

Nordic Ecolabelling of
Chemical building products



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

Addresses

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

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What is a Nordic Swan Ecolabelled Chemical building product?

A Nordic Swan Ecolabelled chemical building product is amongst the least environmentally harmful within its product group. The Nordic Swan Ecolabel shows that the product fulfils strict environmental and health requirements.

For chemical building products less impact on the environment and health since chemicals labelled as environmentally harmful or with health-related classifications are limited in combination with less pollution to air and water.

Nordic Swan Ecolabelled chemical building products:

- Contain low levels of substances that are harmful to health and the environment
- Have low emissions to air and water
- Are effective and meet tough performance standards

Why choose the Nordic Swan Ecolabel?

- 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 Swan 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.
- The Nordic Swan Ecolabel not only covers environmental issues but also quality requirements, since the environment and quality often go hand in hand. This means that a Nordic Swan Ecolabel licence can also be seen as a mark of quality.

What can carry the Nordic Swan Ecolabel?

Chemical building products refers to liquid or non-hardened products for use in building work both indoors and outdoors, and on different substrates. Until further notice, the product group covers the following products for manual and machine application:

- Adhesives, including multipurpose adhesive/construction adhesive *
- Sealants
- Fillers/screed (including primers to these)
- Outdoor paints and varnishes** (including primers to these)
- Paints and varnishes only for industrial application***
- Impregnating agents for tiles, stone, and concrete****
- Anti-corrosion paint for industry and infrastructure*****

Here adhesives refer to products such as wood adhesive, grab adhesive, tile adhesive, wallpaper paste and the like. The product group does not include adhesives for industrial use for purposes such as furniture production or panelling. In version 2.12, the product group was, however, expanded with multipurpose adhesives / construction adhesives intended for industrial use.

*** Outdoor paints and varnishes cover products that are applied manually.*

**** Industrial paints and varnishes refers here to paints that are used and manufactured for industrial applications such as painting furniture / panels for indoor and outdoor usage. Criteria already exist for the Nordic Ecolabelling of indoor paints and varnishes, and thus these cannot be ecolabelled under the criteria below.*

**** Impregnating agents for tiles, stone and concrete refer to products that have special technical properties that protect the material.*

****** Anti-corrosion paint for industry and infrastructure refers to paints containing anticorrosive pigments.*

Note that tinting pastes / colourants can be Nordic Ecolabelled only if they are part of a Nordic Ecolabelled tinting system. Calculation of the content is then done for the complete tinting system (tinting paste, base paint, and hardener).

Solid building products such as insulation materials and plastic products, pure concrete, etc. cannot be Nordic Swan Ecolabelled under these criteria. However, Nordic Ecolabelling criteria exist for, for example small houses, windows and external doors, floors, furniture, and fitments (including internal doors and stairs), building panels and sustainable wood/ durable wood-alternative to conventionally impregnated wood.

How to apply

Application and costs

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

What is required?

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

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

The text describes how the applicant shall demonstrate fulfilment of each requirement. There are also icons in the text to make this clearer. These icons are:

☒ Enclose

🔍 The requirement checked on site.

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

License validity

The ecolabel licence is valid providing the criteria are fulfilled and until the criteria expire. The validity period of the criteria may be extended or adjusted, in which case the licence is automatically extended and the licensee informed.

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

On-site inspection

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

Queries

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

1 General 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. 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.

01 Information about the product

The applicant must give detailed information on the chemical building 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 Swan Ecolabel.
- If the product forms part of a component system that jointly ensures the functioning of the product, the entire product must be Nordic Swan Ecolabelled and not simply parts of it (e.g. 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 no. of the ingredients
 - The function of each ingredient
 - The boiling point (for constituent organic substances, where relevant)

- Description of the product in accordance with the definition of what may be Nordic Swan Ecolabelled.
- Description of how the product is to be used to achieve functionality (as a single component 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 for example set out in Appendix 3.

02 Classification of the product

The product must not be classified or labelled according to table 1 below. The classification must be in line with current legislation (CLP Regulation (EC) No 1272/2008).

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*
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

* Outdoor paints and varnishes are exempted from this where they are classified as H317 or require the label if this is due to the content of preservatives used as film preservatives if they according to O5 perform the weathering test for growth, see further requirements on preservatives in O5.

** Outdoor paints classified as H412 are exempted from this requirement if the classification is due to preservatives/biocides.

*** Exemption from this risk phrase if the content is due to zinc or zinc compounds in two-component products in anti-corrosion paints for industry and infrastructure.

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 exempted preservatives as a declaration of the concentration of the preservative and if it has been added as an or film-preservative.

03 Classification of constituent chemical substances

The product must not contain chemical substances that are or may degrade into substances that are classified as carcinogenic (Carc), mutagenic (Mut), toxic for reproduction (Rep), airway sensitising, acute toxic or specific target organ toxicity with repeated exposure 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
Specific target organ toxicity with repeated exposure STOT SE 1 STOT RE 1	H370, H372

Note that the manufacturer is responsible for correct classification.

Exemptions:

- Vinyl acetate (CAS#: 108-05-04) as residual monomer in polymers (limited to max 1000 ppm in requirement O7).
- Preservatives that are used to preserve the product are exempted from the requirement of classification as specific target organ toxicity with repeated exposure, category 1 (further requirements concerning preservatives are stated in O5).
- Formaldehyde (CAS#: 50-00-0) as an impurity in newly produced polymers, see separate requirement O6.
- Newly produced sealants and construction adhesives* may contain methanol (CAS#: 67-56-1) to a maximum level of 0.10%.
- Respirable crystalline silica/quartz is exempted from the classification as STOT RE 1 with H372 and H350i. Respirable crystalline silica can be up to 1% in the raw material, see requirement O10 regarding constituent powder substances.
- Bisphenol A (CAS#: 67-56-1) up to 5ppm in epoxy paints are exempted.
- Glyoxal (CAS#: 107-22-2) up to maximum 100 ppm in the final product if the pH is above 8 in the final product.
- The dispersant trimethylol propane (CAS #: 77-99-6) self-classified as H361 in up to 1% in pigments.
- Titanium dioxide (CAS#: 13463-67-7) which is added in powder form during raw material production (additional requirements for titanium dioxide is stated in O9).

**Construction adhesives refers to adhesives used on non-absorbing substrates, such as metals and glazed surfaces. Construction adhesives are used on smaller surfaces, like for example mounting mirrors.*

- 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. If methanol is included in sealants it must be documented with test results.
- Safety data sheet for all constituent substances in line with Annex II to REACH (Regulation (EC) No 1907/2006).

04 Environmentally harmful substances

Constituent chemical substances classified as environmentally harmful with risk phrases H410, H411, 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):

$$M \cdot 100 \cdot H410 + 10 \cdot H411 + H412 \leq 11\%$$

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, 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 degradability 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.

Preservatives are exempted from the requirement. Requirements O2 and O5 must still be fulfilled.

Zinc and zinc compounds in two-component products are exempted from the requirement in anti-corrosion paint for industry and infrastructure.

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

05 Preservatives

- 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 total levels of isothiazolinone compounds, iodopropynyl butylcarbamate (IPBC) and 3:1 blends of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (here called CMIT+MIT (3:1)) must not exceed the limit values in Table 4 below:

Table 4. Restrictions on preservatives

The highest amount allowed of each preservative/combination of preservatives are limited according to the following:						
	Isothiazolinone compounds	Iodopropynyl butylcarbamate (IPBC)	IPBC + isothiazolinone	CMIT+MIT (3:1) 5-chloro-2-methyl-2H-isothiazol-3-one (CAS 26172-55-4) and 2-methyl-2H-isothiazol-3-one (CAS 2682-20-4) in blends with ratio 3:1	MIT 2-methyl-2H-isothiazol-3-one (CAS 2682-20-4)	Total amount of preservatives
Adhesives and sealants, incl. multipurpose adhesives/construction adhesives	300 ppm (0.03% by weight, 300 mg/kg)	2000 ppm (0.2% by weight, 2000 mg/kg)	2100 ppm (0.21% by weight, 2100 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	2700 ppm (0,2700 by weight, 2700 mg/kg)
Fillers	500 ppm (0.05% by weight, 500 mg/kg)	2000 ppm (0.2% by weight, 2000 mg/kg)	2500 ppm (0.25% by weight, 2500 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	3100 ppm (0,3100 by weight, 3100 mg/kg)
Outdoor paints and varnishes	1500 ppm (0.15% by weight, 1500 mg/kg)*	4500 ppm (0.45% by weight, 4500 mg/kg)**	5000 ppm (0.50% by weight, 5000 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	6700 ppm (0,6700 by weight, 6700 mg/kg)
Industrial paints and varnishes for indoor products	500 ppm (0.05% by weight, 500 mg/kg)	2000ppm (0.20% by weight, 2000 mg/kg)	2500ppm (0.25% by weight, 2500 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	3100 ppm (0,3100 by weight, 3100 mg/kg)
Industrial paints and varnishes for outdoor products	1500 ppm (0.15% by weight, 1500 mg/kg)*	4500 ppm (0.45% by weight, 4500 mg/kg)**	5000 ppm (0.50% by weight, 5000 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	6700 ppm (0,6700 by weight, 6700 mg/kg)
Impregnating agents for tile, stone and concrete	100 ppm (0,0100 by weight, 100 mg/kg)** *	Not allowed	-	15 ppm (0,0015 by weight, 15 mg/kg)	15 ppm (0.0015% by weight, 15 mg/kg)	600 ppm (0,0600 by weight, 600 mg/kg)
Anti-corrosion paint for industry and infrastructure	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed

** If the content of isothiazolinones is >500ppm and causes classification with H317 or the phrase “Contains (name of sensitizing substance), may cause an allergic reaction”, the requirements for weathering tests for growth in O23 needs to be fulfilled.*

*** If the content of Iodopropynyl butylcarbamate (IPBC) causes classification with H317 or the phrase “Contains (Iodopropynyl butylcarbamate (IPBC)), may cause an allergic reaction”, the requirements for weathering tests for growth in O23 needs to be fulfilled.*

**** 2-Methyl-3,2H,-isothiazolone (MI, CAS 2682-20-4) is not allowed to be added to impregnating agents for tile, stone and concrete*

The term preservative refers to both preservatives for tinned products and preservatives for the surface finish.

- Documentation that none of the added preservatives are bioaccumulative, cf. OECD test method no. 305 A-E or 107, 117.
- Duly completed declaration, see Appendix 2, from the manufacturer of each raw material.
- Calculation clearly showing that the requirement concerning preservatives is fulfilled.

06 Formaldehyde

Products must not contain actively added formaldehyde (CAS no. 50-00-0).

Note that the definition of ingoing substances has been waived regarding potential formaldehyde releasing substances.

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

In case bronopol (CAS#: 52-51-7) or formaldehyde releasers are required for in-can preservation, the level of free formaldehyde must not exceed 25 ppm (0,0025% by weight, 25 mg/kg) in the final product*.

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.

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

In adhesives, sealants and multipurpose adhesives/construction adhesives formaldehyde is permitted as an impurity in newly produced polymers at a concentration of no more than 250 ppm (0.025% by weight, 250 mg/kg)**, 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 or other equivalent test method.*

*** Measured with the VdL-RL 03-methode "In-can concentration of formaldehyde determined by the acetyl-acetone method" or the Merckoquant method 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 levels in the product (if any) as measured using the Merckoquant method. The measurement can also be done according to the VdL-RL 03 method (“Concentration of free formaldehyde determined using the acetyl-acetone method”). Other equivalent test method can also be used.
- The test laboratory must fulfil the requirements in appendix 5.

07 Residual monomers in polymers

The total level of residual monomers in polymers present in the product >1 % may be no more than 100 ppm, where they are classified:

Classification according to CLP Regulation 1272/2008	
Hazard class and category	H-phrase
Carcinogenic Category Carc 1A/1B/2	H350, H351
Mutagenic Category Mut 1A/B/2	H340, H341
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362
Specific target organ toxicity with single exposure STOT SE 1-2	H370, H371
Specific target organ toxicity with repeated exposure STOT RE 1-2	H372, H373
Respiratory sensitisation	H334

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

Exemption: Vinyl acetate can be in the polymer as restmonomer up to 1000 ppm.

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

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

08 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 100ppm (100 mg/kg, 0.01% by weight) per single metal in the raw material.

** An exception is made for antimony contained in a TiO₂ rutile lattice, on the following terms: test results (according to DIN 53770-1) 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).*

*** For cement-based products, please note the EU requirement to cement of max 2 ppm (2mg/kg) Cr(VI) (REACH Annex XVII no 47.1).*

Duly completed declaration, see 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 TiO₂ rutile lattice, documentation must be submitted to show that the molecular structure is inert and that the environmental and health effects of the pigment are on the same level as, or better than, the results for C.I Pigment Brown 24 CAS no. 68186-90-3 and C.I Pigment Yellow 53 CAS no. 8007-18-9 in the report: UNEF Publications, OECD SIDS Initial Assessment Profile (www.inchem.org).

09 Titanium dioxide

If the product contains more than 3.0% by weight of titanium dioxide (CAS No: 13463-67-7):

1. The raw material manufacturer must meet the requirements for powder handling according to O10.
2. In addition, emissions from the production of titanium dioxide shall not exceed the values given below during the sulphate process and the chloride process, respectively.

Sulphate process:

SO_x expressed as SO₂: 7.0 kg/tonne TiO₂

Sulphate waste: 500 kg/tonne TiO₂

Chloride process:

When using natural ore: 103 kg chloride waste/tonne TiO₂

When using synthetic ore: 179 kg chloride waste/tonne TiO₂

When using titanium ore: 329 kg chloride waste/tonne TiO₂

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 and calculation from the titanium dioxide producer is to be submitted, clearly showing that the requirement is fulfilled.
- Description of how powdered substances are handled during the production process.

010 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.

011 Nanoparticles

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

The following are exempted from the requirement:

- Pigments**
- Naturally occurring inorganic fillers***
- Synthetic amorphous silica**** and precipitated calcium carbonate (PCC)
- 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 fillers covered by appendix V point 7 in REACH.*

***** 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. Surface-treated nanoparticles must fulfil requirement O3 (classification of constituent chemical substances) and requirement O12 (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:

- 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 the following link:
http://ec.europa.eu/environment/archives/docum/pdf/bkh_annex_10.pdf
- Organotin compounds
- Phthalates
- APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation).
- Halogenated organic substances.

Exemptions

- Preservatives that fulfil O5
- Paint pigments that meet the EU's requirements concerning colourants in food packaging under Resolution AP (89) point 2.5
- Polymers containing polymerized vinyl chloride are permitted in adhesives and sealants, in concentrations under 2.0 % in the final product. Requirement O7 regarding rest monomers needs to be fulfilled.
- Dries in oxidative drying paints, see also O3 regarding classifications.
- Isocyanates– Exemption for water-borne polyisocyanates with a chain length of more than 10, where the concentration of isocyanates with a chain length of less than 10 as an impurity is documented.
- Fragrances

* 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.

2 Product specific requirements

2.1 Adhesives, incl. multipurpose adhesives/construction adhesives

013 Volatile organic compounds (VOC) and 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 maximum of 100 ppm (0.01% by weight, 100 mg/kg) in the final product.

Adhesives that are intended for frostproof use during the winter may contain maximum 6.0% by weight volatile organic compounds.

Other adhesives may contain a maximum of 1.0% by weight volatile organic compounds.

Note that if, during use, volatile organic compounds form, these must meet all applicable obligatory requirements.

Volatile organic compounds (VOC) are defined here as any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa. VOC content is measured according to the methods in the VOC Directive (2004/42/EC).

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 and calculation of VOC in the product (based on data for all ingoing ingredients).

014 Emission of total volatile compounds (TVOC)

The total level of volatile organic compounds in adhesives must not exceed the following (depending on which test is used):

- M1: 0.2 mg/m²h converted into toluene equivalents after 4 weeks
- or
- EMICODE EC1: 100 µg/m³ after 28 days
- or
- Blaue Engel RAL UZ 113: 100 µg/m³ after 28 days

Note: If the product is intended for both outdoor and indoor use, it must meet the requirements concerning indoor adhesives.

Adhesives for indoor use sold in packs of less than 125 ml are exempted from this requirement.

- Specification of pack size.
- Test report in line with ISO EN 16000, parts 1, 3, 6, 9, 10, 11 for products sold in packs greater than 125 ml. The test laboratory must be accredited for the test method in line with standard EN ISO/IEC 17025 and that the laboratory fulfils the requirements in appendix 5.

015 Quality requirements

Adhesives are to be tested in accordance with the standards stated in the table below.

Table 5 Quality tests for adhesives

Types	Test method
Adhesives for wall and floor coverings	EN ISO 22631, EN ISO 22632, EN 1902 or equivalent methods. At least one comparable reference product is to be tested.
Ceramic tile adhesive	For dispersion adhesives: EN 1324 or equivalent methods. For cement-based adhesive: EN 1348 or equivalent. The adhesive must meet the minimum requirements in standard EN 12004 for the particular type of adhesive.
Wallpaper paste	Comparative test (see Appendix 4) that clearly shows the quality of the adhesive.
Wood adhesive	EN 205:2003 or equivalent methods. At least one comparable reference product is to be tested.
Multipurpose adhesives/ construction adhesives	EAD 330449-01-0601 that has resulted in ETA approval.
Other adhesives	Methods that apply for these products or comparative test (see Appendix 4) that clearly shows the quality of the adhesive.

- ☒ Test report from a laboratory in line with Appendix 5 or comparative test in line with Appendix 4, which clearly shows that the requirement is fulfilled.

2.2 Sealant

016 Volatile organic compounds (VOC) and volatile aromatic hydrocarbons (VAH)

Volatile aromatic hydrocarbons (VAH) must not be actively added to the product, but are permitted as residues or impurities to a maximum of 100 ppm (0.01% by weight, 100 mg/kg) in the final product.

Sealants are permitted to contain no more than 3.0% by weight volatile organic compounds.

Note that if volatile organic compounds form during the use of the sealant, these must meet all applicable obligatory requirements.

Volatile organic compounds (VOC) are defined here as any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa. VOC content is measured according to the methods in the VOC Directive (2004/42/EC).

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 and calculation of VOC in the product based on data all ingoing ingredients.

017 Emission of total volatile compounds (TVOC)

The total level of volatile organic compounds in sealants must not exceed the following (depending on which test is used):

- EMICODE EC1: 100 µg/m³ after 28 days

or

- Blaue Engel RAL-UZ 123: 300 µg/m³ after 28 days

If the product is intended for both outdoor and indoor use, it must meet the requirements concerning sealants for indoor use.

Sealants for indoor use sold in packs of less than 125 ml are exempted from this requirement.

- Specification of pack size.
- Test report in line with ISO EN 16000, parts 1, 3, 6, 9, 10, 11 for products sold in packs greater than 125 ml. The test laboratory must be accredited for the test method in line with standard EN ISO/IEC 17025 and that the laboratory fulfils the requirements in appendix 5.

018 Quality requirements

The sealant must, where appropriate, be tested in accordance with ISO 11600. Other sealants are to be subject to a comparative test (see Appendix 4) that clearly shows the quality of the sealant.

For cement-based products within Sealants NS-EN 13888:2009 Grout for tiles, or equivalent methods, are accepted.

- Test report from a laboratory in line with Appendix 5 or comparative test in line with Appendix 4, which clearly shows that the requirement is fulfilled.

2.3 Filler

019 Volatile organic compounds (VOC) and volatile aromatic hydrocarbons (VAH)

Volatile aromatic hydrocarbons (VAH) must not be actively added to the product, but are permitted as residues or impurities to a maximum of 100 ppm (0.01% by weight, 100 mg/kg) in the final product.

Fillers are permitted to contain no more than 3.0% by weight volatile organic compounds in ready-mixed filler.

Note that if, during use, volatile organic compounds form, these must meet all applicable obligatory requirements.

Volatile organic compounds (VOC) are defined here as any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa. VOC content is measured according to the methods in the VOC Directive (2004/42/EC).

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

- Specification of the level of volatile aromatic hydrocarbons and calculation of VOC in the product based on all ingoing ingredients.
- Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of each raw material.

020 Emission of total volatile compounds (TVOC)

The total level of volatile organic compounds in fillers must not exceed the following (depending on which test is used):

- M1: 0.2 mg/m²h converted into toluene equivalents after 4 weeks

or

- EMICODE EC1: 100 µg/m³ after 28 days

If the product is intended for both outdoor and indoor use, it must meet the requirements concerning fillers for indoor use.

Fillers for indoor use sold in packs of less than 125 ml are exempted from this requirement.

- Specification of pack size.

- Test report in line with ISO EN 16000, parts 1, 3, 6, 9, 10, 11 for products sold in packs greater than 125 ml. The test laboratory must be accredited for the test method in line with standard EN ISO/IEC 17025 and that the laboratory fulfils the requirements in appendix 5.

021 Quality requirements

The manufacturer must describe how the filler is tested in order to ensure good, consistent quality, particularly in terms of viscosity, adhesion, gap-filling properties, shrinkage, minimal sinking and durability.

Test of filler for plasterboard conducted in accordance with the standard EN 13963. Test of other filler in accordance with EN 15824 or other relevant harmonised standards. For fillers tests of adhesion can also be approved according to EN 16566 and for products to be used in wet areas it is also required to do wet scrub measurements according to the standard.

The products can also be tested using a comparative test (see Appendix 4) that clearly shows the quality of the filler.

For cement-based products within Fillers/Screened NS-EN 13813:2002+NA:2011 with relevant measurements according to table 1 chapter 5.2 in the standard, or equivalent methods, are accepted.

- Test report from a laboratory in line with Appendix 5 or comparative test in line with Appendix 4, which clearly shows that the requirement is fulfilled.

2.4 Outdoor paints and varnishes

022 Volatile organic compounds (VOC) and volatile aromatic hydrocarbons (VAH)

Volatile aromatic hydrocarbons (VAH) must not be actively added to the product, but are permitted as residues or impurities to a maximum of 100 ppm (0.01% by weight, 100 mg/kg) in the final product.

Outdoor paints and varnishes may contain the amount of volatile organic compounds stated in Table 6.

Note that if, during use, volatile organic compounds form, these must meet all applicable obligatory requirements.

Volatile organic compounds (VOC) are defined here as any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa. VOC content is measured according to the methods in the VOC Directive (2004/42/EC).

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

Table 6. VOC limits for outdoor paints and varnishes

	Product classification, cf. 2004/42/EC	Maximum permissible quantity of VOC stated in g/l (incl. water)
C	Exterior walls of mineral substrate	25
D	Interior/Exterior trim and cladding paints for wood and metal including undercoats	75
E	Interior/Exterior trim varnishes and wood stains, including opaque wood stains	65
F	Interior and exterior minimal build wood stains	50
F	Primers	10

H	Binding primers	10
I	One-pack performance coatings	80
J	Two-pack reactive performance coatings for specific end use such as floors	65

- ☒ 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 and calculation of VOC in the product, based on all ingoing ingredients, showing that the relevant limit above is fulfilled.

023 Quality requirement

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

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

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

- Masonry paints shall be exposed to test conditions for 1000 hours (6 weeks) (UVA 4t/60°C + humidity 4t/50°C) according to ISO 11507: 2007.
- Metal finishes shall be exposed to test conditions for 500 hours (6 weeks) (UVA 4t/60°C + humidity 4t/50°C) according to ISO 11507: 2007.
- Wood paints, wood stains and wood varnishes shall be exposed to test conditions for 2000 hours (12 weeks) according to EN 927-6.

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

- Flaking (according to ISO 4628-5:2003). Product is to have a flake density of 2 or less, and a flake size of 2 or less.
- Cracking (according to ISO 4628-4:2003). The product is to have a crack quantity of 2 or less and a crack size of 3 or less.
- Blistering (according to ISO 4628-2:2003). The product is to have a blister quantity of 3 or less and a blister size of 3 or less.
- The colour change (according to ISO 7724-2 or ISO 11664-4/6) shall not exceed $\Delta E^*=4$ with respect to the initial value.
- Decrease in gloss (according to EN ISO 2813) shall not be greater than 30% of initial value – matte paints and varnishes with an initial gloss value less than 60% are exempted from the requirement.
- Chalking (according to EN ISO 4628-6:2007) for masonry paints and metal finishes. The product shall achieve at least 1.5 or more, i.e. 0.5 or 1.0. In the standard there are pictorial reference standards.
- General appearance (according to EN ISO 4628-1:2003).

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

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

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

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

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

4. Liquid water permeability, Class III: If masonry and concrete paints are marketed as water repellent/hydrophobic or similar claims are made, the paints are to be classified as Class III, i.e. with low liquid water permeability according to DIN EN 1062-3: 2008. Due to large numbers of possible tinting colours, this criterion will be restricted to testing of the base paint.

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

5. Fungal growth: If the product is classified with Xi R43 or “Contains (name of the sensitising substance), may cause an allergic reaction” because of the use of isothiazolinones or iodopropynyl butylcarbamate, IPBC, the product must pass the relevant fungal growth test, see below. If the product is marketed as “resistant to fungal growth” or similar, a test must be conducted that documents this.

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

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

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

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

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

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

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

7. Cement-based masonry paints

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

Water vapour resistance:

NS-EN ISO 12572:2001 “Hygrothermal performance of building materials and products - Determination of water vapour transmission properties”, resistance against water vapour is measured.

Driving rain:

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

Weathering:

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

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

2.5 Industrial paints and varnishes

024 Volatile organic compounds (VOC) and volatile aromatic hydrocarbons (VAH)

Volatile aromatic hydrocarbons (VAH) must not be actively added to the product, but are permitted as residues or impurities to a maximum of 100 ppm (0.01% by weight, 100 mg/kg) in the final product.

Note that if, during use, volatile organic compounds form, these must meet all applicable obligatory requirements.

Industrial paints and varnishes must not contain more than 130g/litre VOC.

Volatile organic compounds (VOC) are defined here as any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa. VOC content is measured according to the methods in the VOC Directive (2004/42/EC).

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

Industrial powder paints and varnishes are exempted from this requirement.

- Specification of the level of volatile aromatic hydrocarbons and calculation of VOC in the product (based on the data for all ingoing ingredients), showing that the product does not exceed the limit above.
- Declaration in line with Appendices 1 and 2 from the manufacturer of the product and the manufacturer of each raw material.

2.5.1 Quality requirements for industrial paints and varnishes

The quality of industrial paints and varnishes is to be quality tested according the test methods relevant for the paint/varnish's usage. The quality requirements are divided as follows:

- Industrial paints and varnishes for exterior use has to fulfil the relevant parts of O23
- Furniture - O25 ("möbelfakta")
- Panels and such materials - O26 (scratch resistance)
- Paints and varnishes for painting/coating floors - O27 and O28 (Abrasion/wear and water resistance)

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

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

025 Quality requirements for industrial paints and varnishes for furniture

Industrial paints and varnishes for furniture must fulfil the requirements as set out in the Tables 8 and 9 below.

Table 8 Requirement levels for varnished surfaces in different furniture groups.

Seating	Seat and armrest	Requirement level 2
Storage units	External horizontal surfaces (up to 1.25 m), shelves and bases	Requirement level 3
Tables	Private use and normal public use	Requirement level 4
	Intensive public use (restaurant/café)	Requirement level 5
Kitchen	Internal surfaces, including drawer bottoms, excluding shelves and bases	Requirement level 1
	External horizontal surfaces, shelves and bases	Requirement level 3
	Worktops (table tops)	Requirement level 6

Table 9 Test methods and requirement levels for furniture tests

Requirement category			Requirement levels					
Test:		References:	1	2	3	4	5	6
Water	1)	EN 12720	6h	16h	16h	24h	24h	24h
Grease	1)	EN 12720	24h	24h	24h	24h	24h	24h
Grease + scratches	1)	SS 83 91 22	-	-	-	24h+3N	24h+3N	24h+3N
Scratches	2)	SS 83 91 17	-	3N	3N	5N	5N	5N
Alcohol	1)	EN 12720	-	-	-	1h	1h	1h
Coffee	1)	EN 12720	-	1h*	1h	1h	1h	1h
Heat, dryness	1)	EN 12722	-	-	-	70°C	70°C	-
Heat, dryness	1)	EN 12722	-	-	-	-	-	180°C
Heat, moisture	1)	EN 12721	-	-	-	-	-	85°C
Heat on edge	1)	NS 8061	-	-	-	-	-	85°C
Water on edge	1)	SS 83 91 20 NS8062 DS2175	-	-	1h***	-	-	-
Sweat, acid and alkaline	1)	ISO 105E04	-	1h**	-	-	-	-

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

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

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

** = Applies to armrests.

*** = Applies to doors and drawer fronts.



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

026 Quality requirements for industrial paints and varnishes for panels, floors and similar

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

- Scratch resistance ASTM D2794 (<http://www.astm.org/Standards/D2794.htm>)
- “Sheen Automatic Scratch Tester” according to ISO 1518 (1992)

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

027 Abrasion/wear for surfaces subject to heavy wear, e.g. floors and sheeting

Floor paints, floor coatings and other products subject to an equivalent level of wear must have an abrasion resistance not exceeding 70 mg weight loss after 1000 test cycles with a 1000 g load and a CS10 wheel according to EN ISO 7784-2:2006.

Alternatively a test according to ISO 5470-1 can be performed with 1000 test cycles with 1000 gram load and H22-wheel where the weight loss is maximum 3000 mg.

The applicant must submit a test report showing that this requirement has been fulfilled in accordance with EN ISO 7784:2006 or ISO 5470-1.

028 Water resistance (floors)

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

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

2.6 Impregnating agents for tile, stone, and concrete**029 Impregnating agents for tile, stone, and concrete - Volatile organic compounds (VOC) and volatile aromatic hydrocarbons (VAH)**

Volatile aromatic hydrocarbons (VAH) must not be actively added to the product.

Volatile organic compounds (VOC) are defined here as any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa. VOC content is measured according to the methods in the VOC Directive (2004/42/EC).

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.

030 Quality requirements for impregnating agents for tile, stone and concrete

A test must be carried out for wear according to EN 13892-4. The product must live up to the minimum AR 1 (i.e. AR 1 or lower numerical value for AR).

If the product is claimed to reduce coatings and fouling, a field test must be performed where tiles, stone or concrete with impregnation are applied according to the instructions for the product and visually compared with identical untreated tiles, stone, or concrete. The test period must be appropriate so that the effect can be detected.

The applicant must show that the product is effective in relation to the claims of the product. The applicant must describe the test method, send photo documentation, and describe how the results are evaluated.

For other claims, the applicant must perform tests that demonstrate compliance with the claims on the product. The applicant must state the test method, any data, how the results are evaluated and send photo documentation.

- Test report for EN 13892-4, which clearly shows that the requirement is met.

For claims: Test report with the test method description, possible data, description of how results are evaluated and photo documentation.

2.7 Anti-corrosion paint for industry and infrastructure

031 Volatile organic compounds (VOC) and volatile aromatic hydrocarbons (VAH)

Volatile aromatic hydrocarbons (VAH) must not be actively added to the product.

Volatile organic compounds (VOC) are defined here as any organic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa. VOC content is measured according to the methods in the VOC Directive (2004/42/EC).

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.

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

Anti-corrosion paints containing zinc:

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

- Metallic zinc included in the product must be of Type II or higher grade according to ASTM D520.
- The paints must meet the requirements for corrosion class C5 (Very High) according to EN-ISO 12944-6 and test for immersion category: Im 1 (fresh water), Im 2 (salt water) and Im 3 (soil) according to EN ISO 12944-6, and test EN ISO 2812-2 (synthetic seawater) made with scratched samples according to EN-ISO 12944-9.
- If the intended use of the paints is offshore or equivalent, the paints must meet the requirement for corrosion class CX (Offshore). If cathodic protection is to be used, the paints must meet the requirement of Im 4 according to EN ISO 12944-9.

Anti-corrosion paints without zinc:

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

- The paints must meet the requirements for corrosion class C5 (Very High) according to EN-ISO 12944-6.
- If the paint is to be used immersed in water or in soil, it must also pass tests according to Im1 (fresh water), Im2 (salt water) and Im3 (in soil) according to EN-ISO 12944-6, as well as testing EN ISO 2812-2 for immersion category Im 4 (synthetic sea water) according to EN ISO 12944-9.

- If the intended use of the paint is offshore or equivalent, the paints must meet the requirement for corrosion class CX (Offshore). If cathodic protection is to be used, the paints must meet the requirement of Im 4 according to EN ISO 12944-9.

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

3 Requirements concerning packaging, labelling, consumer information and recycling

033 Packaging

Packaging must be resealable, 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.

- Packaging sample or 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.

034 Label/product packaging

The label/product packaging must carry the Nordic Swan Ecolabel logo, licence number and product group or relevant category (e.g. filler or adhesive) designation.

- Label/product packaging – a PDF file is acceptable for this.

035 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 and so on, e.g. correct preparation of the substrate, outdoor use (if relevant) 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, or when using industrial paints).

- 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.
 - Sealants: A recommendation that the sealant should be finished using a smoother/sponge/cloth or similar is to be included in the product description, and it is not to be recommended that this is done with a thumb/finger.
 - 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.

036 Take-back system

The Nordic Ecolabelling's Criteria Group decided on the 9 October 2017 to remove this requirement.

037 Sorting and handling of waste

The manufacturer of the chemical building product must have a plan for the sorting and handling of waste.

The quantity of hazardous waste is to be reported.

- Report on how waste is handled and sorted, including a sorting plan.
- Report on the quality of hazardous production waste.

4 Quality, management, regulatory and marketing requirements

To ensure that Nordic Ecolabelling 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.

038 Laws and regulations

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

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

039 Licence administrators

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

- Organisational chart showing who is responsible for the above.

O40 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.

O41 Product quality

The licensee must guarantee that the quality of the Nordic Swan 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 Swan Ecolabelled product.

O42 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.

O43 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.

O44 Traceability

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



Description of/procedures for fulfilment of the requirement.

Regulations for the Nordic Ecolabelling of products

When the Nordic Swan Ecolabel is used on products the licence number shall be included.

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

Follow-up inspections

Nordic Ecolabelling may decide to check whether the chemical building product 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 chemical building product does not meet the requirements.

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

Criteria version history

Nordic Ecolabelling adopted version 2 of the criteria for chemical building products on 19 March 2014. The criteria are valid until 31 March 2019.

The Board of Directors decided on 3 September 2014 to include a change in requirement O3 regarding construction adhesives. The new version is called 2.1.

The Nordic Ecolabelling Board decided on 16 December 2014 to include a change in requirement O3 regarding driers. On 17 November 2014 the Board of Directors decided to remove requirement O41 Marketing. The new version is called 2.2.

The Nordic Ecolabelling Board decided 25 February 2015 to include an exception in requirement O2 and O4. Simultaneously the text in table 5 was made clearer. 17 March 2015 Nordic Ecolabelling's Criteria Group decided to adjust the requirement O7. The new version is called 2.3.

Nordic Ecolabelling's Criteria Group decided on 16 June 2015 to ease requirement O4. On 9 September 2015 a change in requirement O7 as well as adjustments in "What can carry the Nordic Ecolabel" and requirements O2, O3, O4, O6, O8, O11, O18, O21, O23, O24, Appendix 1 and Appendix 2 were adopted. The new version is called 2.4.

Nordic Ecolabelling's Criteria Group decided per capsulam on 17 February 2016 to include exemptions in requirement O3 regarding glyoxal, sodium nitrite and neutralizing agents. The new version is called 2.5.

Nordic Ecolabelling's Criteria Group decided on April 19, 2016, to include an exemption in O12 for polymerized vinyl chloride. The new version is called 2.6.

Nordic Swan Ecolabelling's Criteria Group decided per capsulam on 1 June, 7 September and 11 October 2016 to include exemptions in requirement O3 and O12 regarding driers and to allow that raw materials classify with acute tox. At the same time several exemptions were removed from O3 and classification with acute tox was deleted from the list of residual monomers in polymers that can not be present in 100 ppm in O7. Since the temporary exemption for driers in the exterior paint and industrial indoor paint are phased out an exemption was added to O3 and O12 to allow alternative driers. Prohibition of metal packaging for pacs of less than 1 litre was deleted too. The new version was called 2.7 and now 2.8.

Nordic Ecolabelling's Criteria Group decided per capsulam on 7 February 2017 to change the requirement O7 Residual monomers in polymers. The new version is called 2.9.

Nordic Ecolabelling's Criteria Group decided per capsulam on 15 March 2017 to change the requirement O3 Classification of constituent chemical substances to allow that raw materials classify with STOT SE 2 or STOT RE 2. The new version is called 2.10.

On 9 October 2017 Nordic Ecolabelling's Criteria Group decided to remove O32 Take-back system. Furthermore Nordic Ecolabelling's Criteria Group decided per capsulam on 20 December 2018 to change the requirement O21, Quality requirements for fillers, to allow an alternative test method for fillers. The Nordic Ecolabelling's Criteria Group decided on 15 March 2018 to make an adjustment to O6 regarding formaldehyde releasing substances to harmonize with the criteria for indoor paints. The criteria document was also prolonged until 30 June 2021. The new version is called 2.11.

Nordic Ecolabelling decided on 7 November 2018 to expand the criteria with multipurpose adhesives/construction adhesives. What can carry the Nordic Swan Ecolabel, O2 classification of product and product-specific adhesive requirements (section 2.1) have been adjusted. The VOC ban of wallpaper paste was deleted in O13 at the same time. The new version is called 2.12.

Nordic Ecolabelling decided on 12 March 2019 to expand the criteria with impregnating agents for tile, stone and concrete. What can carry the Nordic Swan Ecolabel and O5 Preservatives have been adjusted. New sections for product-specific requirements (section 2.6) have been added. The new version is called 2.13.

Nordic Ecolabelling decided on 25 June 2019 to adjust requirements O4 Environmentally harmful substances and O5 Preservatives. These requirements are harmonised with the criteria for indoor paints and varnishes. The new version is called 2.14.

Nordic Ecolabelling decided on 31 March 2020 to expand the criteria for chemical building products with anti-corrosion paints for industry and infrastructure. What can carry the Nordic Swan Ecolabel, O2 Classification and O5 Preservatives have been adjusted. New sections for product-specific requirements (section 2.7.) have been added. Furthermore, the requirements for O5 Preservatives have been adjusted to harmonize isothiazolinones with current EU-legislation. Lastly, a time-based exemption was added to O3 Classification of constituent chemical substances. Furthermore, the validity of the criteria was prolonged until 30 June 2023. The new version is called 2.15.

Nordic Ecolabelling decided on 23 June 2020 to adjust the requirements for O3 Classification of chemical substances included in as constituents, O9 Titanium dioxide and O11 Nanoparticles. On 25 August 2020, the product definition for Impregnating agents for tiles, stone and concrete was clarified to apply to both indoor and outdoor products. The new version is called 2.16.

Nordic Ecolabelling decided on 23 February 2021 to prolong the criteria with 12 months to the 30 June 2024. The new version is called 2.17.

On 5 October 2021, Nordic Ecolabelling decided to adjust the time-based exemption for trimethylol propane (TMP). The current exemption will last during the validity of the criteria and TMP will be re-evaluated during the development of new criteria. The new version is called 2.18.

Nordic Ecolabelling decided on 15 March 2022 to adjust the limit value for isothiazolinones for the product group adhesives, sealant, and multipurpose adhesives. The adjustment means that the total amount of isothiazolinones allowed increases to 300 ppm. The new version is called 2.19.

Nordic Ecolabelling decided on 13 December 2022 to remove the EUH208 requirement (O2). At the same time, it was decided to extend the criteria by 12 months. The new version is called 2.20 and is valid until June 30, 2025.

On 9 May 2023, Nordic Ecolabelling decided to extend the exemption for respirable crystalline silica with classification H350i (O3). The new version is called 2.21.

New criteria

- Review the opportunity to expand the product group to include “Industrial adhesives”.
- Review potential environmental gains by requirements to SVOC (Semi Volatile Organic Compounds) in paints and varnishes (exterior and industrial).
- Review the requirements for industrial paints and varnishes to see what other environmental gains that can be made.
- Review the possibility of further limit the amounts of isothiazolinones.

Terms and definitions

Term	Explanation or definition
CLP	Classification, Labelling and Packaging of substances and mixtures – EU Regulation
CMIT/MIT	CMIT/MIT is a blend of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one in a ratio of 3:1. The blend is used as a preservative.
IPBC	Iodopropynyl butylcarbamate, used as a preservative in products such as paints.
Isothiazolinones	Used as a preservative in products such as paints and sealants. This group includes MIT and BIT.
SVHC	Substances of Very High Concern
TVOC	Total VOC
VAH	Volatile Aromatic Hydrocarbons, which are a subset of VOC.
VOC	Volatile Organic Compounds

Appendix 1 Declaration from the manufacturer of the chemical building product

To be used in conjunction with an application for a licence for the Nordic Ecolabelling of chemical building products. 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. adhesive, paint): _____

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.

O3: Does the product contain substances classified with any of the hazard phrases below?	Yes	No
H350 – Carcinogenic, hazard category 1A and 1B H350i – May cause cancer by inhalation H351 – Carcinogenic, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H340 – May cause genetic defects, hazard category 1A and 1B H341 – May cause genetic defects, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>
H334 – Airway sensitising category 1/1A/B	<input type="checkbox"/>	<input type="checkbox"/>
STOT SE 1 H370 STOT RE 1 H372	<input type="checkbox"/>	<input type="checkbox"/>

If yes, specify which substance, CAS no., function, classification, and concentration in ppm:

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

H410 – Aquatic Chronic 1

H411 – Aquatic Chronic 2

H412 – Aquatic Chronic 3

If yes, specify which substance, CAS no., function, classification, and concentration in ppm:

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

If yes, state log Kow/BCF or E-number for each preservative:

State, for each preservative: CAS no. and concentration in ppm:

Is/are the preservative(s) approved in The Biocidal Product Regulation (Regulation (EU) 528/2012)? **Yes** **No**

O6: Does the final product contain formaldehyde or formaldehyde-releasing substances? **Yes** **No**

O6: Does the product contain more than 10 ppm formaldehyde? **Yes** **No**

If yes:

- is it due to preservatives that are formaldehyde releasers required as in-can preservative? **Yes** **No**
- and is the formaldehyde level below 25 ppm (0,0025 weight percent, 25 mg/kg)? **Yes** **No**

Please attach test report according to Merckoquant method, EPA 8315A or other equivalent test method.

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 exemption is also made for antimony 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).

For antimony in pigments that are included in this exemption: Please enclose a test report according to DIN 53770-1 or equivalent, which shows that the conditions are fulfilled.

If yes, specify in the table below which heavy metal(s), concentration in ppm for each one, and whether the heavy metal is actively added or an impurity.

Heavy metal	Concentration ppm	Actively added/impurity?
Cadmium		
Lead		
Chromium 6		
Mercury		
Arsenic		
Barium		
Selenium		
Antimony		

O9: Does the product contain titanium dioxide?

Yes No

If yes, state the weight-% titanium dioxide: _____

If more than 3 weight-%, state the manufacturer of the titanium dioxide: _____

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.

If yes, what kind of nanomaterial is it? _____

Does it qualify for the exemption in requirement O11?

If yes, please explain why: _____

If the product contains synthetic amorphous silica, please inform about the surface-treatment of the nano particles. And state whether the surface-treated nano particles fulfil the requirements O3 and O12.

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)	<input type="checkbox"/>	<input type="checkbox"/>
• 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.	<input type="checkbox"/>	<input type="checkbox"/>
• 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/archives/docum/pdf/bkh_annex_10.pdf , See Appendix L	<input type="checkbox"/>	<input type="checkbox"/>
• Tin-organic compounds	<input type="checkbox"/>	<input type="checkbox"/>
• Phthalates	<input type="checkbox"/>	<input type="checkbox"/>
• APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation).	<input type="checkbox"/>	<input type="checkbox"/>
• Halogenated organic substances. Exemptions: <ul style="list-style-type: none"> ○ 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, ○ polymers containing polymerized vinyl chloride in adhesives and sealants, in concentrations under 2.0 % in the final product (requirement O7 regarding rest monomers needs to be fulfilled) and ○ dries in oxidative drying paints (note: see O3) 	<input type="checkbox"/>	<input type="checkbox"/>
• Isocyanates (water-based polyisocyanates with a chain length of more than 10 are exempted, where the concentration of isocyanates with a chain length of less than 10 as an impurity is documented).	<input type="checkbox"/>	<input type="checkbox"/>
• Fragrances	<input type="checkbox"/>	<input type="checkbox"/>

If yes, state the CAS no. (if possible), chemical name and concentration (in ppm, weight-% or mg/kg). Also state whether the substance is present as an impurity or an added substance.

O13, O16, O19, O22, O24, O29 Does the product contain:	Yes	No
Volatile organic compounds (VOC)	<input type="checkbox"/>	<input type="checkbox"/>

If yes, state the CAS no. (if possible), chemical name, concentration (in ppm, weight-% or mg/kg) and the boiling point. Also state whether the substance is present as an impurity or an added substance.

Yes **No****O13, O16, O19, O22, O24, O29 Does the product contain:**

Volatile aromatic hydrocarbons (VAH)

If yes, state the CAS no. (if possible), chemical name, concentration (in ppm, weight-% or mg/kg) and the boiling point. Also state whether the substance is present as an impurity or an added substance.

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

Place and date	Company name/stamp
Responsible person	Signature of responsible person
Phone	E-mail

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 chemical building products.

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

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.

O3: Does the product contain substances classified with any of the hazard phrases below?		
	Yes	No
H350 – Carcinogenic, hazard category 1A and 1B H350i – May cause cancer by inhalation H351 – Carcinogenic, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
H340 – May cause genetic defects, hazard category 1A and 1B H341 – May cause genetic defects, hazard category 2	<input type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>
H334 – Airway sensitising category 1/1A/B	<input type="checkbox"/>	<input type="checkbox"/>
STOT SE 1 H370 STOT RE 1 H372	<input type="checkbox"/>	<input type="checkbox"/>

If yes, specify which substance, CAS no., function, classification, and concentration 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– Aquatic Chronic 1
H411– Aquatic Chronic 2
H412– Aquatic Chronic 3

If yes, state which substance, CAS no., function, classification, and concentration in ppm:

Yes No

O5: Does the raw material contain any preservatives?

If yes, state log Kow/BCF or E-number for each preservative:

State, for each preservative: CAS no. and concentration in ppm:

Yes No

Is/are the preservative(s) approved in The Biocidal Product Regulation (Regulation (EU) 528/2012)?

Yes No

O6: Does the raw material contain formaldehyde or formaldehyde releasing substances?

If yes, specify in which raw materials(s), and the concentration of free formaldehyde in ppm in the final product:

Yes No

Is formaldehyde or formaldehyde releasing substances actively added to the raw material?

O7: Does the raw material contain residual monomers that are classified with any of the following hazards ?

Classification according to CLP Regulation 1272/2008	
Hazard class and category	H-phrase
Carcinogenic Category Carc 1A/1B/2	H350, H351
Mutagenic Category Mut 1A/B/2	H340, H341
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362
Specific target organ toxicity with single exposure STOT SE 1-2	H370, H371
Specific target organ toxicity with repeated exposure STOT RE 1-2	H372, H373
Respiratory sensitisation	H334

If yes, state which substance(s), classification, and concentration 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 exemption is also made for antimony 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, specify in the table below which heavy metal(s), concentration in ppm for each one, and whether the heavy metal is actively added or an impurity.

Heavy metal	Concentration ppm	Actively added/impurity?
Cadmium		
Lead		
Chromium 6		
Mercury		
Arsenic		
Barium		
Selenium		
Antimony		

Yes **No**

O9: Does the raw material contain titanium dioxide?

If yes, state the weight-% titanium dioxide: _____

If more than 3 weight-%, state the manufacturer of the titanium dioxide: _____

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.

If yes, what kind of nanomaterial is it? _____

Does it qualify for the exemption in requirement O11? **Yes** **No**

If yes, please explain why: _____

If the product contains synthetic amorphous silica, please inform about the surface-treatment of the nano particles.

And state whether the surface-treated nano particles fulfil the requirements O3 and O12.

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/archives/docum/pdf/bkh_anex_10.pdf, see appendix L
- Tin-organic compounds
- Phthalates
- APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation).
- Halogenated organic substances. Exemptions:
 - 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,
 - polymers containing polymerized vinyl chloride in adhesives and sealants, in concentrations under 2.0 % in the final product (requirement O7 regarding rest monomers needs to be fulfilled) and
 - dries in oxidative drying paints (note: see O3)
- 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

If yes, state the CAS no. (if possible), chemical name and concentration (in ppm, weight-% or mg/kg). Also state whether the substance is present as an impurity or an added substance.

O13, O16, O19, O22, O24, O29 Does the raw material contain: **Yes** **No**

Volatile organic compounds (VOC)

If yes, state the CAS no. (if possible), chemical name, concentration (in ppm, weight-% or mg/kg) and the boiling point. Also state if the substance is present as an impurity or an added substance.

O13, O16, O19, O22, O24, O29 Does the raw material contain:

Volatile aromatic hydrocarbons (VAH)

Yes **No**

If yes, state the CAS no. (if possible), chemical name, concentration (in ppm, weight-% or mg/kg) and the boiling point. Also state if the substance is present as an impurity or an added substance.

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

Place and date	Company name/stamp
Responsible person	Signature of responsible person
Phone	E-mail

Appendix 3 Example of recipe structure

Example of recipe structure to be used when applying for the Nordic Swan Ecolabel

Chemicals building Product Name: Xxx										
Chemical building product Formula nr. Xxx										
Substance reference nr.	Company name	Product name:	Function in the chemical building product	CAS nr.	Substance content	% in substance	CAS nr.	Classification peer component	Substance content in the chemical building product	Content % peer component in product
1...	-	Water	Solvent	7732-18-5	Water	100,000	7732-18-5	-	14,97	14,9700
2...	Xxx	Xxx	pH regulator	1310-73-2	Sodium hydroxide	95,000	1310-73-2	R35	9	8,5500
					Water	5,000	7732-18-5	-		0,0000
3...	Xxx	Xxx	Dispersing 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	R34, R43, R52/53		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 stabilizer	-	Xxx	xx,xx	xxxx-xx-x	R41	5	-
					Xxx	xx,xx	xxxx-xx-x	-		-
6...	Xxx	Xxx	Thickener/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/preservatives	xxxx-xx-x	1,2-Benzisothiazol-3(2H)-one	5,000	2634-33-5	R34, R43, R52/53	0,03	0,0015
					Xxx	xx,xx	xxxx-xx-x	R22, R37/38, R41, R50		-
					Xxx	xx,xx	xxxx-xx-x	Xn; N; R22, 41, 43, 50		-

Appendix 4 Comparative tests for adhesives, fillers, and sealants

In the requirements concerning quality, there is an option for adhesives (O15), sealants (O18) and fillers (O21) to show the quality of the product by means of comparative tests. The following applies for such comparative tests:

1. Testers

At least 5 professional users must have used the product for at least 3 months (company name, number of years in profession).

2. User report

There must be at least 1 user report for each area of application for which the product is marketed.

Each user report must be signed and dated by the tester.

3. Evaluation

The properties of the product in each specific area of application are to be graded on a scale of 1 to 5 (see table below).

Table A5. Grading scale key

Grade	Description
1	Product does not work
2	Product works poorly
3	Product works
4	Product works well
5	Product works very well

Each user should also make an overall assessment that can include additional parameters beyond the specific properties during use (e.g. ability to remove adhesive or ease of handling).

Parameters that are given a grade of 1-2 are considered not to have passed.

The licence applicant must summarise all the test reports and make an evaluation of the overall results.

4. Requirement level

The product is considered to show satisfactory performance if all the properties achieve a grade of 3 or more.

Appendix 5 Analysis and test laboratories

For all quality tests (except comparative tests as set out in Appendix 4), the test laboratory must comply with one of the following:

- The test laboratory meets the general requirements set out in standard EN ISO/IEC 17025.
- or
- The test laboratory is officially GLP approved.

The company's own laboratory may act as a test laboratory if:

- The laboratory is covered by the company's certified quality management system.