Nordic Ecolabelling of

# Indoor paints and varnishes

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**For public consultation**

Nordic Ecolabelling

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# Addresses

In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Nordic 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 Ecolabelled Indoor paint and varnish?

A Nordic Ecolabelled indoor paint or varnish is amongst the least environmentally harmful within its product group. The Nordic Ecolabel shows that the product fulfils strict environmental and health requirements.

Indoor paints and varnishes labelled with the Nordic Ecolabel contain less environmentally harmful substances and fewer substances with health effects than other indoor paints.

Nordic Ecolabel paints and varnishes are considered to be:

- products with lower environmental impact along their life cycle
- products fulfilling stringent requirements with low environment and health impact
- products which have high quality, very good performance and long durability

# Why choose the Nordic Ecolabel?

- The Nordic Ecolabel is a cost-effective and simple way of communicating environmental work and commitment to customers and suppliers.
- Reducing environmental impact often creates scope for lowering costs, such as by cutting the consumption of energy and reducing amounts of packaging and waste.
- Environmental issues are complex. It can take a long time and extensive resources to gain an understanding of a specific area. Nordic Ecolabelling can be seen as aid in this work.
- The Nordic Ecolabel not only covers environmental and health issues but also quality requirements, since the environment and quality often go hand in hand. This means that a Nordic Ecolabel licence can also be seen as a mark of quality.

# What can carry the Nordic Ecolabel?

The product group of indoor paints and varnishes shall comprise indoor decorative paints and varnishes, woodstains and related products intended for use by consumers and professional users falling under the scope of Directive 2004/42/CE ("the paints directive")[1] of the European Parliament and of the Council (5).

The product group of indoor paints and varnishes shall comprise: 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 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 Annex I to Directive 2004/42/CE for indoor usage.

[1] Directive: 2004/42/C http://ec.europa.eu/environment/air/pollutants/stationary/paints/paints_legis.htm (visited 2014-10-10)

The product group shall not comprise the following products:

- Anti-fouling coatings
- preservation products for wood impregnation
- coatings for particular industrial and professional uses, including heavy-duty coatings, powder coatings, UV curable paint systems
- paints primarily intended for vehicles
- products 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
- anti-rust paints
- products for exterior usage
- products for industrial applications

Exterior products are covered by the Nordic Ecolabelling criteria for chemical building products.

# How to apply

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

### Icons in the text

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

🔑 The requirement checked on site

### Application

Applications are made to the national ecolabelling organisation and the application is valid for 12 months. Applications may be processed by another ecolabelling organisation according to agreement between the organisations. The applicant is notified of this. Companies located outside the Nordic countries make applications to the national ecolabelling organisation of the primary market.

The application must consist of a completed application form together with all of the documentation required to demonstrate compliance with the requirements specified in the criteria document (this is specified for each requirement). The application form must specify in which Nordic countries the products in question are to be sold and the estimated turnover from the products in each country.

Further information and assistance may be available. Visit the relevant national website for information.

### Sales in the Nordic region

Once granted, a licence is valid throughout the Nordic region. The licence document specifies in which Nordic countries the products are sold according to the information provided on the application. The products are published on Nordic Ecolabelling's website(s). The licensee undertakes to inform Nordic Ecolabelling of any changes as to where the product is sold. If the product is to be sold in other Nordic countries than those initially specified in the application, the licensee must provide written notification of this and submit any extra documentation required to Nordic Ecolabelling in the country that issued the license.

### 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.

### Costs

An application fee is charged to companies applying for a licence. There is an additional annual fee based on the turnover of the Nordic Ecolabelled Indoor paints and varnishes.

### Enquiries

Please contact Nordic Ecolabelling if you have any queries or require further information. See page 2 for addresses.

# What are the requirements of the Nordic Ecolabelling?

To be awarded a Nordic Ecolabel licence, all requirements must be fulfilled.

In order to be granted a Nordic license, the following documentation must be attached to the application:

- Documentation demonstrating compliance with any national regulations/special requirements.
- User instructions in all relevant languages.
- A copy of labels in all relevant languages.
- Documentation demonstrating compliance with national rules and laws, as well as any industry agreements on return systems for packaging.

# 1 General environmental requirements

The requirements in Chapter 1 "General environmental requirements" apply to all constituent substances unless otherwise stated.

The term constituent substance refers to all substances in the product, including additives in the ingredients (such as preservatives and stabilisers) but does not include impurities from primary production. Impurity refers to residues from primary production which may be found in the finished product at concentrations below 100 ppm (0.0100% by weight, 100 mg/kg), but not substances that have been added to a raw material or the product actively and for a particular purpose, irrespective of quantity.

If a product already has the EU Ecolabel for indoor paints and varnishes see appendix 2 in the background document to find out what complimentary information that needs to be collected.

## O1 White pigment content (EU Ecolabel 1a and 1b)

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 $m^2$ of dry film equal to or lower than that described in Table 1i, with 98 % opacity.

All other paints shall have a white pigment content (white inorganic pigments with a refractive index higher than 1.8) per $m^2$ of dry film equal to or lower than that described in Table 1ii, with 98 % opacity.

For tinting systems this requirement only applies to the base paint.

** Wet scrub resistance is here defined in accordance with EN 13300 and EN ISO 11998, see requirement O2.*

**Table 1i Relationship between wet scrub resistance and $TiO_2$ content for indoor paints with claims of wet scrub resistance**

| Wet scrub resistance | Indoor limit ($g/m^2$) |
|---|---|
| Class 1 | 40 |
| Class 2 | 36 |

**Table 1ii. Limits for white pigment content for products not covered by table 1i**

| Type of paint | Indoor limit ($g/m^2$) with 98% opacity |
|---|---|
| Wall and ceiling paints without claims | 25 |
| Other 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.

## O2 Minimum requirement for claims of Wet Scrub Resistance (for indoor paints only) (EU Ecolabel 1b)

All indoor wall and ceiling paints (finishes) 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. For tinting systems this requirement is only relevant for the tinting bases (base paints).

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

☒ 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

☒ The test laboratory must fulfil the requirements in appendix 4.

## O3 Titanium Dioxide pigment (EU Ecolabel 2)

If the product contains more than 3.0 % w/w of titanium dioxide, the emissions and discharges of wastes from the production of any titanium dioxide pigment used shall not exceed the following:

**For the sulphate process**:
SOx calculated as $SO_2$: 7.0 kg/tonne $TiO_2$ pigment

Sulphate waste: 500 kg/tonne $TiO_2$ pigment

**For the chloride process:**
If natural rutile ore is used, 103 kg chloride waste/tonne $TiO_2$ pigment

If synthetic rutile ore is used: 179 kg chloride waste/tonne $TiO_2$ pigment

If slag ore is used: 329 kg chloride waste/tonne $TiO_2$ pigment

If more than one type of ore is used, the values will apply in proportion to the quantity of the individual ore types used.

*Note:*
*SOx emissions only apply to the sulphate process.*

*The Waste Framework Directive 2008/98/EC of the European Parliament and of the Council (3), Article 3 shall be used for the definition of waste. If the TiO2 producer can satisfy Article 5 (by-product production) of the Waste Framework Directive for its solid wastes then, the wastes shall be exempted.*

☒ Declaration, see Appendices 1 and 2, from the manufacturer of the product and the manufacturer of each raw material.

☒ If the product contains more than 3% w/w of titanium dioxide, a description and calculation from the titanium dioxide producer is to be submitted, clearly showing that the requirement is fulfilled.

## O4 Spreading rate (EU Ecolabel 3a)

The spreading rate requirement shall apply to white and light coloured paint products. For paints that are available in more colours the spreading rate shall apply to the lightest colour. The spreading rate should be at least at the levels presented in table 3 below.

**Table 3. Spreading rate**

| | **Opacity/hiding power** | **Spreading rate of at least the following** |
|---|---|---|
| **White paints and light-coloured paints (including finishes and intermediates)*** | Hiding power 98% | 8 $m^2$ per litre of product |
| **Transparent and semi-transparent primers and undercoats** | Without opacity<br>With opacity | 6 $m^2$ per litre of product<br>8 $m^2$ per litre of product |
| **Opaque primers with specific blocking/sealing, penetrating/binding properties and primers with special adhesion properties** | Opaque | 6 $m^2$ 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)** | | 1 $m^2$ per kg of product |
| **Opaque elastomeric paints** | Opaque | 4 $m^2$ per litre of product |

**Tinting systems*

- For tinting systems, this requirement applies only to the white base (the base containing the most $TiO_2$). 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.

*This requirement does not apply to varnishes, lasures, transparent adhesion primers or any other transparent coatings.*

✉ 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**
- 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.

✉ The test laboratory must fulfil the requirements in appendix 4.

## O5 Resistance to water (EU Ecolabel 3b)

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.

✉ The test laboratory must fulfil the requirements in appendix 4.

## O6 Adhesion (EU Ecolabel 3c)

- Pigmented masonry primers for interior uses shall score a pass in the EN 24624 (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 undercoats, interior masonry primers, metal and wood undercoats shall score 2 or less in the EN 2409 test for adhesion.

*Transparent primers are not included in this requirement.*

*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 24624 (ISO 4624) as applicable.

✉ The test laboratory must fulfil the requirements in appendix 4.

## O7 Abrasion (EU Ecolabel 3d)

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 applicant shall provide a test report showing compliance with this requirement using the method EN ISO 7784-2 or ISO 5470-1.

☒ The test laboratory must fulfil the requirements in appendix 4.

## O8 Content of Volatile and Semi-volatile Organic Compounds (VOCs, SVOCs) (EU Ecolabel 4)

The maximum content of Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs) shall not exceed the limits given in Table 4a-b.

The content of VOCs and SVOCs shall be determined for the ready to use product and shall include any recommended additions prior to application such as colourants and/or thinners.

The VOC content shall be determined either by calculation based on the ingredients and raw materials or by using the methods given in ISO 11890-2 or, alternatively for products with a VOC content of less than 1.0 g/l, the methods given in ISO 17895.

The SVOC content shall be determined using the method given in ISO 11890-2. The markers given in Table 4b shall be used as the basis for delimiting the Gas Chromatography results for SVOC's.

***Definitions of VOC and SVOC***

*Volatile organic compounds' (VOC) means 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 tetradecane (C14H30) for non-polar systems or diethyl adipate (C10H18O4) for polar systems.*

*Semi volatile organic compounds' (SVOCs) means any organic compound having a boiling point of greater than 250 °C and which, in a capillary column 8 are eluting with a retention range between n-tetradecane (C14H30) and n-docosane (C22H46) for non-polar systems and diethyl adipate (C10H18O4) and methyl palmitate (C17H34O2) for polar systems.*

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

**Table 4a. VOC and SVOC content limits**

| **Product description (with subcategory denotation according to Directive 2004/42/EC)** | **VOC limits (g/l including water)** | **SVOC limits (g/l including water)** | |
|---|---|---|---|
| | | White paints and varnishes | Tinted paints and varnishes |
| a.Interior matt walls and ceilings (Gloss < 25@60°) | 10 | 30 | 40 |
| b. Interior glossy walls and ceilings (Gloss > 25@60°) | 40 | 30 | 40 |
| d. Interior/Exterior trim and cladding paints for wood and metal | 80 | 50 | 60 |
| e. Interior trim varnishes and woodstains, including opaque woodstains | 65 | 30 | 30 |
| f. Interior and Exterior minimal build woodstains | 50 | 30 | 40 |
| g. Primers | 15 | 30 | 40 |
| h. Binding primers | 15 | 30 | 40 |
| i. One-pack performance coatings | 80 | 50 | 60 |
| j.Two-pack reactive performance coatings for specific end use such as floors | 80 | 50 | 60 |
| l. Decorative effect coatings | 80 | 50 | 60 |

**Table 4b. Marker compounds to be used in the determination of SVOC content**

| | Polar systems (water-borne coating products) | Non-polar systems (solvent-borne coating products) |
|---|---|---|
| SVOC | Diethyl adipate (C10H18O4) to methylpalmitate (C17H34O2) | n-Tetradecane (C14H30) to n-Docosan (C22H46) |

☒ The applicant shall provide for the VOC content of the ready to use product a test report using the methods given in ISO 11890-2 or ISO 17895 that demonstrates compliance or a declaration of compliance supported by calculations based on the paint ingredients and raw materials.

☒ The applicant shall provide for the SVOC content of the ready to use product a test report using the method given in ISO 11890-2. The test should be carried out with reference to the markers specified in Table 4 and appendix 3 in this criteria document.

☒ The test laboratory must fulfil the requirements in appendix 4.

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

## O9 Restrictions to hazard classifications and risk phrases on constituent substances (EU Ecolabel 5a)

Substances in the product or in the raw materials that make up the product must not be classified as shown in Table 5 below.

*The most recent classification rules adopted by the EU shall take precedence over the listed hazard classifications and risk phrases. In accordance with Article 15 of Regulation (EC) No 1272/2008 applicants shall therefore ensure that classifications are based on the most recent rules on the classification, labelling and packaging of substances and mixtures.*

**Table 5. Restricted hazard classifications and their categorisation for constituent substances**

| **Acute toxicity** | |
|---|---|
| Category 1 and 2 | Category 3 |
| H300 Fatal if swallowed (R28) | H301 Toxic if swallowed (R25) |
| H310 Fatal in contact with skin (R27) | H311 Toxic in contact with skin (R24) |
| H330 Fatal if inhaled (R23/26) | H331 Toxic if inhaled (R23) |
| H304 May be fatal if swallowed and enters airways (R65) | EUH070 Toxic by eye contact (R39/41) |
| **Specific target organ toxicity** | |
| Category 1 | Category 2 |
| H370 Causes damage to organs (R39/23, R39/24, R39/25, R39/26, R39/27, R39/28) | H371 May cause damage to organs (R68/20, R68/21, R68/22) |
| H372 Causes damage to organs through prolonged or repeated exposure (R48/25, R48/24, R48/23) | H373 May cause damage to organs through prolonged or repeated exposure (R48/20, R48/21, R48/22) |
| **Respiratory and skin sensitisation** | |
| Category 1/1A | Category 1/1B |
| H317: May cause allergic skin reaction (R43) | H317: May cause allergic skin reaction (R43) |
| H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled (R42) | H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled (R42) |

### Exemptions

- Respirable crystalline silica/quartz is exempted from the classification as STOT RE 1 with H372. Respirable crystalline silica can be up to 1% in the raw material.

- In can preservatives that are used to preserve the product are exempted from the requirement of classification as acute toxic with H301, H311 and H331 and skin sensitising with H317. The in-can preservatives are exempted up to a maximum of 0,060% w/w totally in the final product. See further requirements concerning preservatives are stated in O14.
- Film preservatives used to preserve the final film in products to be used in high humidity areas, such as kitchens, bathrooms and other wet rooms, are exempted from classifications with category 1/1A/1B with H317 up to 0.10% w/w totally in the final product.
- Neutralizing agents are exempted from classifications with H311 and H331 up to maximum 0.50% w/w totally in the final product.

☒ 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 on appendix 1 and 2 together with a statement why the substance is present in the product/raw material.

☒ Safety data sheet for all constituent substances in line with Annex II to REACH (Regulation (EC) No 1907/2006).

☒ Documentation of content of above exemptions as a declaration of the concentrations and the function of the raw materials.

## O10 Restrictions to substances classified as Carcinogenic, mutagenic or toxic for reproduction on constituent substances (EU Ecolabel 5a)

Substances in the product or in the raw materials that make up the product must not be classified as shown in Table 6 below.

*The most recent classification rules adopted by the Union shall take precedence over the listed hazard classifications and risk phrases. In accordance with Article 15 of Regulation (EC) No 1272/2008 applicants shall therefore ensure that classifications are based on the most recent rules on the classification, labelling and packaging of substances and mixtures.*

**Table 6 Restricted CMR classifications and their categorisation on constituent substances**

| **Carcinogenic, mutagenic or toxic for reproduction** | |
|---|---|
| **Category 1A and 1B** | **Category 2** |
| H340 May cause genetic defects (R46) | H341 Suspected of causing genetic defects (R68) |
| H350 May cause cancer (R45) | H351 Suspected of causing cancer (R40) |
| H350i May cause cancer by inhalation (R49) | |
| H360F May damage fertility (R60) | H361f Suspected of damaging fertility (R62) |
| H360D May damage the unborn child (R61) | H361d Suspected of damaging the unborn child (R63) |
| H360FD May damage fertility. May damage the unborn child (R60, R60/61) | H361fd Suspected of damaging fertility. Suspected of damaging the unborn child (R62/63) |
| H360Fd May damage fertility. Suspected of damaging the unborn child (R60/63) | H362 May cause harm to breast fed children (R64) |
| H360Df May damage the unborn child. Suspected of damaging fertility (R61/62) | |

**Exemption**

- Formaldehyde as an impurity in newly produced polymers and from formaldehyde donors maximum content of 0.0010 % w/w (10 ppm) in the final product, see separate requirement O20.

☒ 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 on appendix 1 and 2 together with a statement why the substance is present in the product/raw material.

☒ Safety data sheet for all constituent substances in line with Annex II to REACH (Regulation (EC) No 1907/2006).

## O11 Restrictions to constituent substances classified as hazardous to the aquatic environment and hazardous to the ozone layer (EU Ecolabel 5a)

Substances in the product or in the raw materials that make up the product must not be classified as shown in Table 7 below.

*The most recent classification rules adopted by the Union shall take precedence over the listed hazard classifications and risk phrases. In accordance with Article 15 of Regulation (EC) No 1272/2008 applicants shall therefore ensure that classifications are based on the most recent rules on the classification, labelling and packaging of substances and mixtures.*

**Table 7. Restricted classifications for constituent substances as hazardous to the environment and their categorisation**

| **Hazardous to the aquatic environment** | |
|---|---|
| **Category 1 and 2** | **Category 3 and 4** |
| H400 Very toxic to aquatic life (R50) | H412 Harmful to aquatic life with long-lasting effects (R52/53) |
| H410 Very toxic to aquatic life with long-lasting effects (R50/53) | H413 May cause long-lasting effects to aquatic life (R53) |
| H411 Toxic to aquatic life with long-lasting effects (R51/53) | |
| **Hazardous to the ozone layer** | |
| EUH059 Hazardous to the ozone layer (R59) | |

### Exemptions

- In can preservatives that are used to preserve the product are exempted from the requirement of classification as hazardous to the aquatic environment category 1-4 up to maximum 0.060% w/w total in the final product. See specific limits in requirement O14.
- Film preservatives used to preserve the final film in products to be used in high humidity areas, such as kitchens, bathrooms and wet rooms, are exempted from classifications as hazardous to the aquatic environment category 1-4 up to 0.10% totally in the final product. Zinc oxide used to stabilize dry film preservatives is exempted from classifications with H400 and H410 up to 0.050% w/w in the final product. See requirement O14 for further requirements on preservatives.
- Driers in alkyd paints classified with H410, H412, and H413 up to 0.050% w/w totally in the final product.
- Anti-skinning agents are exempted from classification H412 and H413 up to a maximum of 0.040% w/w totally in the final product.
- Surfactants classified as hazardous to the aquatic environment with H411, H412 and H413 up to 1.0% totally in the final product.
- Silicon resin emulsions in white paints, tinting bases and colourants are exempted from classifications with H412 and H413 up to 2.0% w/w totally in the final product.
- Neutralizing agents are exempted from classifications as hazardous to the aquatic environment category 1-4 with H400, H410, H411, and H413 up to maximum 0.50% w/w totally in the final product.

☒ 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).

☒ Documentation of content of above exemptions as a declaration of the concentrations and the function of the raw materials.

## O12 Restrictions to classification of the final product (EU Ecolabel 5a)

The final product shall not be classified and labelled as being acutely toxic, a specific target organ toxicant, a respiratory or skin sensitizer, or carcinogenic, mutagenic or toxic for reproduction hazardous to the environment according to table 8 below.

Applicants are required to calculate the hazard classification of the final paint product in order to demonstrate compliance. This shall be in accordance with the methodologies for the classification of mixtures contained in Regulation (EC) No 1272/2008 and all amending legislation.

*The most recent classification rules adopted by the Union shall take precedence over the listed hazard classifications and risk phrases. In accordance with Article 15 of Regulation (EC) No 1272/2008 applicants shall therefore ensure that classifications are based on the most recent rules on the classification, labelling and packaging of substances and mixtures.*

**Table 8. Classification of the product**

| **Classification according to CLP Regulation 1272/2008** | |
|---|---|
| **Hazard class and category** | **H-phrase** |
| Toxic to aquatic organisms<br>Category acute 1<br>Chronic 1-4 | H400, H410, H411, H412, H413 |
| Acute toxicity<br>Category 1-4 | H300, H310, H330,<br>H301, H311, H331,<br>H302, H312, H332, H370, H372 |
| Specific target organ toxicity (STOT) with single and repeated exposure<br>STOT SE category 1-2<br>STOT RE category 1-2 | H370, H371,<br>H372, H373 |
| Airway or skin sensitising<br>Category 1 | H334, H317 and the product must not contain constituent substances in quantities that result in the label "Contains (name of sensitising substance), may cause an allergic reaction"* |
| Skin corrosion or irritation<br>Skin corr. 1A/1B/C | H314 |
| Carcinogenic<br>Carc 1A/1B/2 | H350, H350i, H351 |
| Mutagenic<br>Mut 1A/B/2 | H340, H341 |
| Toxic for reproduction<br>Repr 1A/1B/2 | H360, H361, H362 |

### Exemption

- *In-can preservatives causing the risk phrase "Contains (name of sensitising substance), may cause an allergic reaction" to appear on the package of the final paint or varnish are exempted. See also O14 concerning limits for preservatives.

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

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

☒ Documentation of content of above exemption for preservatives as a declaration of the concentration of the preservative and if it has been added as an in-can or filmpreservative.

## O13 Other substances excluded from use (EU Ecolabel 5b)

The constituent substances must not contain:

- Substances on the Candidate List for Substances of Very High Concern*.
- Substances evaluated by EU as PBT (Persistent, bioaccumulable and toxic) or vPvB (very persistent and very bioaccumulable), in accordance with the criteria in appendix XIII in REACH.
- Substances considered being potential endocrine disruptors in category 1 or 2 on the EU's priority list of substances that are to be investigated further for endocrine disruptive effects. See link: http://ec.europa.eu/environment/chemicals/endocrine/strategy/being_en.htm

** Identified according to Article 59(1) of the REACH Regulation which establishes the Candidate List for Substances of Very High Concern. The Candidate List can be found on the ECHA website at: http://echa.europa.eu/candidate-list-table*

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

## O14 Preservatives (EU Ecolabel 5c i-iv, appendix 1)

a) Only preservatives authorized by Directive 98/8/EC of the European Parliament and of the Council and Regulation (EU) No 528/2012 can be used.

b) No preservatives added to the product or its ingredients may be bioaccumulative.

The bioaccumulative properties of a substance can be tested on fish in line with OECD test method 305 A-E. If the bioconcentration factor (BCF) is ≥ 100, the substance is considered to be bioaccumulative. If there is no BCF for a substance, that substance is considered to be bioaccumulative if logKow ≥ 3.2 under the OECD's guidelines 107 or 117 or equivalent.

*Note that if there is a measured BCF value and a logKow value, it is always the highest measured BCF that is used, rather than the logKow value.*

c) The amounts of preservatives added to the products must not exceed the limit values in Table 9a and 9b below:

**Table 9a Concentration limits for preservatives**

| Preservation type | Concentration limit |
|---|---|
| Dry-film preservatives for high humidity areas* | 0,10% w/w |
| Preservatives in colourants/tinting pastes dispensed from tinting machines | 0,10% w/w |
| In-can preservatives totally (paints, varnishes, base paints etc.) | 0,060% w/w |

** High humidity areas are here described as kitchens, bathrooms and other wet rooms.*

**Table 9b Specific restrictions on isothiazolinones, zinc pyrithione and N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine**

| Preservative | Concentration limit |
|---|---|
| Total amounts of isothiazolinones | 0,0400% w/w |
| 2-Methyl-2H-isothiazol-3-one | 0,0100% w/w |
| 1,2-Benzisothiazol-2(2H)-one | 0,0400% w/w |
| 2-Octyl-2H-Isothiazol-3-one | 0,0400% w/w |
| 5-chloro-2-methyl-4-isothiazolin-3-one/2-methyl-4-isothiazolin-3-one | 0,0015% w/w |
| Zinc pyrithione | 0,0500% w/w |
| N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine | 0,0500% w/w |

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

☒ Documentation that none of the added preservatives are bioaccumulative, cf. OECD test method no. 305 A-E or 107, 117.

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

☒ Calculation clearly showing that the requirement concerning preservatives is fulfilled.

### O15 Alkylphenolethoxylates (APEOs) surfactants (EU Ecolabel Appendix 4b)

Alkylphenolethoxylates (APEOs) and their derivatives shall not be present in the product or in its constituent substances.

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

### O16 Perfluorinated substances and polyperfluorinated alkylated substances (EU Ecolabel Appendix 4c)

Perfluorinated substances and polyperfluorinated alkylated substances (PFAS) including PFOA and PFOS are not allowed in the product or in its constituent substances.

*Note the national legislations concerning PFOA in the Nordic countries. In Norway PFOA is regulated in «Forskrift om begrensning i bruk av helse- og miljøfarlige kjemikalier og andre produkter (produktforskriften)», §2- 32.Declaration of non-use from applicant and raw material suppliers.*

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

### O17 Metals and their compounds (EU Ecolabel Appendix 5b)

The following metals or metal compounds must not be present in the product or in its constituent substances:

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

Traces from impurities can be included up to 100 ppm (100 mg/kg, 0.010% w/w) per single metal in the raw material and up to 100 ppm in the final product.

**Exemption:**

- Metals in pigments shall fulfil requirement O18.

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

### O18 Pigments (EU Ecolabel Appendix 5f)

Pigments containing the metals cadmium, lead, chromium VI, mercury, arsenic, barium, selenium or antimony shall only be used where laboratory testing of the pigment shows that the metal chromophore is bonded within a crystal lattice and is insoluble.

**Exemptions**
The following metal containing pigments are exempted for use without the need for testing:

- Barium sulphate
- Antimony nickel within an insoluble $TiO_2$ lattice

✉ Test results demonstrating that the pigment chromophore is bonded within a crystal lattice and is insoluble. Test method: DIN 53770-1 or equivalent.

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

## O19 Phthalates (EU Ecolabel Appendix 6b)

The following phthalates must not be present in the product or in its constituent substances:

- DEHP (Bis-(2-ethylhexyl)-phthalate)
- BBP (Butylbenzylphthalate)
- DBP (Dibutylphthalate)
- DMEP (Bis2-methoxyethyl) phthalate
- DIBP (Diisobutylphthalate)
- DIHP (Di-C6-8-branched alkyphthalates)
- DHNUP (Di-C7-11-branched alkylphthalates)
- DHP (Di-n-hexylphthalate)
- DNOP (di-n-octylphthalate)
- DINP (diisononylphthalate),
- DIDP(diisodecylphthalate)
- DPP (dipentylphtalate)
- DiPP (diisopentylphtalate)
- N-pentyl-isopentyl phatlate
- Bis(2-methoxyethyl)phtalate

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

## O20 Formaldehyde (EU Ecolabel Appendix 7a)

Free formaldehyde shall not be intentionally added to the final product.

Formaldehyde donors and residual levels of formaldehyde from polymer dispersions (binders) is allowed, as long as the content of free formaldehyde do not exceeds 10ppm (0,0010%) in the final product.

The final product shall be tested in order to determine its free formaldehyde content. The sampling requirements for testing shall reflect the product range.

*The free formaldehyde content shall be determined for the white base or transparent tinting base predicted to contain the highest theoretical amount of formaldehyde. The content of the colour tint which is predicted to contain the highest theoretical amount of formaldehyde shall also be determined. When colour tint is used the limit values applies for the base with the colour tint with highest theoretical amount of formaldehyde.*

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

✉ Determination of the in-can formaldehyde concentration by means of analysis using VdL-RL 03 or high-performance liquid chromatography (HPLC).

✉ The test laboratory must fulfil the requirements in appendix 4.

## O21 Monomers (EU Ecolabel Appendix 7c)

The total level of residual monomers in polymers may be no more than 100ppm (0.010% w/w), where they are very toxic, toxic or harmful to health and classified as Acute Tox. Cat. 1-4, classified in accordance with the prevailing CLP Regulation EC (No) 1272/2008.

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

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

## O22 Volatile Aromatic Hydrocarbons - VAH (EU Ecolabel 5x, appendix 7d)

Volatile aromatic hydrocarbons (VAH) and halogenated solvents must not be actively added to the product, but may occur as residues or impurities to a maximum of 100 ppm (0.01% w/w, 100 mg/kg) in the final product.

*Volatile aromatic hydrocarbons 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.

✉ Specification of the level of volatile aromatic hydrocarbons in the product (based on data for all ingoing ingredients).

## O23 Nanoparticles (no equivalence in the EU Ecolabel document)

a) Nanoparticles (from nanomaterials*) are not permitted in the product.

The following are exempted from the requirement:

- Pigments**
- Naturally occurring inorganic fillers - this applies to fillers covered by appendix V point 7 in REACH.
- Synthetic amorphous silica***
- Polymer dispersions

b) The producer must declare any nanomaterials present in the product.

** The definition of nanomaterials follows the European Commission's definition from 18 October 2011 (2011/696/EU): "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."*

*** Nano-titanium dioxide (nano-$TiO_2$) is not considered a pigment and is therefore covered by this requirement.*

****This applies to traditional synthetic amorphous silica. Chemically modified colloidal silica can be included in the products as long as the silica particles form aggregates in the final product. The surface treatment of surface-treated nanoparticles must fulfil requirement O9-11 (classification of constituent chemical substances) and requirement O14 (Other substances excluded from use).*

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

## O24 Consumer information (EU Ecolabel 6a-c)

**1. The following texts shall appear on or be attached to the packaging:**

- 'Minimise paint wastage by estimating how much paint you will need'
- 'Recover unused paint for re-use'.
- 'Reuse of paint can effectively minimise the products' life cycle environmental impact'

2. **The following general information and advice shall be provided on or be attached to the packaging:**
    - How to estimate the amount of paint needed prior to purchase in order to minimise paint wastage and a recommended amount as a guideline (e.g. for 1 $m^2$ of wall x litres of paint is needed).
    - How to deal with the 'unused paint' together with, where available, a web-link or contact details from which the consumer can find more detailed information.
3. **The following advice and recommendations on how to handle the paint shall be provided on or be attached to the packaging:**
    - Safety measures for the user. This shall include basic recommendation on personal protective equipment that should be worn. It shall also include additional measures that should be taken when using spray equipment.
    - The use of cleaning equipment and appropriate waste management (in order to limit water and soil pollution). For example, text advising that unused paint requires specialist handling for safe environmental disposal and therefore it should not be thrown away with household or commercial waste (e.g. 'Do not put residual paint down the kitchen sink or toilet, or into a waste bin').
    - Storage of the paint in appropriate conditions (before and after opening), including, where appropriate, safety advice.

✉ The applicant shall declare that the product complies with the requirement and provide the artwork or samples of the user information and/or a link to a manufacturer's website containing this information as part of the application. The recommended amount of paint given as a guideline shall be provided.

## O25 Take-back systems

Relevant national regulations, legislation and agreements within the sector regarding take-back systems for products and packaging shall be complied with in all the Nordic countries where the Nordic Ecolabelled products are marketed. Relevant take-back systems are PYR (Fi), Grønt punkt (No) and FTi AB (Sw).

✉ Declaration from the applicant regarding affiliation to existing recycling/processing agreements.

# 2 Quality and regulatory requirements

To ensure that Nordic Ecolabel requirements are fulfilled, the following procedures must be implemented.

If manufacturer's environmental management system is certified to ISO 14 001 or EMAS, and the following procedures implemented, it is sufficient for the accredited auditor to certify that the requirements are observed.

### O26 Laws and regulations

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

✉ Declaration from the licensee (signed application form) that the requirement is fulfilled, plus a report to the regulatory authority.

### O27 Licence administrators

The company shall appoint an individual responsible for ensuring the fulfilment of Nordic Ecolabel requirements, and a contact person for communications with Nordic Ecolabelling.

✉ Organisational chart showing who is responsible for the above.

### O28 Documentation

The licensee must be able to present a copy of the application and factual and calculation data supporting the documents submitted with the application (including test reports, documents from suppliers and suchlike).

🔑 On-site inspection.

### O29 Product quality

The licensee must guarantee that the quality of the Nordic Ecolabelled product is maintained throughout the validity period of the licence.

✉ Procedures for collating and, where necessary, dealing with claims and complaints regarding the quality of the Nordic Ecolabelled product.

### O30 Planned changes

Written notice of planned product and marketing changes that affect the Nordic Ecolabelling requirements must be given to Nordic Ecolabelling.

✉ Procedures detailing how planned product and marketing changes are dealt with.

### O31 Unforeseen non-conformities

Unforeseen non-conformities that affect Nordic Ecolabelling requirements must be reported to Nordic Ecolabelling in writing and logged.

✉ Procedures detailing how unforeseen non-conformities are handled.

### O32 Traceability

The licensee must have a traceability system for the production of the Nordic Ecolabelled product.

✉ Description of/procedures for fulfilment of the requirement.

# Marketing

The Nordic Ecolabel is a very well-known and well-reputed trademark in the Nordic region. Nordic Ecolabelled products and services may be marketed using the Nordic Ecolabel so long as the associated licence is valid.

The label must be positioned so that there is no doubt as to what the label refers and so that it is clear that the indoor paint or varnish is ecolabelled.

More information on marketing can be found in "Regulations for the Nordic Ecolabelling of products" 22 June 2011 or later versions.

# Design of the Nordic Ecolabel

Design of the Nordic Ecolabel:




Each licence has a unique six-figured licence number that must be displayed along with the label.

More information on the design of the label can be found in "Regulations for the Nordic Ecolabelling of products" 22 June 2011 or later versions.

# Follow-up inspections

Nordic Ecolabelling may decide to check whether indoor paints and varnishes fulfil Nordic Ecolabel 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 indoor 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.

# How long is a licence valid?

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

The 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.

# New criteria

- Evaluate the possibility to include a requirement on the total weighted sum of environmentally hazardous substances as in for example chemical building products.
- Evaluate the limits on preservatives.

# Terms and definitions

For the purpose of this document, the following definitions shall apply (from article 2 in the EU Ecolabel criteria document):

(1) '**Paint**' means a pigmented coating material, supplied in a liquid paste or powder form, which, when applied to a substrate, forms an opaque film having protective, decorative or specific technical properties and after application dries to a solid, adherent and protective coating;

(2) '**Varnish'** means a clear coating material which, when applied to a substrate forms a solid transparent film having protective, decorative or specific technical properties and after application dries to a solid, adherent and protective coating;

(3) '**Decorative paints and varnishes'** means paints and varnishes that are applied in-situ to buildings, their trim and fittings, for decorative and protective purposes;

(4) **'Lasure'** means coatings producing a transparent or semi-transparent film for decoration and protection of wood against weathering, which enables maintenance to be carried out easily;

(5) '**Tinting system'** means a method for preparing coloured paints by mixing a 'base' with coloured tints;

(6) '**Masonry coating'** means a coating that produces a decorative and protective film for use on concrete, paintable brickwork, blockwork, rendering, calcium silicate board or fibre-reinforced cement;

(7) '**Binding primers'** means coatings designed to stabilise loose substrate particles or impact hydrophobic properties;

(8) **'UV curable paint system**' means the hardening of coating materials by exposure to artificial ultra-violet radiation;

(9) '**Powder coating**' means protective or decorative coating formed by the application of a coating powder to a substrate and fusion to give a continuous film;

(10) '**In-can preservatives'** are products used for the preservation of manufactured products during storage by the control of microbial deterioration to ensure their shelf life;

(11) **'Dry-film preser**vatives' are 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;

(12) **'Anti-skinning substances'** are additives that are added to the coating materials to prevent skinning during production or storage of the coating material;

(13) '**Volatile organic compounds' (VOC)** means 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 Tetradecane ($C_{14}H_{30}$) for non-polar systems or Diethyl adipate ($C_{10}H_{18}O_4$) for polar systems;

(14) **'Semi volatile organic compounds' (SVOCs)** means any organic compound having a boiling point of greater than 250 °C and which, in a capillary column (1) are eluting with a retention range between n-Tetradecane ($C_{14}H_{30}$) and n-Docosane ($C_{22}H_{46}$) for non-polar systems and diethyl adipate ($_{C10H18O4}$) and methyl palmitate ($C_{17}H_{34}O_2$) for polar systems;

(15) '**White and light coloured' paints** are those with a tri-stimulus (Y-value) > 70%;

(16) '**Gloss paints'** are those which at an angle of incidence of 60° show a reflectance of ≥ 60;

(17) **'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;

(18) '**Matt paints'** are those which at an angle of incidence of 85° show a reflectance of < 10;

(19) '**Dead matt paints'** are those which at an angle of incidence of 85° show a reflectance of < 5;

(20) '**Transparent'** and **'semi-transparent'** means a film with a contrast ratio of < 98% at 120µ wet film thickness;

(21) '**Opaque'** means a film with a contrast ratio of > 98% at 120µ wet film thickness.

**Additional definitions**

**High humidity areas** are here considered areas such as kitchens, bathroom, laundry rooms and other wet rooms where the humidity on a regular basis is a lot higher than in the rest of the indoor environment.

# Appendix 1 Declaration from the manufacturer of the indoor paint or varnish

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

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

Product name: _____

Product type/subcategory (e.g. floor paint, wall paint, primer, varnish):

_____

*The term constituent substance refers to all substances in the product, including additives in the ingredients (such as preservatives and stabilizers) but does not include impurities from primary production. Impurity refers to residues from primary production which may be found in the finished product at concentrations below 100 ppm (0.0100% by weight, 100 mg/kg), but not substances that have been added to a raw material or the product actively and for a particular purpose, irrespective of quantity.*

*Impurities of over 1.0% concentration in the primary product are, however, regarded as constituent substances. Substances known to be degradation products of the constituent substances are also themselves considered to be constituent substances.*

| | **Yes** | **No** |
|---|---|---|
| **O3: Does the product contain Titanium Dioxide pigment:** | ☐ | ☐ |
| **O8: Does the product contain:** | | |
| Volatile organic compounds (VOC) | ☐ | ☐ |
| Semi-volatile organic compounds (SVOC) | ☐ | ☐ |
| **O9: Does the product contain substances classified with any of the hazard phrases below?** | | |
| Acute Tox category 1-3:<br>H300, H301, H310, H311, H330, H331, H304 or EUH070 | ☐ | ☐ |
| Specific target organ toxicity (STOT) with single and repeated exposure<br>H370 STOT SE 1<br>H371 STOT SE 2<br>H372 STOT RE 1<br>H373 STOT RE 2 | ☐ | ☐ |
| Respiratory and skin sensitization category 1/1A/1B: | | |
| H317 | ☐ | ☐ |
| H334 | ☐ | ☐ |

| | Yes | No |
|---|---|---|
| **O10: Does the product contain any substances classified as carcinogenic, mutagenic or toxic for reproduction or combinations of them?** | ☐ | ☐ |

H340 – May cause genetic defects, hazard category 1A and 1B
H341 – May cause genetic defects, hazard category 2
H350 – Carcinogenic, hazard category 1A and 1B
H350i - May cause cancer by inhalation
H351 – Carcinogenic, hazard category 2
H360F May damage fertility, hazard category 1A and 1B
H361f Suspected of damaging fertility, hazard category 2
H360D May damage the unborn child, hazard category 1A and 1B
H361d Suspected of damaging the unborn child, hazard category 2
H360FD May damage fertility. May damage the unborn child, hazard category 1A and 1B
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child, hazard category 2
H360Fd May damage fertility. Suspected of damaging the unborn child, hazard category 1A and 1B
H362 May cause harm to breast fed children, hazard category 2
H360Df May damage the unborn child. Suspected of damaging fertility, hazard category 1A and 1B

| | | |
|---|---|---|
| **O11: Does the raw material contain any substances classified as harmful to the environment with the following risk phrases or combinations of them?** | | |
| Hazardous to the environment categories 1-4: | ☐ | ☐ |

H400 – Very toxic to aquatic life
H410 – Very toxic to aquatic life with long-lasting effects
H411 – Toxic to aquatic life with long-lasting effects
H412 – Harmful to aquatic life with long-lasting effects
H413 - May cause long-lasting effects to aquatic life

| | | |
|---|---|---|
| Hazardous to the ozone layer:<br>EUH059 Hazardous to the ozone layer | ☐ | ☐ |

**O13: Does the product contain any of the following substances?**

| | | |
|---|---|---|
| • Substances on the candidate list (The Candidate List can be found on the ECHA website at: http://echa.europa.eu/candidate-list-table) | ☐ | ☐ |
| • Substances evaluated by EU as PBT (Persistent, bioaccumulable and toxic) or vPvB (very persistent and very bioaccumulable), in accordance with the criteria in appendix XIII in REACH. | ☐ | ☐ |
| • Substances considered to be potential endocrine disruptors in category 1 or 2 on the EU's priority list of substances that are to be investigated further for endocrine disruptive effects. The list can be read in its entirety at http://ec.europa.eu/environment/chemicals/endocrine/strategy/being_en.htm | ☐ | ☐ |
| **O14: Does the raw material contain any preservatives?** | ☐ | ☐ |

If yes, state log Kow/BCF or E-number: _____

| | | |
|---|---|---|
| Is the preservative authorized by Directive 98/8/EC of the European Parliament and of the Council and Regulation (EU) No 528/2012? | ☐ | ☐ |
| Does any of the raw material contain isothiazolinone compounds and/or IPBC? | ☐ | ☐ |

| | Yes | No |
|---|---|---|
| **O15: Does the product contain APEOs – alkylphenol ethoxylates or alkylphenol derivatives (substances that release alkylphenols on degradation)?** | ☐ | ☐ |
| **O16: Does the product contain perfluorinated substances or polyperfluorinated alkylated substances (PFAS)?** | ☐ | ☐ |
| **O17-O18: Does the product contain any of the following metals cadmium, lead, chromium$^{VI}$, mercury, arsenic, barium, selenium, antimony or cobalt?** | ☐ | ☐ |
| **O19: Does the product contain any of the following phthalates:**<br>• DEHP (Bis-(2-ethylhexyl)-phthalate)<br>• BBP (Butylbenzylphthalate)<br>• DBP (Dibutylphthalate)<br>• DMEP (Bis2-methoxyethyl) phthalate<br>• DIBP (Diisobutylphthalate)<br>• DIHP (Di-C6-8-branched alkyphthalates)<br>• DHNUP (Di-C7-11-branched alkylphthalates)<br>• DHP (Di-n-hexylphthalate)<br>• DNOP (di-n-octylphthalate)<br>• DINP (diisononylphthalate)<br>• DIDP(diisodecylphthalate)<br>• DPP (dipentylphtalate)<br>• DiPP (diisopentylphtalate)<br>• N-pentyl-isopentyl phatlate<br>• Bis(2-methoxyethyl)phthalate | ☐ | ☐ |
| **O20: Does the product contain formaldehyde?** | ☐ | ☐ |
| **O22: Does the product contain:**<br>Volatile aromatic hydrocarbons (VAH) or halogenated solvents | ☐ | ☐ |
| **O23: Does the product contain any nanomaterials according to the EU definition, 2011/696/EU, (including nanotitanium dioxide)?**<br>*Definition: 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.* | ☐ | ☐ |

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 substances classified as acute toxins or specific target organ toxins under requirement O9 also state the physical form of the raw material (powder, aerosol etc.). For nanoparticles, also state what type of particles, and for VOC/VAH also state the boiling point. Also state if the substance is present as an impurity or as an added substance:

_____

_____

_____

_____

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

| | |
|---|---|
| Place and date: | Company name/stamp: |
| Responsible person: | Signature of responsible person: |

# Appendix 2 Declaration from the manufacturer of the raw material/ingredient

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

This declaration is based on the knowledge we have at the time of the application, 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/Ingredient name:_____

Raw material's/ingredient's function: _____

*The term constituent substance refers to all substances in the product, including additives in the ingredients (such as preservatives and stabilisers) but does not include impurities from primary production. Impurity refers to residues from primary production which may be found in the finished product at concentrations below 100 ppm (0.0100% by weight, 100 mg/kg), but not substances that have been added to a raw material or the product actively and for a particular purpose, irrespective of quantity.*

*Impurities of over 1.0% concentration in the primary product are, however, regarded as constituent substances. Substances known to be degradation products of the constituent substances are also themselves considered to be constituent substances.*

| | **Yes** | **No** |
|---|---|---|
| **O3: Does the raw material contain Titanium Dioxide pigment:** | ☐ | ☐ |
| **O8: Does the raw material contain:** | | |
| Volatile organic compounds (VOC) | ☐ | ☐ |
| **O9: Does the raw material contain substances classified with any of the hazard phrases below?** | | |
| Acute Tox category 1-3:<br>H300, H301, H310, H311, H330, H331, H304 or EUH070 | ☐ | ☐ |
| Specific target organ toxicity (STOT) with single and repeated exposure<br>H370 STOT SE 1<br>H371 STOT SE 2<br>H372 STOT RE 1<br>H373 STOT RE 2 | ☐ | ☐ |
| Respiratory and skin sensitization category 1/1A/1B:<br>H317<br>H334 | ☐ | ☐ |

| | Yes | No |
|---|---|---|
| **O10: Does the raw material contain any substances classified as Carcinogenic, mutagenic or toxic for reproduction or combinations of them?** | ☐ | ☐ |

H340 – May cause genetic defects, hazard category 1A and 1B
H341 – May cause genetic defects, hazard category 2
H350 – Carcinogenic, hazard category 1A and 1B
H350i - May cause cancer by inhalation
H351 – Carcinogenic, hazard category 2
H360F May damage fertility, hazard category 1A and 1B
H361f Suspected of damaging fertility, hazard category 2
H360D May damage the unborn child, hazard category 1A and 1B
H361d Suspected of damaging the unborn child, hazard category 2
H360FD May damage fertility. May damage the unborn child, hazard category 1A and 1B
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child, hazard category 2
H360Fd May damage fertility. Suspected of damaging the unborn child, hazard category 1A and 1B
H362 May cause harm to breast fed children, hazard category 2
H360Df May damage the unborn child. Suspected of damaging fertility, hazard category 1A and 1B

| | | |
|---|---|---|
| **O11: Does the raw material contain any substances classified as harmful to the environment with the following risk phrases or combinations of them?** | | |
| Hazardous to the environment categories 1-4 | ☐ | ☐ |

H400 – Very toxic to aquatic life
H410 – Very toxic to aquatic life with long-lasting effects
H411 – Toxic to aquatic life with long-lasting effects
H412 – Harmful to aquatic life with long-lasting effects
H413 - May cause long-lasting effects to aquatic life

| | | |
|---|---|---|
| Hazardous to the ozone layer: | ☐ | ☐ |

EUH059 Hazardous to the ozone layer

**O13: Does the raw material contain any of the following substances?**

| | | |
|---|---|---|
| • Substances on the candidate list (The Candidate List can be found on the ECHA website at: http://echa.europa.eu/candidate-list-table) | ☐ | ☐ |
| • Substances evaluated by EU as PBT (Persistent, bioaccumulable and toxic) or vPvB (very persistent and very bioaccumulable), in accordance with the criteria in appendix XIII in REACH. | ☐ | ☐ |
| • Substances considered to be potential endocrine disruptors in category 1 or 2 on the EU's priority list of substances that are to be investigated further for endocrine disruptive effects. The list can be read in its entirety at http://ec.europa.eu/environment/chemicals/endocrine/strategy/being_en.htm | ☐ | ☐ |

| | | |
|---|---|---|
| **O14: Does the raw material contain any preservatives?** | ☐ | ☐ |

If yes, state log Kow/BCF or E-number: _____

| | | |
|---|---|---|
| Is the preservative authorized by Directive 98/8/EC of the European Parliament and of the Council and Regulation (EU) No 528/2012? | ☐ | ☐ |
| Does the raw material contain isothiazolinone compounds and/or IPBC? | ☐ | ☐ |

| | Yes | No |
|---|---|---|
| **O15: Does the raw material contain APEO – alkylphenol ethoxylates or alkylphenol derivatives (substances that release alkylphenols on degradation)?** | ☐ | ☐ |
| **O16: Does the raw material contain perfluorinated substances or polyperfluorinated alkylated substances (PFAS)?** | ☐ | ☐ |
| **O17-O18: Does the raw material contain any of the following metals cadmium, lead, chromiumVI, mercury, arsenic, barium, selenium, antimony or cobalt?** | ☐ | ☐ |
| **O19: Does the raw material contain any of the following phthalates:**<br>• DEHP (Bis-(2-ethylhexyl)-phthalate)<br>• BBP (Butylbenzylphthalate)<br>• DBP (Dibutylphthalate)<br>• DMEP (Bis2-methoxyethyl) phthalate<br>• DIBP (Diisobutylphthalate)<br>• DIHP (Di-C6-8-branched alkyphthalates)<br>• DHNUP (Di-C7-11-branched alkylphthalates)<br>• DHP (Di-n-hexylphthalate)<br>• DNOP (di-n-octylphthalate)<br>• DINP (diisononylphthalate),<br>• DIDP (diisodecylphthalate)<br>• DPP (dipentylphtalate)<br>• DiPP (diisopentylphtalate)<br>• N-pentyl-isopentyl phatlate<br>• Bis(2-methoxyethyl)phthalate | ☐ | ☐ |
| **O20: Does the raw material contain formaldehyde?** | ☐ | ☐ |
| **O21: Does the raw material contain rest monomer?** | ☐ | ☐ |
| **O22: Does the raw material contain:**<br>Volatile aromatic hydrocarbons (VAH) or halogenated solvents | ☐ | ☐ |
| **O23: Does the raw material contain any nanomaterials according to the EU definition, 2011/696/EU, (including nanotitanium dioxide)?**<br>*Definition: 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.* | ☐ | ☐ |

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 substances classified as acute toxins or specific target organ toxins under requirement O9 also state the physical form of the raw material (powder, aerosol etc.). For nanoparticles, also state what type of particles, and for VOC/VAH also state the boiling point. Also state if the substance is present as an impurity or as an added substance:

_____

_____

_____

_____

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

| | |
|---|---|
| Place and date: | Company name/stamp: |
| Responsible person: | Signature of responsible person: |

# Appendix 3 VOC and sVOC test method information (requirement O8)

Note that ISO 17895 has now been superseded by ISO 11890-2. This new standard should be used.

The ISO 11890-2 test method for VOCs has been specified in the requirement for use also to quantify SVOC content. In order to do this and improve reproducibility of test results between laboratories a number of modifications to the test procedure are suggested:

- Polar and non-polar columns: It is recommended to use in all cases a non-polar column, or a slightly polar column for the chromatography;
- Detector selection: Only a Flame Ionisation Detector is recommended to be used.
- Calibration: It is recommended as being based on toluene equivalent.
- Test conditions: The temperature conditions and retention time will need to be increased to reflect the marker compound range.

During the validity period of the criteria it is likely that ISO 11890-2 will be revised to also provide a test method for SVOC's. These modifications shall therefore be referred to as an interim guidance until the standard is revised, at which time it should be used as the sole reference point for SVOC testing.

# Appendix 4 Requirements on the analysis laboratory

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

The four quality test (O2 and O4-O7) the applicant's analysis laboratory/test procedure may be approved for analysis and testing 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.