Nordic Ecolabelling of

Indoor paints and varnishes

Version 3.0 • 25 May 2015 - 26 June 2015
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

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

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.

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.

Constituent substances/impurities

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% w/w, 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.

Preservatives

With the term preservatives is meant all preservatives and biocides, including in-can preservatives and dry-film preservatives.

More terms and definitions can be found under chapter "Terms and definitions" in the end of this document.

If a product has the Nordic Ecolabel for chemical building products see appendix 3 in the background document to find out what complimentary information that needs to be collected.

O1 Information about the product

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

- Describe the product and its application method and the way in which it fulfils the definition of a product that qualifies for a Nordic Ecolabel
- 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 constituent substances (see definition of constituent substances in Chapter 1). The description must include:
    - The chemical name
    - The trade name and CAS# of the ingredient
    - The function of each ingredient
    - Content in % peer ingredient 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 (as a single component, tinting system or part of a multi-component system) and what application method it is intended for.

✉ Formulation detailing complete composition with a specification of all constituent substances, as set out in Appendix 3.

O2 Classification of the products

The final product shall not be classified and labelled according to table 1 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 1 Classification of the product

Classification according to CLP Regulation 1272/2008	
Hazard class and category	**H-phrase**
Toxic to aquatic organisms Category acute 1 Chronic 1-4	H400, H410, H411, H412, H413
Hazardous to the ozone layer	H420
Acute toxicity Category 1-4	H300, H310, H330, H301, H311, H331, H302, H312, H332, H370, H372
Specific target organ toxicity (STOT) with single and repeated exposure STOT SE category 1-2 STOT RE category 1-2	H370, H371, H372, H373
Aspiration hazard Category 1	H304
Airway or skin sensitising 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 Skin corr. 1A/1B/C	H314
Carcinogenic Carc 1A/1B/2	H350, H350i, H351
Mutagenic Mut 1A/B/2	H340, H341
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362
Explosive Category 1.1-1.6	H200, H201, H202, H203, H204, H205
Oxidising	H240, H241, H242, H270, H271, H272
Highly flammable	H220, H221, H224, H242

Exemption

- *The risk phrase "Contains (name of sensitising substance), may cause an allergic reaction" is excepted if it is due to the content of preservatives. See also O5 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.

O3 Classification of constituent chemical substances

The product must not contain constituent substances that are classified or may degrade into substances that are classified according to table 2. Classification shall be according to CLP Regulation (No) 1272/2008.

Table 2 Classification of constituent substances

Classification according to CLP Regulation 1272/2008	
Hazard class and category	**H-phrase**
Carcinogenic Category Carc 1A/1B/2	H350, H350i, H351
Mutagenic Category Mut 1A/B/2	H340, H341
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362
Airway sensitising	H334
Acute toxicity Acute Tox 1-3	H300, H301, H310, H311, H330, H331
Specific target organ toxicity with repeated exposure STOT RE 1-2	H370, H371, H372, H373

Note that the manufacturer is responsible for correct classification.

Exemptions:

- Preservatives are exempted from the requirement of classification as acute toxic 1-3 (H300, H301, H310, H311, H330, H331) and specific target organ toxicity with repeated exposure (H370, H371, H372, H373) (further requirements concerning preservatives are stated in O5).
- Formaldehyde (CAS#: 50-00-0) as an impurity in newly produced polymers, maximum content of 10 ppm (0.0010% by weight) in the final product, see separate requirement O6.
- 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, see requirement O10 regarding constituent powder substances.
- Neutralizing agents are exempted from classifications with H311 and H331 up to maximum 0.50% by weight 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 in 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).

O4 Environmentally harmful substances

Constituent substances classified as environmentally harmful with risk phrases H410, H411and/or H412, according to CLP Regulation (No) 1272/2008, are limited in the product according to the following formula (calculation model taken from current classification rules, except that here the limit value is tougher):

$$M*100*H410 + 10*H411 + H412 \leq 2.5\%$$

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 linked to the substance's LC50 or EC50 value and biodegradable read in accordance with Table 3 below (from the CLP classification rules).

Table 3 Concentration limits and multiplying factors for substances classified as H410

Acute toxicity		**Chronic toxicity**		
L(E)C50 value (mg/l)	**M-factor**	**NOEC value (mg/l)**	**M-factor non readily biodegradable substances**	**M-factor readily biodegradable substances**
0,1 < L(E)C50 ≤ 1	1	0,01 < NOEC≤0,1	1	-
0,01 < L(E) C50 ≤ 0,1	10	0,001 < NOEC≤0,01	10	1
0,001 < L(E) C50 ≤ 0,01	100	0,0001 < NOEC≤0,001	100	10
0,0001 < L(E) C50 ≤ 0,001	1000	0,00001 < NOEC≤0,0001	1000	100
0,00001 < L(E) C50 ≤ 0,0001	10 000	0,000001 < NOEC≤0,00001	10 000	1000
Continues with factor 10 intervals		Continues with factor 10 intervals		

If information about a substance's harmfulness to the environment (in the form of data concerning toxicity and biodegradability or toxicity and bioaccumulation) is not available, the substance is treated as a worst case, i.e. 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, as long as the final product is not classified Hazardous to the aquatic environment H400, H410, H411, H412 and/or H413 (requirement O2). See requirement O5 for further requirements on preservatives.

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

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 ≥ 500, the substance is considered to be bioaccumulative. If there is no BCF for a substance, that substance is considered to be bioaccumulative if logKow ≥ 4 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.

The amounts of preservatives in the products must not exceed the limit values in Table 4a and 4b below:

Table 4a Concentration limits for preservatives in the final product.

Preservation type	**Concentration limit**
Preservatives totally (paints, varnishes, base paints etc.)	600 ppm (0,060% w/w)

Table 4b Specific restrictions on isothiazolinones in the final product.

Preservative	Concentration limit
Total amounts of isothiazolinones	500 ppm (0,0500% w/w)
2-methyl-2H-isothiazol-3-one (CAS# 2682-20-4) (MIT*)	100 ppm (0,0100% w/w)
5-Chloro-2-Methyl-2H-Isothiazol-3-one/2-Methyl-2HIsothiazol-3-one (3:1) (CAS#: 55965-84-9) (CMIT/MIT)	15 ppm (0,0015% w/w)

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

** Note that the shortening MI may also be used.*

For tinting systems a worst case calculation is done with the colour with most tinting paste and the base paint with highest content of preservative and isothiazolinone compounds.

✉ 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.

O6 Formaldehyde

Products must not contain actively added formaldehyde (CAS#: 50-00-0) or formaldehyde-releasing substances.

The level of free formaldehyde (from formaldehyde not intentionally added) in the end product must not exceed 10 ppm (0.001% by weight, 10 mg/kg)*.

The level of free formaldehyde must be measured for the final product. A calculation based on the contents of free formaldehyde in each raw material cannot be done.

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.

Formaldehyde is permitted as an impurity in newly produced polymers at a concentration of no more than 200 ppm (0.02% by weight)**, on condition that the content of free formaldehyde in the end product does not exceed 10 ppm (0.001% by weight, 10 mg/kg)*.

**Measured with the Merckoquant method (appendix 2 to RAL-UZ 102), EPA 8315A or other equivalent test method.*

***Measured with the VdL-RL 03-method "In-can concentration of formaldehyde determined by the acetyl-acetone method", EPA 8315A, the Merckoquant method (appendix 2 to RAL-UZ 102) or other equivalent test method.*

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

✉ Statement on the level in the product (if any) as measured using the Merckoquant method (see appendix 2 to RAL-UZ 102), EPA 8315A or other equivalent test method.

✉ Statement on the levels in newly produced polymers (if any) as measured using the Merckoquant method (see appendix 2 to RAL-UZ 102), EPA 8315A or other equivalent test method. The measurement can also been done according to the VdL-RL 03 method ("Concentration of free formaldehyde determined using the acetyl-acetone method", according to which the measured concentration cannot be above 100 ppm). The test laboratory must fulfil the requirements in appendix 5.

O7 Residual monomers in polymers

For each polymers the quantity of residual monomers* and its classification have to be stated and may be no more than 100 ppm of each classification in table 5.

Appendix 2 can be used.

In the final product the total level of residual monomers must be no more than 500 ppm* total for the sum of the classifications in table 5.

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

Appendix 1 can be used.

Table 5 Classification of constituent substances

Classification according to CLP Regulation 1272/2008	
Hazard class and category	**H-phrase**
Carcinogenic Category Carc 1A/1B/2	H350, H350i, H351
Mutagenic Category Mut 1A/B/2	H340, H341
Toxic for reproduction Repr 1A/1B/2	H360, H361
Acute toxicity Acute Tox 1-3	H300, H301, H310, H311, H330, H331
Specific target organ toxicity with repeated exposure STOT SE 1	H370, H372
Respiratory and skin sensitisation Category 1/1A/1B	H317, H334

The classifications is in accordance with the prevailing CLP Regulation EC (No) 1272/2008.

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

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

☒ Calculation of the total amount of residual monomers with the above classifications in the final product.

O8 Heavy metals

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

- Cadmium
- Lead
- Chromium VI
- Mercury
- Arsenic
- Barium (with the exception of barium sulphate, and other equally insoluble barium compounds)
- Selenium
- Antimony*

Traces of the above mentioned metals from impurities can be included up to 100 ppm (100 mg/kg, 0.01% by weight) per single metal in the raw material.

** An exception is made for antimony in pigments contained in a TiO_2 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 each raw material.

✉ For pigment that contains antimony integrated into a TiO_2 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).

O9 Titanium dioxide

If the product contains more than 3.0% by weight titanium dioxide (CAS#: 13463-67-7), emissions from production of the titanium dioxide must not exceed the value stated below under the sulphate process and the chloride process.

Sulphate process:
SO_X expressed as SO_2: 7.0 kg/tonne TiO_2

Sulphate waste: 500 kg/tonne TiO_2

Chloride process:
When using natural ore: 103 kg chloride waste/tonne TiO_2

When using synthetic ore: 179 kg chloride waste/tonne TiO_2

When using titanium ore: 329 kg chloride waste/tonne TiO_2

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

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

✉ If the product contains titanium dioxide, a description from the titanium dioxide-producer and calculation is to be submitted, clearly showing that the requirement is fulfilled.

O10 Constituent powdered substances

Substances 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 substances are handled during the production process.

O11 Nanoparticles

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

** 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-TiO2) 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).*

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

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

O12 Other substances excluded from use

The product must not contain constituent substances that are:

- Substances on the Candidate List*.
- 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. See link: http://ec.europa.eu/environment/chemicals/endocrine/strategy/being_en.htm
- Organotin compounds
- Phthalates
- APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation).
- Halogenated organic substances, including perfluorinated substances and polyperfluorinated alkylated substances (PFAS)**. Exemptions of preservatives that fulfil O5 and paint pigments that meet the EU's requirements concerning colourants in food packaging under Resolution AP (89) point 2.5.
- 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

** The Candidate List can be found on the ECHA website at: http://echa.europa.eu/candidate-list-table*

*** 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 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.

O13 Content of Volatile (VOC) and Semi-volatile Organic Compounds (SVOC)

The maximum content of Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs) shall not exceed the limits given in Table 6.

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.

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 content shall be determined by using the methods given in ISO 11890-2.

The SVOC content shall be determined using the method given in ISO 11890-2. (NOTE: Nordic Ecolabel awaits EU Ecolabel regarding modifications and harmonised test parameters for ISO 11890-2, which is scheduled to be finish before June 2015.).

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 ($C_{14}H_{30}$) for non-polar systems or diethyl adipate ($C_{10}H_{18}O_4$) 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 ($C_{14}H_{30}$) and n-docosane ($C_{22}H_{46}$) for non-polar systems and diethyl adipate ($C_{10}H_{18}O_4$) and methyl palmitate ($C_{17}H_{34}O_2$) 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 6. 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

✉ The applicant shall provide for the VOC content of the ready to use product a test report using the method given in ISO 11890-2 that demonstrates compliance.

✉ 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 that demonstrates compliance.. The test should be carried out as specified in appendix 4 (NOTE: Awaits EU revision of ISO 11890-2) in this criteria document

✉ The test laboratory must fulfil the requirements in appendix 5.

✉ Declaration in line with Appendices 1.

O14 Volatile Aromatic Hydrocarbons - VAH

Volatile aromatic hydrocarbons (VAH) must not be actively added to the product, but may occur as residues or impurities to a total 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).

2 Quality requirements

O15 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 m^2 of dry film equal to or lower than that described in Table 7a, 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 7b, 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 O16*

Table 7a 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 7b. Limits for white pigment content for products not covered by table 7a

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.

O16 Minimum requirements for claims of Wet Scrub Resistance

All 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 5.

O17 Spreading rate

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 8 below.

Table 8. 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 or having specific properties** With opacity	6 m^2 per litre of product 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)	Not relevant	1 m^2 per kg of product
Opaque elastomeric paints	Opaque	4 m^2 per litre of product

**Tinting systems*

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

- 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 5.

O18 Resistance to water

All floor 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 5.

O19 Adhesion

- Pigmented masonry primers for interior uses for which claims are made that they protect or bind the surface 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 5.

O20 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 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 5.

3 Consumer information, packaging and take-back systems

O21 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, g/m or equivalent).
- Recommended preventive safety measures for users, such as safety equipment and ventilation (particularly when working in enclosed spaces or similar).
- 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.
- Recommendations on the disposal of residual product and packaging.

✉ Label, product sheet or equivalent and description of how the information accompanies each product.

O22 Packaging

- Packaging must be re-sealable, unless documentation can be provided that the entire product will always be used in one go.
- The type of plastic material must be documented by the manufacturer. Labels and product packaging must not contain halogenated plastic.
- Packaging and any surface coating must not contain halogens.
- Metal packaging must not be used for packs of less than 1 litre, unless this is justified by special health and environmental arguments.

✉ Photo of the packaging showing that the packaging can be resealed.

✉ Description of the packaging type and size.

✉ Descriptions of whether the entire product is always used in one go.

✉ Declaration from the packaging manufacturer that no halogenated plastics have been used or product data sheets clearly showing that the requirement is met by all parts of the packaging, including lids, caps, etc.

✉ Declaration from the packaging manufacturer that the packaging has not been surface coated, or that the surface coating does not contain halogens.

✉ Declaration from the label producer that no halogenated plastics have been used.

O23 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. Appendices 1 can be used.

4 Quality management 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.

O24 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.

O25 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.

O26 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.

O27 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.

O28 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.

O29 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.

O30 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 eight-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 the indoor paint or varnishes fulfils 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 varnishes 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 indoor paint or varnishes 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 limits on preservatives.
- Evaluate the limit of constituent substances classified as environmentally harmful.

Terms and definitions

For the purpose of this document, the following definitions shall apply (mainly 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) '**Preservatives'** means all preservatives and biocides, including in-can preservatives and dry-film preservatives.

(11) **'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;

(12)'**Dry-film preservatives**' 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;

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

(14) '**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;

(15) '**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 ($C_{10}H_{18}O_4$) and methyl palmitate ($C_{17}H_{34}O_2$) for polar systems;

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

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

(18) '**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;

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

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

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

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

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 product contain substances classified with any of the hazard phrases below?		
H350 – Carcinogenic, hazard category 1A and 1B H350i - May cause cancer by inhalation H351 – Carcinogenic, hazard category 2	☐	☐
H340 – May cause genetic defects, hazard category 1A and 1B H341 – May cause genetic defects, hazard category 2	☐	☐
H360 – Toxic for reproduction, hazard category 1A and 1B H361 – Toxic for reproduction, hazard category 2 H362 – Toxic for reproduction – effects on or through breastfeeding (supplementary category)	☐	☐
H334 – Airway sensitising category 1/1A/B	☐	☐
Acute Tox 1-3: H300, H301, H310, H311, H330, H331	☐	☐
STOT SE 1 H370 STOT SE 2 H371 STOT RE 1 H372 STOT RE 2 H373	☐	☐

If yes, please for each specify which substance, CAS-no., function (if appropriate), classification and amount in ppm:

_____

_____

	Yes	No
O4: Does the product contain any substances classified as harmful to the environment with the following risk phrases or combinations of them?	☐	☐

H410 (R50/53) – Aquatic Chronic 1
H411 (R51/53) – Aquatic Chronic 2
H412 (R52/53) – Aquatic Chronic 3

If yes, please for each classification specify which substance, if substance is a preservative and amount in ppm:

_____

_____

	Yes	No
O4: Does the product fulfill the requirement regarding maximum content of substances classified as harmful to the environment and is calculation showing this attached?	☐	☐

	Yes	No
O5: Does the product contain any preservatives?	☐	☐

If yes, please state:
Is the preservativ authorized by Directive 98/8/EC of the European Parliament and of the Council and Regulation (EU) No 528/2012:

_____

_____

Specify each preservative, CAS-no. and amount in ppm for each:

_____

_____

BCF or logKow value:

	Yes	No
O5: Does the product fulfill the requriment regarding maximum contens of preservatives, total isothiazolinones, MIT and CMIT/MIT and is calculation showing this attaced?	☐	☐

	Yes	No
O6: Does the product contain formaldehyde?	☐	☐

If yes, please state the total level in ppm and test method used:

_____

_____

	Yes	No
O6: Does the product contain actively added formaldehyde and/or from formaldehyde-releasing substances?	☐	☐

Underline either actively added formaldehyde, from formaldehyde-releasing substances or both as appropriate.

O7: Does the product contain residual monomer classified with any of these hazard phrases H350, H350i, H351, H340, H341, H360, H361, H300, H301, H310, H311, H330, H331, H370, H372, H317 and/or H334?

Yes ☐ **No** ☐

If yes, please state the total level for the sum of the above classifications in ppm:

_____

_____

O8: Does the product contain any heavy metals (cadmium, lead, chromium^{VI}, mercury, arsenic, barium, selenium, antimony)?

Yes ☐ **No** ☐

- 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)*.

If yes, please state the heavy metals and the amount in ppm for each:

_____

_____

*For antimony in pigments that are excepted by the above terms, please attach test according to Test method DIN 53770-1 or equivalent, showing that terms are fulfilled.

O9: Does the product contain titanium dioxide?

Yes ☐ **No** ☐

If yes, please state amount in %:

_____

_____

If the product contains more than 3.0% by weight titanium dioxide, a description from the titanium dioxide producer and calculation is to be submitted, clearly showing that the requirement is fulfilled.

O11: Does the product contain any nanomaterials according to the EU definition, 2011/696/EU, (including nanotitanium dioxide)?

Yes ☐ **No** ☐

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.

O12: Does the product contains any of the following substances?

Yes **No**

- 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

- Organotin compounds ☐ ☐
- Phthalates ☐ ☐
- APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation). ☐ ☐
- Halogenated organic substances ☐ ☐

Preservatives that fulfil O5 and paint pigments that meet the EU's requirements concerning colourants in food packaging under Resolution AP (89) point 2.5 are exempted.

- 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.

- Fragrances ☐ ☐

O13: VOC and SVOC

Please state:	**Yes**	**No**
Product description (with subcategory denotation according to Directive 2004/42/EC):		
Tinted paints and varnishes	☐	☐
Interior matt walls and ceilings (Gloss < 25@60°)	☐	☐
Interior glossy walls and ceilings (Gloss > 25@60°)	☐	☐
Interior/Exterior trim and cladding paints for wood and metal	☐	☐
Interior trim varnishes and woodstains, including opaque woodstains	☐	☐
Interior and Exterior minimal build woodstains	☐	☐
Primers	☐	☐
Binding primers	☐	☐
One-pack performance coatings	☐	☐
Two-pack reactive performance coatings for specific end use such as floors	☐	☐
Decorative effect coatings	☐	☐

Please state the VOC content in g/l including water of the ready to use product (by method ISO 11890-2)**:

Please state the SVOC content in g/l including water of the ready to use product (by method ISO 11890-2)**:

** Attach ISO 11890-2 test report.

	Yes	**No**
O14: Does the product contains any VAH?	☐	☐

If yes, please state amount in ppm:

_____

_____

O23: Take-back systems	**Yes**	**No**

Are any of these systems used:

PYR (Finland)	☐	☐
Grønt Punkt (Norway)	☐	☐
FTi AB (formerly REPA) (Sweden)	☐	☐

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 licence for the Nordic Ecolabelling of indoor paint and varnishes.

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.

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 substances classified with any of the hazard phrases below?		
H350 – Carcinogenic, hazard category 1A and 1B H350i - May cause cancer by inhalation H351 – Carcinogenic, hazard category 2	☐	☐
H340 – May cause genetic defects, hazard category 1A and 1B H341 – May cause genetic defects, hazard category 2	☐	☐
H360 – Toxic for reproduction, hazard category 1A and 1B H361 – Toxic for reproduction, hazard category 2 H362 – Toxic for reproduction – effects on or through breastfeeding (supplementary category)	☐	☐
H334 – Airway sensitising category 1/1A/B	☐	☐
Acute Tox 1-3: H300, H301, H310, H311, H330, H331	☐	☐
STOT SE 1 H370 STOT SE 2 H371 STOT RE 1 H372 STOT RE 2 H373	☐	☐

If yes, please for each specify which substance, CAS-no., function (if appropriate), classification and amount in ppm:

	Yes	No
O4: Does the raw material contain any substances classified as harmful to the environment with the following risk phrases or combinations of them?	☐	☐
H410 (R50/53) – Aquatic Chronic 1 H411 (R51/53) – Aquatic Chronic 2 H412 (R52/53) – Aquatic Chronic 3		

If yes, please for each classification specify which substance, if substance is a preservative and amount in ppm:

	Yes	No
O5: Does the raw material contain any preservatives?	☐	☐

If yes, please state:
Is the preservativ authorized by Directive 98/8/EC of the European Parliament and of the Council and Regulation (EU) No 528/2012:

Specify each preservative, CAS-no. and amount in ppm for each:

BCF or logKow value:

	Yes	No
O6: Does the raw material contain formaldehyde?	☐	☐

If yes, please state:
Specify which substance and amount in ppm:

If the formaldehyde is from formaldehyde-releasing substances:

	Yes	No
O7: Does the raw material contain residual monomer classified with any of the hazard phrases below?		
H350 – Carcinogenic, hazard category 1A and 1B H350i - May cause cancer by inhalation H351 – Carcinogenic, hazard category 2	☐	☐
H340 – May cause genetic defects, hazard category 1A and 1B H341 – May cause genetic defects, hazard category 2	☐	☐
H360 – Toxic for reproduction, hazard category 1A and 1B H361 – Toxic for reproduction, hazard category 2	☐	☐
Acute Tox 1-3: H300, H301, H310, H311, H330, H331	☐	☐
STOT SE 1 H370 STOT RE 1 H372	☐	☐
H317 – Skin sensitisation H334 – Respiratory sensitisation	☐	☐

If yes, please for each classification state the amount in ppm:

	Yes	No
O8: Does the raw material contain any heavy metals (cadmium, lead, chromium^{VI}, mercury, arsenic, barium, selenium, antimony)?	☐	☐

- 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)*.

If yes, please state the heavy metals and the amount in ppm for each:

*For antimony in pigments that are excepted by the above terms, please attach test according to Test method DIN 53770-1 or equivalent, showing that terms are fulfilled.

	Yes	No
O9: Does the raw material contain titanium dioxide?	☐	☐

If yes, please state amount in ppm:

	Yes	No
O11: Does the raw material contain any nanomaterials according to the EU definition, 2011/696/EU, (including nanotitanium dioxide)?	☐	☐

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.

O12: Does the raw material contains any of the following substances?	Yes	No
• 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	☐	☐
• Organotin compounds	☐	☐
• Phthalates	☐	☐
• APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation).	☐	☐
• Halogenated organic substances	☐	☐
- Preservatives that fulfil O5 and paint pigments that meet the EU's requirements concerning colourants in food packaging under Resolution AP (89) point 2.5 are exempted.		
• 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.		
• Fragrances	☐	☐

	Yes	No
O14: Does the raw material contains any VAH?	☐	☐

If yes, please state amount in ppm:

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

Appendix 3 Example of recipe structure

Example of recipe structure to be used when applying for the Nordic Ecolabel indoor paint and varnishes

Paint or varnish Name: Xxx					Paint or varnished Formula nr. Xxx					
Sub-stance refe-rence nr.	Com-pany name	Pro-duct name:	Function in the paint/va rnish	CAS nr.	Substance content	% in sub-stance	CAS nr.	Classifi-cation peer compo-nent	Substance content in the paint/varn ish	Content % peer compo-nent in product
1…	-	Water	Solvent	7732-18-5	Water	100,000	7732-18-5	-	14,97	14,9700
2…	Xxx	Xxx	pH regu-lator	1310-73-2	Sodium hydroxide	95,000	1310-73-2	H314	9	8,5500
					Water	5,000	7732-18-5	-		0,0000
3…	Xxx	Xxx	Disper-sing agents	-	Acrylic Polymers	30,000	-	-	7	2,1000
					Water	69,995	7732-18-5	-		0,0000
					1,2-Benzisothiazol-3(2H)-one	0,005	2634-33-5	H314, H317, H412		0,0000
4…	Xxx	Xxx	Pigment	xxxx-xx-x	Titanium dioxide	96,000	13463-67-7	-	20	19,2000
					Aluminium hydroxide	4,000	21645-51-2	-		0,0000
5…	Xxx	Xxx	Light stabi-lizer	-	Xxx	xx,xx	xxxx-xx-x	H318	5	-
					Xxx	xx,xx	xxxx-xx-x	-		-
6…	Xxx	Xxx	Thicken er/ rheology modifier	xxxx-xx-x	Acrylic emulsion	30,000	xxxx-xx-x	-	10	3,0000
					Xxx	xx,xx	xxxx-xx-x	-		-
					Xxx	xx,xx	xxxx-xx-x	-		-
7…	Xxx	Xxx	Binder	xxxx-xx-x	Xxx	xx,xx	xxxx-xx-x	-	34	-
					Xxx	xx,xx	xxxx-xx-x	-		-
					Xxx	xx,xx	xxxx-xx-x	-		-
8…	Xxx	Xxx	Biocide/ preserva tives	xxxx-xx-x	1,2-Benzisothiazol-3(2H)-one	5,000	2634-33-5	H314, H317, H412	0,03	0,0015
					Xxx	xx,xx	xxxx-xx-x	H302, H335, H318, H400		-
					Xxx	xx,xx	xxxx-xx-x	H302, H318, H317, H400		-

Appendix 4 VOC and SVOC test method information (requirement O13)

Note that ISO 17895 has now been superseded by ISO 11890-2. This new standard shall 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 5 Requirements on the analysis laboratory

For tests in requirements O6 and O13 the analysis laboratory used shall be certified according to standard EN ISO 17025 or have official GLP status.

For tests in requirements O16-O20 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.