Table 15 Limits for white pigment content for products not covered by Table 13.

White pigment content	
Type of paint	Indoor limit (g/m ²) with 98% opacity
Wall paints	25
Other paints (including ceiling paints)	36

- ☒ The applicant shall provide documentation showing that the content of white pigments is compliant with this requirement.
- ☒ For ceiling paints and indoor wall paints, the labelling for the packaging, including the accompanying text, shall be provided as evidence regarding claims of wet scrub resistance.

O20 Claims of Wet Scrub Resistance

Only Wet Scrub Resistance class 1 and 2 ecolabelled paints may claim wet scrub resistance on the label or other marketing documentation.

All wall and ceiling paints for which claims of class 1 or 2 in wet scrub is made shall achieve the claimed class according to class 1 or class 2 in wet scrub resistance (WSR) according to EN 13300 and EN ISO 11998. This requirement only applies to tinting bases (base paints).

The test laboratory must fulfil the requirements in appendix 5.

For tinting systems or a paint series with different colours this requirement only has to be demonstrated for one of the paints.

- ☒ The applicant shall provide a test report according to EN 13300 using the method EN ISO 11998 (Test for cleanability and scrub resistance). For ceiling paints and indoor wall paints the labelling for the packaging, including the accompanying text, shall be provided as evidence regarding claims of wet scrub resistance.
- ☒ Documentation showing that the test laboratory fulfils the requirements in appendix 5.

O21 Spreading rate

The spreading rate should be at least at the levels presented in Table 15 below.

This requirement does not apply to varnishes, wood stains (lasures), transparent adhesion primers or any other transparent coatings.

- For paint series that are available in more colours the spreading rate shall apply to the lightest colour.
- For tinting systems, this requirement applies only to the white base (the base containing the most TiO₂). In cases where the white base is unable to achieve this requirement, the requirement shall be met after tinting the white base to produce the standard colour RAL 9010.
- For paints that are a part of a tinting system, the applicant must advise the end-user on the product packaging and at the Point of Sale which shade or primer/undercoat (if possible, bearing the Nordic Ecolabel/EU Ecolabel) should be used as a basecoat before applying the darker shade.
- The test laboratory must fulfil the requirements in appendix 5.

Table 16 Spreading rate

Spreading rate		
Type	Opacity/hiding power	Spreading rate of at least the following
White paints and light-coloured paints (tri-stimulus (Y-value) > 70%) (including finishes and intermediates) *, **	Hiding power 98%	8 m ² per litre of product indoor paints 6m ² per litre of product outdoor paints
Semi-transparent primers	Without opacity or having specific properties ***	6 m ² per litre of product
	With opacity	8 m ² per litre of product
Thick decorative coatings (paints that are specially designed to give a three-dimensional decorative effect and are therefore characterised by a very thick coat)	Not relevant	1 m ² per kg of product
Opaque elastomeric paints	Opaque	4 m ² per litre of product

* Base paints to be used with a tinting system.

** Products marketed for both — indoor and outdoor shall have a spreading rate (at a hiding power of 98 %) of at least 8 m² per litre.

*** Opaque primers with specific blocking/sealing, penetrating/binding properties.

- ☒ The applicant shall provide a test report using one of the following:
 - The method ISO 6504/1 (Paints and varnishes — determination of hiding power — Part 1: Kubelka-Munk method for white and light-coloured paints) or
 - ISO 6504/3 (Part 3: determination of contrast ratio (opacity) of light-coloured paints at a fixed spreading rate) or
 - For paints specially designed to give a three-dimensional decorative effect and characterised by a very thick coat the method NF T 30 073.
- ☒ For bases used to produce tinted products not evaluated according to the abovementioned requirements, the applicant shall produce evidence of how the end-user will be advised to use a primer and/or grey (or other relevant shade) of undercoat before application of the product.
- ☒ Documentation showing that the test laboratory fulfils the requirements in appendix 5.

O22 Resistance to water

All varnishes, floor coatings and floor paints shall have resistance to water, as determined by ISO 2812-3 such that after 24 hours' exposure and 16 hours' recovery no change of gloss or of colour occurs.

- ☒ The applicant shall provide a test report using the method ISO 2812-3.
- ☒ Documentation showing that the test laboratory fulfils the requirement in appendix 5.

O23 Adhesion

- Pigmented masonry primers shall score a pass in the EN ISO 4624 pull-off test where the cohesive strength of the substrate is less than the adhesive strength of the paint, otherwise the adhesion of the paint must be in excess of a pass value of 1.5 MPa.
- Floor coatings, floor paints, floor primers, masonry primers, transparent primers, metal, and wood primers shall score 2 or less in the EN ISO 2409 test for adhesion.

The test laboratory must fulfil the requirements in appendix 5.

The applicant shall evaluate the primer and/or finish alone or both applied together. When testing the finish alone, this shall be considered the worst-case scenario concerning adhesion.

- ☒ The applicant shall provide a test report using the method EN ISO 2409 or EN ISO 4624.

According to the EN ISO 2409 best result is 0 and worst is 5.

O24 Abrasion

- Floor coatings and floor paints shall have an abrasion resistance not exceeding 70 mg weight loss after 1000 test cycles with a 1000 g load and a CS10 wheel according to EN ISO 7784-2.
- Alternatively, a test according to ISO 5470-1 with 1000 test cycles with 1000 gram load and the H22 wheel where the weight loss is maximum 3000 mg.

The test laboratory must fulfil the requirements in appendix 4.

- ☒ The applicant shall provide a test report showing compliance with this requirement using the method EN ISO 7784-2 or ISO 5470-1.
- ☒ Documentation showing that the test laboratory fulfils the requirements in appendix 4.

1.6 Quality requirements for outdoor paints and varnishes

O25 Quality requirements for Outdoor paints and varnishes

If there is no relevant quality test for a specific product mentioned below, Nordic Ecolabelling can extend the requirements for quality tests during the validity of the criteria to include other relevant tests.

1. Weathering test: Products shall be exposed to artificial weathering in special apparatus including UV fluorescent lamps and condensation or water spray according to the respective tests mentioned.

- Masonry paints shall be exposed to test conditions for 1000 hours (6 weeks) (UVA 4h/60°C + humidity 4h/50°C) according to ISO 16474-3.
- Metal finishes shall be exposed to test conditions for 500 hours (6 weeks) (UVA 4h/60°C + humidity 4h/50°C) according to ISO 16474-3.
- Wood paints, wood stains and wood varnishes shall be exposed to test conditions for 2000 hours (12 weeks) according to EN 927-6.

2. The following results of the weathering test are also to be reported:

- Flaking (according to ISO 4628-5). Product is to have a flake density of 2 or less, and a flake size of 2 or less.

- Cracking (according to ISO 4628-4). The product is to have a crack quantity of 2 or less and a crack size of 3 or less.
- Blistering (according to ISO 4628-2). The product is to have a blister quantity of 3 or less and a blister size of 3 or less.
- The colour change (according to ISO 7724-2 or ISO 11664-4/6) shall not exceed $\Delta E^* = 4$ with respect to the initial value.
- Decrease in gloss (according to EN ISO 2813) shall not be greater than 30% of initial value – matte paints and varnishes with an initial gloss value less than 60% at 60° angle of incident are exempted from the requirement.
- Chalking (according to EN ISO 4628-6) for masonry paints and metal finishes. The product shall achieve at least 1.5 or more, i.e., 0.5 or 1.0. In the standard there are pictorial reference standards.
- General appearance (according to EN ISO 4628-1).

If an entire paint system is ecolabelled, all bases and colours must fulfil the requirements. This can be documented by testing at least three representative products – at least one white, one intermediate colour and one dark colour – to show fulfilment of the quality requirement.

- Test report from a laboratory in line with Appendix 5 which clearly shows that the requirement is fulfilled.

3. Water vapour permeability, Class II: If masonry and concrete paints are marketed as water vapour permeable or similar claims are made, the paints are to be classified as Class II, i.e., with average water vapour permeability or better according to test method EN ISO 7783-2 and classified according to EN 1062-1 or EN 1504-2*. Due to large numbers of possible tinting colours, this criterion will be restricted to testing of the base paint. This method is not applicable for transparent primers.

** Facade paints tested according to EN1504-2 must fulfil class I.*

- Test report from a laboratory in line with Appendix 5 which clearly shows that the requirement is fulfilled.

4. Liquid water permeability, Class III: If masonry and concrete paints are marketed as water repellent/hydrophobic or similar claims are made, the paints are to be classified as Class III, i.e., with low liquid water permeability according to DIN EN 1062-3. Due to large numbers of possible tinting colours, this criterion will be restricted to testing of the base paint.

- Test report from a laboratory in line with Appendix 5 which clearly shows that the requirement is fulfilled.

5. Fungal growth: If the product contains dry film preservatives which have anti-fungal and algal properties the product must pass the relevant fungal growth test, see right below.

Products intended for mineral substrates must achieve a score of 2 (under 10% fungal growth) or better, as established in BS 3900:G6 or equivalent.

Products intended for wood are to be tested according to EN-927-3 or equivalent. No detectable defects (class 0) and no defects visible under 10 times magnification (class 0) according to EN ISO 4628-1.

If an equivalent method is used, for example PREN 15457, the applicant must document that the test is equivalent to the tests specified in the criteria document.

Due to large numbers of possible tinting colours, this criterion will be restricted to testing of the base paint.

- Test report from a laboratory in line with Appendix 5 which clearly shows that the requirement is fulfilled.

6. Powder paints: Powder paints for outdoor use must meet the quality requirements in Qualicoat or in the GSB standard GSB AL 631 (Aluminium) or GSB ST 663 (Steel and Galvanised steel).

- Certificate from Qualicoat or GSB showing that the product meets the requirements applicable to the product.

7. Cement-based masonry paints: The following alternative tests are accepted for cement-based masonry paints:

Water vapour resistance:

EN ISO 12572 “Hygrothermal performance of building materials and products - Determination of water vapour transmission properties”, resistance against water vapour is measured.

Driving rain:

The method NBI-29/1983 “Mortars, resistance against driving rain”, resistance against water penetration during driving rain is measured.

Weathering:

The method NBI-83 / 1983 with 28 days exposure time in climate carousel, equivalent to 1,5 years in real conditions. Colour change, bond strength and lime precipitation are measured as parameters for weathering resistance.

- Test report from a laboratory in line with Appendix 5 which clearly shows that the requirement is fulfilled.

1.7 Quality requirements for industrial paints and varnishes

Industrial paints and varnishes are applied to furniture, wall panels, floors and similar or used within infrastructure. The quality of these products is to be tested according to the methods that are relevant for the purpose of the paint/varnish as follows:

- Industrial paints and varnishes for exterior use has to fulfil the relevant parts of O26 or,
- Furniture – O27 ("möbelfakta") or,
- Panels, UV-cured floors and similar – O28 (scratch resistance)
- Paints and varnishes for painting/coating floors, including UV-cured floors – O29 and O30 (Abrasion/wear and water resistance)
- Anti-corrosion paints for industry and infrastructure – O31

If there is no relevant quality test for a specific product mentioned above, Nordic Ecolabelling can extend the requirements for quality tests during the validity of the criteria to include other relevant tests.

O26 Quality requirements for industrial paints and varnishes for furniture

Industrial paints and varnishes for furniture must fulfil the requirements as set out in the Tables 16 and 17 below.

Table 17 Requirement levels for varnished surfaces in different furniture groups.

Requirement levels and furniture group for industrial paints and varnishes		
Furniture group	Area	Requirement
Seating	Seat and armrest	Requirement level 2
Storage units	External horizontal surfaces (up to 1.25 m), shelves and bases	Requirement level 3
Tables	Private use and normal public use	Requirement level 4
	Intensive public use (restaurant/café)	Requirement level 5
Kitchen	Internal surfaces, including drawer bottoms, excluding shelves and bases	Requirement level 1
	External horizontal surfaces, shelves, and bases	Requirement level 3
	Worktops (tabletops)	Requirement level 6

Table 18 Test methods and requirement levels for furniture tests

Test methods and requirements for industrial paints and varnishes for furniture							
Requirement category		Requirement levels					
Tests:	References:	1	2	3	4	5	6
Water ⁽¹⁾	EN 12720	6 h	16 h	16 h	24 h	24 h	24 h
Grease ⁽¹⁾	EN 12720	24 h	24 h	24 h	24 h	24 h	24 h
Grease + scratches ⁽¹⁾	SS 83 91 22	-	-	-	24 h+3 N	24 h+3 N	24 h+3 N
Scratches ⁽²⁾	SS 83 91 17	-	3 N	3 N	5 N	5 N	5 N
	alt. EN 15186. Method A ⁽³⁾	-	1,5 N	1,5 N	1,5 N	3 N	3 N
Alcohol ⁽¹⁾	EN 12720	-	-	-	1 h	1 h	1 h
Coffee ⁽¹⁾	EN 12720	-	1 h*	1 h	1 h	1 h	1 h
Heat, dryness ⁽¹⁾	EN 12722	-	-	-	70 °C	70 °C	180 °C
Heat, moisture ⁽¹⁾	EN 12721	-	-	-	-	-	85 °C
Heat on edge ⁽¹⁾	NS 8061	-	-	-	-	-	85 °C
Water on edge ⁽¹⁾	SS 83 91 20	-	-	1 h***	-	-	-
Sweat, acid and alkaline ⁽¹⁾	EN 12720	-	1 h**	-	-	-	-

⁽¹⁾ A result of 4 is pass score in the assessment. Assessment after 24 h

⁽²⁾ Maximum scratch width 0.5 mm. Penetration of the varnish layer is not acceptable.

⁽³⁾ Maximum scratch width 0.3 mm.

* Applies to storage units – external horizontal surfaces ≤ 1,250 mm above floor-level.

** Applies to armrests.

*** Applies to doors and drawer fronts.

☒ Information on which function/end use the paints or varnishes have been tested for and which standard has been used, the test institute and a full test report clearly showing that the requirements are fulfilled.

O27 Scratch resistance for UV-cured floors, panels and similar

Scratch resistance can be tested using the following methods or equivalent:

- Scratch resistance ASTM D2794 (<http://www.astm.org/Standards/D2794.htm>)
- “Sheen Automatic Scratch Tester” according to ISO 1518

- Complete test report showing that the paint/varnish has satisfactory scratch resistance for its intended purpose.

O28 Abrasion/wear for surfaces subject to heavy wear, e.g., UV-cured floors and sheeting

- Floor paints, floor coatings and other products subject to an equivalent level of wear must have an abrasion resistance not exceeding 70 mg weight loss after 1000 test cycles with a 1000 g load and a CS10 wheel according to EN ISO 7784-2.
- Alternatively, a test according to ISO 5470-1 can be performed with 1000 test cycles with 1000 gram load and H22-wheel where the weight loss is maximum 3000 mg.

- The applicant must submit a test report showing that this requirement has been fulfilled in accordance with EN ISO 7784-2 or ISO 5470-1.

O29 Water resistance for surfaces subject to heavy wear, e.g., UV-cured floors and sheeting

- Varnishes, floor coatings and floor paints shall have a resistance to water, as determined by ISO 2812-3, such that after 24 hours' exposure and 16 hours' recovery no change of gloss or of colour occurs.

- Assessment and verification: The applicant shall provide a test report using the method ISO 2812-3 (Paints and varnishes – determination of resistance to liquids – Part 3: Method using an absorbent medium).

O30 Quality requirements for anti-corrosion paint for industry and infrastructure

Paint systems shall be tested according to the methods relevant to the purpose of the treatment, i.e., C5 or alternatively CX.

Anti-corrosion paints containing zinc:

- Metallic zinc included in the product must be of Type II or higher grade according to ASTM D520.
- The paints must meet the requirements for corrosion class C5 (Very High) according to EN-ISO 12944-6 and test for immersion category: Im1 (fresh water), Im2 (salt water) and Im3 (soil) according to EN ISO 12944-6, and test EN ISO 2812-2 (synthetic seawater) made with scratched samples according to EN-ISO 12944-9.
- If the intended use of the paints is offshore or equivalent, the paints must meet the requirement for corrosion class CX (Offshore). If cathodic protection is to be used, the paints must meet the requirement of Im4 according to EN ISO 12944-9.

Anti-corrosion paints without zinc:

- The paints must meet the requirements for corrosion class C5 (Very High) according to EN-ISO 12944-6.
- If the paint is to be used immersed in water or in soil, it must also pass tests according to Im1 (fresh water), Im2 (salt water) and Im3 (in soil) according to EN-ISO 12944-6, as well as testing EN ISO 2812-2 for immersion category Im4 (synthetic sea water) according to EN ISO 12944-9.
- If the intended use of the paint is offshore or equivalent, the paints must meet the requirement for corrosion class CX (Offshore). If cathodic protection is to be used, the paints must meet the requirement of Im4 according to EN ISO 12944-9.

- Test report for metallic zinc according to ASTM D520.
- Test report for anti-corrosion protection according EN ISO 12944-6 or EN ISO 12944-9 depending on relevant method which clearly shows that the requirement is met.

2 Requirements concerning packaging, labelling, consumer information and recycling

031 Metal packaging

- Packaging solely made from metal or containing metal parts is not permitted.

The requirement does not apply to handles nor to packaging for industrial paints and varnishes ≥ 18 L.

- Declaration from the paint manufacturer that the packaging does not contain metal parts.

032 Recycled material in hard plastic packaging

- Hard/rigid plastic packaging must contain a minimum of 50 weight% post-consumer recycled (PCR)* material.

The requirement does not apply to lids and handles, nor to packaging for industrial paints (≥ 18 L).

** Post-consumer/commercial recycled material is defined according to ISO 14021:2016: Material generated by households or by commercial, industrial, and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.*

- Description and documentation from plastic manufacturers showing that the plastic is recycled in compliance with the requirement's definition or has EuCertPlast certification or Global Recycled Standard certification.
- Calculation or statement from the packaging manufacturer showing the percentage of recycled material in the packaging showing that the packaging is made of at least 50% recycled material.

033 Recycled material in flexible bags and pouches

- Flexible bags and pouches must contain a minimum 30 weight% post-consumer recycled (PCR)* material.
- The bags, pouches and any surface coating must not contain halogens e.g., PVC or PFAS.

** Post-consumer/commercial recycled material is defined according to ISO 14021:2016: Material generated by households or by commercial, industrial, and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.*

- Description and documentation from the plastic manufacturer showing that the plastic is recycled in compliance with the requirement's definition or has EuCertPlast certification or Global Recycled Standard certification.
- Declaration from the packaging manufacturer that the packaging and any surface coating does not contain halogens.

- ☒ Calculation or statement from the packaging manufacturer showing the percentage of recycled material in the packaging showing that the packaging is made of at least 50% recycled material.

O34 Consumer information

The following information must be placed on the packaging or enclosed with each individual product:

- The purpose, substrate, and other conditions of application for which the product is intended. This shall include advice on preparation, e.g., correct preparation of the substrate or temperature.
 - Estimate of “normal” coverage (e.g., l/m² or equivalent).
 - Recommended preventive safety measures for users, such as safety equipment and ventilation (particularly when working in enclosed spaces or similar).
 - The label must contain information on how the packaging should be sorted in the relevant country of sale.
 - Information that liquid paint and washing water with paint residues must not be emptied down the drain but delivered to an approved hazardous waste collection point.
 - Recommendations on cleaning used tools and how waste products from cleaning can best be disposed of (to limit water pollution). These recommendations are to be adapted to the product types and areas of application. Pictograms may also be used where appropriate.
 - Recommendations on how the product is to be stored after opening, including safety instructions where relevant.
 - Dry and empty packaging is sorted as plastic waste. (Only applicable for Norway)
 - Remove the handle before sorting (only relevant if the handle is made of metal).
- ☒ Label, product sheet or equivalent and description of how the information accompanies each product.

3 Licence maintenance

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

O35 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 complain.

O36 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 products the license number shall be included.

Follow-up inspections

Nordic Ecolabelling may decide to check whether the paint and varnish 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 paint or varnish 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

Draft for consultation, 30 November 2022.

New criteria

- Determine environmental gains with energy requirement for polymer producers.
- Determine environmental gains with energy requirement for paint manufacturer.

Evaluate the possibility of stricter requirement for biobased binders.

- Determine possible environmental gains with requirement to SVOC (Semi-Volatile Organic Compounds) in industrial paints and varnishes.

Appendix 1 Declaration from the manufacturer of the paint or varnish

To be used in conjunction with an application for a licence for the Nordic Ecolabelling paint and varnishes. To complete the following declaration, you will need declarations for all raw materials (Appendix 2 or equivalent declaration) and Appendix 3 or equivalent declaration).

Declaration is made by the manufacturer based to the best of their knowledge at the given time, also based on information from raw material manufacturers, recipe, and available knowledge on the chemical product with reservations for new advances and new knowledge. Should such new knowledge arise, the undersigned is obliged to submit an updated declaration to Nordic Ecolabelling.

Product name: _____

Product's function/product group (e.g., paint, masonry coatings):

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the Nordic Swan Ecolabelled paint and varnish. Impurities are not regarded as ingoing substances and are exempt from the requirements.

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

- **Ingoing substances:** all substances in the Nordic Swan Ecolabelled product regardless of amount, including additives (e.g., preservatives and stabilizers) in the raw materials. Substances known to be released from ingoing substances (e.g., formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
- **Impurities:** residuals, pollutants, contaminants etc. from production, incl. production of raw materials, that remain in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0,0100 w%).
- Impurities in the raw materials exceeding concentrations of 1000 ppm (0,1000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.

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

The impurity limit of 100 ppm (0.0100 w%) applies to each individual substance that is excluded, i.e., Impurities with the same classification in different raw materials shall not be summed up to comply with the limit. The same contaminants in different raw materials also do not need to be summed.

O2 Classification of the product		
Is the product classified with any of the hazard phrases below? <i>Including all combinations of stated exposure routes and stated specific effect. For example, H350 also covers classification H350i.</i>	Yes	No
H400 – Toxic to aquatic life, Acute 1	<input type="checkbox"/>	<input type="checkbox"/>
H410 – Toxic to aquatic life, Chronic 1	<input type="checkbox"/>	<input type="checkbox"/>
H411 – Toxic to aquatic life, Chronic 2	<input type="checkbox"/>	<input type="checkbox"/>
H412 – Toxic to aquatic life, Chronic 3	<input type="checkbox"/>	<input type="checkbox"/>
H413 – Toxic to aquatic life, Chronic 4	<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"/>
H304 – Aspiration hazard	<input type="checkbox"/>	<input type="checkbox"/>
H334 – Respiratory sensitising	<input type="checkbox"/>	<input type="checkbox"/>
H317 – Skin sensitising	<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.

O3 Classification of ingoing substances		
Does the product contain substances classified with any of the hazard phrases below? <i>Including all combinations of stated exposure routes and stated specific effect. For example, H350 also covers classification H350i.</i>	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 – Respiratory sensitising 1 / 1A / 1B	<input type="checkbox"/>	<input type="checkbox"/>
H370 – Specific organic toxicity, STOT SE 1	<input type="checkbox"/>	<input type="checkbox"/>
H372 – Specific organic toxicity, STOT RE 1	<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. If it is residual monomers in polymers, please state in point O7 instead.

O4 Environmentally harmful substances		
Does the product contain any substances classified as harmful to the environment with the following risk phrases or combinations of them?	Yes	No
H410 – Toxic to aquatic life, Chronic 1	<input type="checkbox"/>	<input type="checkbox"/>
H411 – Toxic to aquatic life, Chronic 2	<input type="checkbox"/>	<input type="checkbox"/>
H412 – Toxic to aquatic life, Chronic 3	<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 a preservative.

O4 Environmentally harmful substances		
Does the product fulfil the requirement regarding maximum content of substances classified as harmful to the environment?	Yes	No
	<input type="checkbox"/>	<input type="checkbox"/>

Please do calculation below clearly showing that requirement is fulfilled:

O5 Preservatives		
Does the product contain any preservatives?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes , please state: Does the preservatives comply with product-type 6 and product-type 7 according to Regulation (EU) No 528/2012 (The Biocidal Products Regulation)?	<input type="checkbox"/>	<input type="checkbox"/>
If yes , please state: Does the product fulfil the requirement regarding maximum contents of preservatives and total isothiazolinones according to Table 3 and Table 4 of the criteria document?	<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) and calculation showing that the requirement for total amount of preservatives and isothiazolinones is fulfilled.

O6 Formaldehyde		
Does the product contain formaldehyde or formaldehyde releasing agents?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes , please state: Is the product an indoor paint or varnish? If yes , please attach test report according to requirement O6, e.g., EN 16516	<input type="checkbox"/>	<input type="checkbox"/>
If yes , please state: Is the product an outdoor paint or varnish or industrial paint? If yes , please attach test report according to requirement O6 e.g., EPA 8315A, VdL-RL03, Merckoquant method, HPLC	<input type="checkbox"/>	<input type="checkbox"/>
O7 Residual monomers		
Does the product contain residual monomers in polymers present in product > 1% 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 <input type="checkbox"/>	No <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"/>

H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled 1 / 1A / 1B	<input type="checkbox"/>	<input type="checkbox"/>
H370 – Specific target organ toxicity: STOT SE 1 or 2	<input type="checkbox"/>	<input type="checkbox"/>
H371 – Specific target organ toxicity: STOT SE 1 or 2	<input type="checkbox"/>	<input type="checkbox"/>
H372 – Specific target organ toxicity: STOT RE 1 or 2	<input type="checkbox"/>	<input type="checkbox"/>
H373 – Specific target organ toxicity: STOT RE 1 or 2	<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) of residual monomers in newly produced polymers and based on the content in the raw material. (If vinyl acetate is present in an amount over 100 ppm, please also state the amount in ppm in each polymer).

O8 Heavy metals		
Does the product contain any heavy metals (cadmium, lead, chromium VI, mercury, arsenic, barium, selenium, antimony)? <i>Traces of the above-mentioned metals from residuals can be included up to 100 ppm (100 mg/kg, 0.0100% by weight) per single metal in the raw material. - Barium sulphate and other insoluble barium compounds are exempted. - An exception is made for antimony in pigments contained in a TiO₂ rutile lattice on the following terms: test results must prove that the molecular structure is inert and that the environmental and health effects of the pigment are on the same level as, or better than, the results for C.I Pigment Brown 24 CAS no. 68186-90-3 and C.I Pigment Yellow 53 CAS no. 8007-18-9 in the report: UNEF Publications, OECD SIDS Initial Assessment Profile (www.inchem.org)*.</i>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

If the answer to any of the above questions is Yes, state the chemical name and level (in ppm, % by weight or mg / kg). For antimony in pigments that are exempted by the above terms, please attach test according to test method DIN 53770-1 or equivalent, showing that terms are fulfilled).

O9 Titanium dioxide		
Does the product contain titanium dioxide?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

If yes, please state amount in % by weight and raw material manufacturer name. If the product contains more than 3.0% by weight titanium dioxide, the raw material manufacturer must supply information in accordance with requirement O9 and O10 in the criteria document.

O10 Powdered raw materials		
Have any of the raw materials used in the product been in powder form?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

If yes, please attach documentation describing how powdered raw materials have been handled during the production process in accordance with requirement O10 in the criteria document.

O11 Nanomaterials/-particles		
<p>Does the product contain nanomaterials/-particles? <i>Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01):</i> <i>'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:</i> <i>(a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm;</i> <i>(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;</i> <i>(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.</i></p> <p>The following are exempted from the requirement:</p> <ul style="list-style-type: none"> • Pigments. Nano-TiO₂ is not considered a pigment. • Naturally occurring inorganic fillers in accordance with annex V point 7 in REACH. • Synthetic amorphous silica (SAS). This exemption applies to non-modified SAS. Chemically modified colloidal silica can be included in the products if the silica particles form aggregates in the final product. Surface-treated nanoparticles must fulfil requirement O3 (Classification of constituent chemical substances) and requirement O12 (Prohibited substances). • Unmodified calcium carbonate (grounded calcium carbonate, GCC) and precipitated calcium carbonate (PCC). • Polymer dispersions. 	Yes <input type="checkbox"/>	No <input type="checkbox"/>

If yes, please state if one of the above exceptions apply and add additional information if needed:

O12 Prohibited substances		
Does the product contain any of the following substances or substance groups?	Yes	No
Substances categorised as Substances of Very High Concern (SVHC) and included on the EU Candidate List: http://echa.europa.eu/candidate-list-table	<input type="checkbox"/>	<input type="checkbox"/>
Substances evaluated by the EU to be persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB), in accordance with the criteria in Annex XIII of REACH and substances that have not yet been investigated, but which meet these criteria.	<input type="checkbox"/>	<input type="checkbox"/>
Potential or identified endocrine disruptors according to any of the EU member state initiative "Endocrine Disruptor list" List I; List II; and/or List III <ul style="list-style-type: none"> • https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu • https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption • https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities • Substances on the List II sublist "Substances no longer on list"? https://edlists.org/the-ed-lists/substances-no-longer-on-list-ii 	<input type="checkbox"/>	<input type="checkbox"/>

<p>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.</p> <p>2,2-dibromo-2-cyanoacetamide (DBNPA) used for disinfecting process water is exempted from the requirement as it is not constituent or part of the manufacturing of the product.</p> <hr/>		
Organotin compounds	<input type="checkbox"/>	<input type="checkbox"/>
Phthalates Esters of phthalic acid (ortho-phthalic acid / phthalic acid / 1,2- benzene dicarboxylic acid)	<input type="checkbox"/>	<input type="checkbox"/>
<p>Bisphenols and bisphenol derivatives:</p> <p>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).</p>	<input type="checkbox"/>	<input type="checkbox"/>
APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation).	<input type="checkbox"/>	<input type="checkbox"/>
<p>Halogenated organic substances, including perfluorinated substances and polyperfluorinated alkylated substances (PFAS).</p> <p>Exempted are:</p> <ul style="list-style-type: none"> • Preservatives that fulfil O5 • paint pigments that meet the EU's requirements concerning colourants in food packaging under Resolution AP (89) point 2.5 and • dries in oxidative drying paints (note: see O3). 	<input type="checkbox"/>	<input type="checkbox"/>
<p>Isocyanates</p> <p>Water-based polyisocyanates with a chain length of more than 10 are exempted, where the concentration of isocyanates with a chain length of less than 10 as an impurity is documented.</p>	<input type="checkbox"/>	<input type="checkbox"/>
Fragrances	<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). If an exemption applies as above, please attach document as appropriate.

O13 Emissions of Volatile and Semi-Volatile Organic Compounds in indoor paints and varnishes		
Please state:	Yes	No
Product description (with subcategory denotation according to Directive 2004/EC):		
a. Interior matt walls and ceilings (Gloss < 25@60°)	<input type="checkbox"/>	<input type="checkbox"/>
b. Interior glossy walls and ceilings (Gloss > 25@60°)	<input type="checkbox"/>	<input type="checkbox"/>
d. Interior trim and cladding paints for wood and metal	<input type="checkbox"/>	<input type="checkbox"/>
e. Interior trim varnishes and woodstains, including opaque woodstains	<input type="checkbox"/>	<input type="checkbox"/>
f. Interior and Exterior minimal build woodstains	<input type="checkbox"/>	<input type="checkbox"/>
g. Primers	<input type="checkbox"/>	<input type="checkbox"/>
h. Binding primers	<input type="checkbox"/>	<input type="checkbox"/>
i. One-pack performance coatings	<input type="checkbox"/>	<input type="checkbox"/>
j. Two-pack reactive performance coatings for specific end use such as floors	<input type="checkbox"/>	<input type="checkbox"/>
l. Decorative effect coatings	<input type="checkbox"/>	<input type="checkbox"/>

Does the emission of the final product meet the emission limits as stated in Table 9 of requirement O13?	<input type="checkbox"/>	<input type="checkbox"/>
Please attach test report in accordance with EN 16516, EN 16402 or other equivalent standardised test conditions and determination methods. TVOC and TSVOC are defined as stated in EN 16516 and carcinogenic 1A and 1B VOCs are listed in Annex H of EN 16516.		
O14 Content of Volatile and Semi-volatile Organic Compounds in outdoor paints and varnishes and industrial paints		
Please state: Product description (with subcategory denotation according to Directive 2004/EC):	Yes	No
c. Exterior walls of mineral substrate	<input type="checkbox"/>	<input type="checkbox"/>
d. Exterior trim and cladding paints for wood and metal	<input type="checkbox"/>	<input type="checkbox"/>
e. Exterior trim varnishes and wood stains, including opaque wood stains	<input type="checkbox"/>	<input type="checkbox"/>
f. Exterior minimal build wood stains	<input type="checkbox"/>	<input type="checkbox"/>
g. Primers	<input type="checkbox"/>	<input type="checkbox"/>
h. Binding primers	<input type="checkbox"/>	<input type="checkbox"/>
i. On pack performance coatings	<input type="checkbox"/>	<input type="checkbox"/>
j. Two-pack reactive performance coatings for specific end use such as floors	<input type="checkbox"/>	<input type="checkbox"/>
Please state: Product description for products falling outside of the scope of Directive 2004/42/EC	Yes	No
Industrial paints and varnishes	<input type="checkbox"/>	<input type="checkbox"/>
Industrial paints and varnishes for outdoor use	<input type="checkbox"/>	<input type="checkbox"/>
Industrial anti-corrosion paints	<input type="checkbox"/>	<input type="checkbox"/>
Definitions of VOC and SVOC Volatile organic compounds (VOC) mean any organic compounds having an initial boiling point less than or equal to 250 °C measured at a standard pressure of 101,3 kPa as defined in Directive 2004/42/EC and which, in a capillary column, are eluting up to and including n-Tetradecane (C ₁₄ H ₃₀). Semi volatile organic compounds (SVOCs) mean any organic compound having a boiling point greater than 250 °C and less than 370 °C measured at a standard pressure of 101,3 kPa and which, in a capillary column are eluting with a retention range after n-Tetradecane (C ₁₄ H ₃₀) and up to and including n-Docosane (C ₂₂ H ₄₆).		

Please state the VOC content in g/l ready-to-use of the final product in accordance with ISO 11890-2*.

Please state the SVOC content in g/l ready-to-use of the final product in accordance with ISO 11890-2*.

* Attach ISO 11890-2 test report for the final product or calculation based on all ingoing raw materials.

O15 Volatile Aromatic Compounds		
Please state the following:	Yes	No
Does the product contain any Volatile Aromatic Compounds (VAC)? <i>Volatile aromatic compounds are volatile organic compounds where one or more benzene rings are contained within the molecule.</i>	<input type="checkbox"/>	<input type="checkbox"/>
If yes , please state if actively added or as a residue in ppm: <hr/>		

O16 Acrylic resins (binders)		
Please state the following:	Yes	No
Does the product contain acrylic resins?	<input type="checkbox"/>	<input type="checkbox"/>

If the answer to the above questions is Yes, state the proportion of acrylic resins made from renewable raw material. Please attach enclosed procedures for policy or equivalent documentation of the work with environmental goals, showing fulfilment of the requirement. The manufacturer of the raw material must enclose documentation in accordance with appendix 4 and documentation showing valid certificates or certificate identifier showing that the renewable raw material complies with EU's Renewable Energy Directive (EUREDII).

O17 Alkyd resins (binders)		
Please state the following:	Yes	No
Does the product contain alkyd resins?	<input type="checkbox"/>	<input type="checkbox"/>

If the answer to the above questions is Yes, documentation from the raw material manufacturer in accordance with Appendix 4 is required, documentation showing valid certificates or certificate identifier showing that the renewable raw material complies with EU's Renewable Energy Directive (EUREDII) and documentation showing that fatty acids and polyols in alkyd resins are made from renewable raw materials.

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

Appendix 2 Declaration from the manufacturer of the raw material

To be used in conjunction with an application for a licence for the Nordic Ecolabelling of paints and varnishes.

Declaration is made by the chemical supplier based to the best of their knowledge at the given time, also based on information from raw material manufacturers, recipe, and available knowledge on the chemical product 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.

Raw material name: _____

Raw material's function: _____

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

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

Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials, that remain in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0,0100 w%).

Impurities in the raw materials exceeding concentrations of 1000 ppm (0,1000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.

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

The impurity limit of 100 ppm (0.0100 w%) applies to each individual substance that is excluded, i.e., Impurities with the same classification in different raw materials shall not be summed up to comply with the limit. The same contaminants in different raw materials also do not need to be summed.

O3 Classification of ingoing substances		
Does the raw material contain substances classified with any of the hazard phrases below? <i>Including all combinations of stated exposure routes and stated specific effect. For example, H350 also covers classification H350i.</i>	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"/>
H370 – Specific organic toxicity, STOT SE 1	<input type="checkbox"/>	<input type="checkbox"/>
H372 – Specific organic toxicity, STOT RE 1	<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. If it is residual monomers in polymers, please state in point O7 instead.

O4 Environmentally harmful substances		
Does the raw material contain any substances classified as harmful to the environment with the following risk phrases or combinations of them?	Yes	No
H410 – Toxic to aquatic life, Chronic 1	<input type="checkbox"/>	<input type="checkbox"/>
H411 – Toxic to aquatic life, Chronic 2	<input type="checkbox"/>	<input type="checkbox"/>
H412 – Toxic to aquatic life, Chronic 3	<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 a preservative.

O5 Preservatives		
Please state:	Yes	No
Does the product contain any preservatives?	<input type="checkbox"/>	<input type="checkbox"/>
If yes , please state: Does the preservatives comply with product-type 6 and product-type 7 according to Regulation (EU) No 528/2012 (The Biocidal Products Regulation)?	<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) for each preservative.

O6 Formaldehyde		
Please state:	Yes	No
Does the raw material contain formaldehyde or formaldehyde releasing agents?	<input type="checkbox"/>	<input type="checkbox"/>
If yes , please specify source of formaldehyde, i.e., actively added or because of release or decomposition from another substance and theoretical amount of formaldehyde in the raw material:		

O7 Residual monomers		
Does the raw material contain residual monomers in polymers present in product > 1% 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"/>
H370 – Specific target organ toxicity: STOT SE 1 or 2	<input type="checkbox"/>	<input type="checkbox"/>
H371 – Specific target organ toxicity: STOT SE 1 or 2	<input type="checkbox"/>	<input type="checkbox"/>
H372 – Specific target organ toxicity: STOT RE 1 or 2	<input type="checkbox"/>	<input type="checkbox"/>
H373 – Specific target organ toxicity: STOT RE 1 or 2	<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) of residual monomers in newly produced polymers and based on the content in the raw material. (If vinyl acetate is present in an amount over 100 ppm, please also state the amount in ppm in each polymer).

O8 Heavy metals		
Please state:	Yes	No
<p>Does the raw material contain any heavy metals (cadmium, lead, chromium VI, mercury, arsenic, barium, selenium, antimony)?</p> <p><i>Traces of the above-mentioned metals from residuals can be included up to 100 ppm (100 mg/kg, 0.0100% by weight) per single metal in the raw material.</i></p> <p><i>- Barium sulphate and other insoluble barium compounds are exempted.</i></p> <p><i>- An exception is made for antimony in pigments contained in a TiO₂ rutile lattice on the following terms: test results must prove that the molecular structure is inert and that the environmental and health effects of the pigment are on the same level as, or better than, the results for C.I Pigment Brown 24 CAS no. 68186-90-3 and C.I Pigment Yellow 53 CAS no. 8007-18-9 in the report: UNEF Publications, OECD SIDS Initial Assessment Profile (www.inchem.org)*.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>

If the answer to any of the above questions is Yes, state the chemical name and level (in ppm, % by weight or mg / kg). For antimony in pigments that are exempted by the above terms, please attach test according to test method DIN 53770-1 or equivalent, showing that terms are fulfilled).

O9 Titanium dioxide		
Does the raw material contain titanium dioxide?	Yes	No
	<input type="checkbox"/>	<input type="checkbox"/>

If yes, please state amount in % by weight. If the product contains more than 3.0% by weight titanium dioxide, the raw material manufacturer must supply documentation in accordance with requirement O9 and O10 in the criteria document.

O11 Nanomaterials/-particles		
Does the raw material contain nanomaterials/-particles?	Yes	No
<p><i>Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01):</i></p> <p><i>'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:</i></p> <p><i>(a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm;</i></p> <p><i>(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;</i></p> <p><i>(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.</i></p> <p>The following are exempted from the requirement:</p> <ul style="list-style-type: none"> • Pigments. Nano-TiO₂ is not considered a pigment. • Naturally occurring inorganic fillers in accordance with annex V point 7 in REACH. 	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> • Synthetic amorphous silica (SAS). This exemption applies to non-modified SAS. Chemically modified colloidal silica can be included in the products if the silica particles form aggregates in the final product. Surface-treated nanoparticles must fulfil requirement O3 (Classification of constituent chemical substances) and requirement O12 (Prohibited substances). • Unmodified calcium carbonate (grounded calcium carbonate, GCC) and precipitated calcium carbonate (PCC). • Polymer dispersions. 		
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If yes, please state if one of the above exceptions apply and add additional information if needed:

O12 Prohibited substances		
Does the raw material contain any of the following substances or substance groups?	Yes	No
Substances categorised as Substances of Very High Concern (SVHC) and included on the EU Candidate List: http://echa.europa.eu/candidate-list-table	<input type="checkbox"/>	<input type="checkbox"/>
Substances evaluated by the EU to be persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB), in accordance with the criteria in Annex XIII of REACH and substances that have not yet been investigated, but which meet these criteria.	<input type="checkbox"/>	<input type="checkbox"/>
Potential or identified endocrine disruptors according to any of the EU member state initiative "Endocrine Disruptor list" List I; List II; and/or List III <ul style="list-style-type: none"> • https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu • https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption • https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities • Substances on the List II sublist "Substances no longer on list"? https://edlists.org/the-ed-lists/substances-no-longer-on-list-ii <p><i>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.</i></p> <p><i>2,2-dibromo-2-cyanoacetamide (DBNPA) used for disinfecting process water is exempted from the requirement as it is not constituent or part of the manufacturing of the product.</i></p> <hr/>	<input type="checkbox"/>	<input type="checkbox"/>
Organotin compounds	<input type="checkbox"/>	<input type="checkbox"/>
Phthalates Esters of phthalic acid (ortho-phthalic acid / phthalic acid / 1,2- benzene dicarboxylic acid)	<input type="checkbox"/>	<input type="checkbox"/>
Bisphenol and bisphenol derivatives: <i>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).</i>	<input type="checkbox"/>	<input type="checkbox"/>
APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation).	<input type="checkbox"/>	<input type="checkbox"/>
Halogenated organic substances, including perfluorinated substances and polyperfluorinated alkylated substances (PFAS). Exempted are: <ul style="list-style-type: none"> • Preservatives that fulfil O5 • paint pigments that meet the EU's requirements concerning colourants in food packaging under Resolution AP (89) point 2.5 and • dries in oxidative drying paints (note: see O3). 	<input type="checkbox"/>	<input type="checkbox"/>

Isocyanates Water-based polyisocyanates with a chain length of more than 10 are exempted, where the concentration of isocyanates with a chain length of less than 10 as an impurity is documented.	<input type="checkbox"/>	<input type="checkbox"/>
Fragrances	<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). If an exemption applies as above, please attach document as appropriate.

O14 Content of Volatile and Semi-volatile Organic Compounds in outdoor paints and varnishes and industrial paints		
Please state:	Yes	No
Does the raw material contain any VOC and/or SVOC? If the content of SVOC is unknown, please state this	<input type="checkbox"/>	<input type="checkbox"/>
<p>Definitions of VOC and SVOC</p> <p>Volatile organic compounds (VOC) mean any organic compounds having an initial boiling point less than or equal to 250 °C measured at a standard pressure of 101,3 kPa as defined in Directive 2004/42/EC and which, in a capillary column, are eluting up to and including n-Tetradecane (C14H30).</p> <p>Semi volatile organic compounds (SVOCs) mean any organic compound having a boiling point greater than 250 °C and less than 370 °C measured at a standard pressure of 101,3 kPa and which, in a capillary column are eluting with a retention range after n-Tetradecane (C14H30) and up to and including n-Docosane (C22H46).</p>		

Please state the VOC content in g/l:

Please state the SVOC content in g/l:

O15 Volatile Aromatic Compounds		
Please state the following:	Yes	No
Does the product contain any Volatile Aromatic Compounds (VAC)? <i>Volatile aromatic compounds are volatile organic compounds where one or more benzene rings are contained within the molecule.</i>	<input type="checkbox"/>	<input type="checkbox"/>
<p>If yes, please state if actively added or as a residue in ppm:</p> <hr/>		
O16 Acrylic resins (binders)		
Please state the following:	Yes	No
Does the raw material contain acrylic resins*?	<input type="checkbox"/>	<input type="checkbox"/>
<p>* Synthetic resin resulting from the polymerization or copolymerization of acrylic and/or methacrylic monomers, frequently together with other monomers e.g., styrene.</p>		
Is the acrylic resin based on renewable raw material or feedstock?	<input type="checkbox"/>	<input type="checkbox"/>

If the answer to the above questions is Yes, the manufacturer of the raw material must enclose documentation in accordance with appendix 4 of the criteria and documentation showing valid certificates or certificate identifier showing that the renewable raw material complies with EU's Renewable Energy Directive (EUREDII).

O17 Alkyd resins (binders)		
Please state the following:	Yes	No
Does the raw material contain alkyd resins?	<input type="checkbox"/>	<input type="checkbox"/>

If the answer to the above question is Yes, the raw material manufacturer must enclose documentation in accordance with Appendix 4 is required, documentation showing valid certificates or certificate identifier showing that the renewable raw material complies with EU's Renewable Energy Directive (EUREDII) and documentation showing that fatty acids and polyols in alkyd resins are made from renewable raw materials.

O18 Cement/Hydraulic binder		
Please state the following:	Yes	No
Does the raw material contain cement or alternative hydraulic binder?	<input type="checkbox"/>	<input type="checkbox"/>

If the answer to the above question is Yes, the raw material manufacturer must enclose documentation in accordance requirement O17 of the criteria document showing that the requirements are met.

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

Appendix 3 Example of recipe structure

Example of recipe structure to be used when applying for the Nordic Ecolabelling of indoor and outdoor paints and varnishes.

Paint or varnishes Name: <name>										
Raw material reference number	Company name	Raw material name	Function in the paint	CAS No.	Substance content	% Substance	Cas No.	Classification per substance	Raw material content in the paint/varnish	Substance content in the paint/varnish
1...	-	Water	Solvent	7732-18-5	Water	100,000	7732-18-5	-Not Classified (NC)	14,97	14,9700
2...	Xxx	Xxx	pH regulator	1310-73-2	Sodium hydroxide	95,000	1310-73-2	H314	9	8,5500
					Water	5,000	7732-18-5	NC		
3...	Xxx	Xxx	Dispersing agent	-	Acrylic resins	30,000	-	NC	7	2,1000
					Water	69,995	7732-18-5	NC		4,9000
					1,2-Benzisothiazol-3(2H)-one	0,005	2634-33-5	H314, H317, H412		0,0004
And so on										

Appendix 4 Declaration from the manufacturer of raw materials used in acrylic/alkyd resins

To be used in conjunction with an application for a licence for the Nordic Ecolabelling of paints and varnishes.

Name of acrylic/alkyd resin binder: _____

Manufacturer of acrylic/alkyd resin binder: _____

Yes No

O15 and/or O16: Does the acrylic/alkyd resin binder contain renewable raw materials?

If **yes**, please state the type(s) of renewable raw material (e.g., castor oil, soybean oil....) and whether the renewable raw materials are derived from primary feed stock or residues or waste:

Please indicate which of the renewable raw material(s) are certified according to sustainability standard(s) or certification identity number:

Please describe the level of traceability (Identity Preserved, Segregated, Mass Balance, Book & Claim) on both the renewable raw materials used in acrylic resin binder and the acrylic resin binders itself.

Signature

We declare that the requirements have been met and that the information provided is correct.

Company name:	Date:
Address:	
Telephone:	E-mail:
Signature:	Name in block letters:
Person in charge of marketing:	Date:
Telephone:	E-mail:
Signature	

In the event of personnel changes, a new confirmation must be submitted to the ecolabelling organization.

Appendix 5 Requirements on the analysis laboratory

The analysis laboratory used shall be certified according to standard EN ISO 17025 or have official GLP status.

Company's own laboratory may act as a test laboratory if:

- The manufacturer has a quality management system encompassing sampling and analysis and has been certified to ISO 9000.
- The test method for performance test is part of the quality system.
- Nordic Ecolabelling shall have access to all raw data from performance testing.