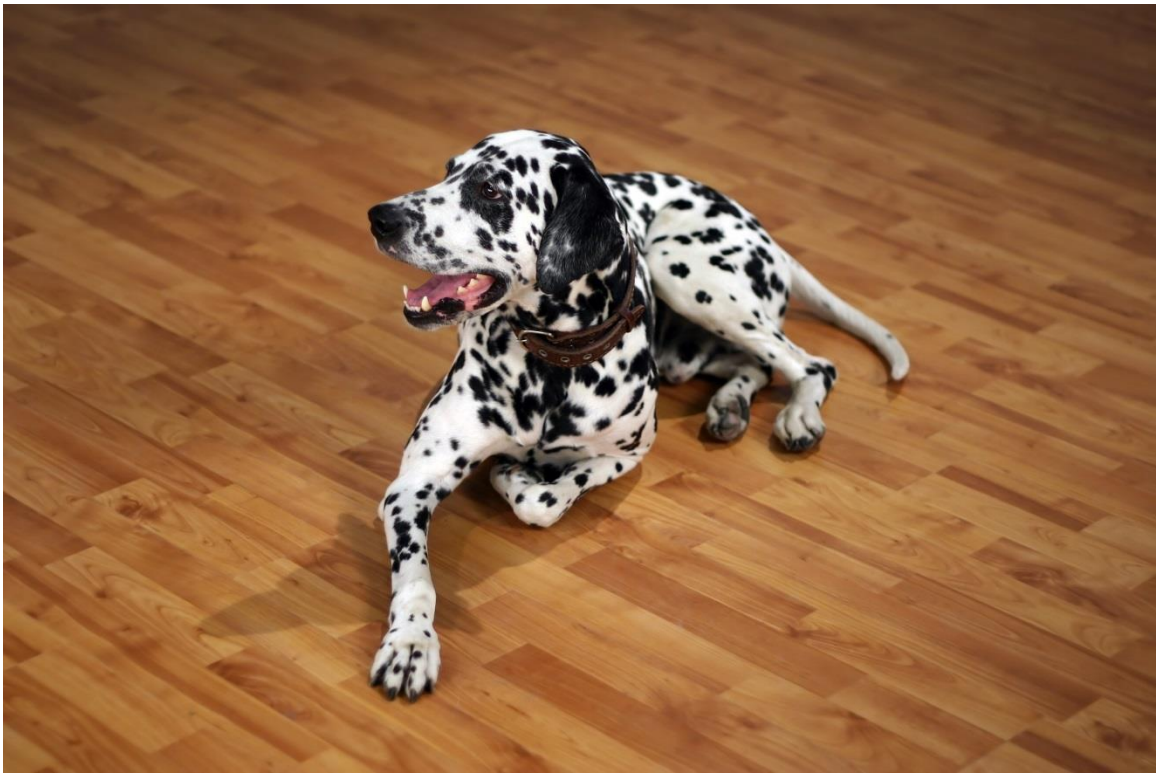
Nordic Ecolabelling of

Floor coverings



Version 6.0 • 15 May 2014 - 22 August 2014
Consultation proposal

Nordic Ecolabelling

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This document is a translation of an original in Nordic languages. 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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It may be quoted from provided that Nordic Ecolabelling is stated as the source.

What is a Nordic Ecolabelled floor covering?

A floor is defined as the bottom surface of the room and a floor covering (flooring) is the general term that describes a permanent covering for this surface. Flooring is manufactured from several different materials, some of the most common being: wood (solid or parquet), linoleum, ceramic tiles, plastic, textile fibres and cork.

The flooring material selected is guided by factors such as requirements for sustainability/durability, sound insulation, muffling tread, comfort, price, hygiene and ease of cleaning, aesthetics, etc. Certain flooring materials must not be installed on surfaces exposed to a high moisture level.

Flooring is a heterogeneous project group and can be divided into semi-hard flooring, soft flooring, wet room panels and tiles. Nordic Ecolabelling has chosen to limit the criteria to the actual floor covering itself. The flooring contained in this product group must be intended for indoor use and must be able to be laid on a surface of concrete or timber boarding, for example.

Why choose the Nordic Ecolabel?

Flooring is a large proportion of the indoor surface area, e.g. in a home or office. This means that the materials the flooring contains are important for the indoor environment and for the risk of exposure to undesirable substances. Flooring and its health and environmental impact in the indoor environment are further complicated by the fact that the flooring itself may interact with the surface on which it is laid (usually concrete), damp proofing, levelling, caulk, soundproofing material, insulating material and the flooring adhesive.

Several flooring materials, the most common of which are wood floors, linoleum and cork flooring, largely comprise renewable materials and are often marketed by the industry as sustainable, "green" or "natural" flooring. Compilations of life cycle analyses and comparisons carried out[1] also show that bio-based flooring such as linoleum, cork and wood have a lower environmental impact in most, or all, the areas assessed compared with other types of floor covering.

A Nordic Ecolabelled floor covering:

- Has a high proportion of renewable and/or recycled materials.
- Meets stringent requirements on chemicals harmful to health and the environment
- Guarantees low emissions and a good indoor environment.
- Has been manufactured energy efficiently.
- Has good durability.

[1] According to the Building for Energy and Environmental Sustainability (BEES) program at the National Institute of Standards and Technology (NIST) at the US Department of Commerce.

What can carry the Nordic Ecolabel?

Flooring that can be Nordic Ecolabelled is solid timber flooring, parquet flooring, veneer flooring, laminate flooring, linoleum flooring, cork flooring, bamboo flooring, textile flooring and plastic flooring free from PVC.

Floor coverings that cannot be Nordic Ecolabelled:

- PVC/vinyl flooring and other flooring that contains PVC. This also applies to other flooring that contains PVC, for example textile flooring with PVC backing.
- Rubber flooring. Rubber material can, however, be used, for example as an intermediate layer and/or backing for other flooring material.
- Ceramic tiles. However, the EU Ecolabel does accept this type of flooring.
- Flooring that is part of the load-bearing structure of the building.
- Flooring sold together with integrated underfloor heating systems.
- Seamless flooring, laid in liquid form which then hardens.
- The concept of floor levelling, a combined name for products and methods used to achieve a surface that is either ready for a floor covering or which can itself constitute a finished floor surface.
- Loose-laid rugs are not included in this product group, but can be labelled under Nordic Ecolabelling's criteria for textiles or those of the EU Ecolabel.

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 floor covering.

Enquiries

Please contact Nordic Ecolabelling if you have any queries or require further information. See page 3 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.

1 Terms and overview of requirements

This section describes the terms used in the requirements. To understand how the requirements are to be interpreted and applied, and to ensure that the licence application is accompanied by all the documentation required, it is important to read this section first.

1.1 Terms and definitions

Constituent substance

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 (0.01% 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% 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.

For two-component products it is the added ingredients in the separate components that shall comply with the requirement. Alternatively, if it can be documented that protective equipment was worn when the hardener was mixed with the paint/varnish and the finished two-component product was applied in a closed system, the requirement may apply to the hardened product.

Fillers

In the requirement of renewable and/or recycled raw materials, an opportunity is provided to exempt fillers from the calculation of the percentage of the floor by weight, provided that the filler is available to an, in principle, unlimited extent in nature. This is the case for the fillers normally used in flooring, such as kaolin, calcium carbonate, calcium magnesium carbonate, calcium sulphate and silicates. Pigments are not counted as a filler but as an additive.

Volatile organic compounds (VOC)

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.

1.2 Overview of requirements

Overview of the requirements that a particular material must meet. In addition to the material requirements in the table below, criteria on surface treatment and the indoor environment must be met in all relevant cases. Quality requirements and regulatory requirements must be met for all Nordic Ecolabelled floor coverings.

Material	Level	Requirement	Declaration	Comments
All materials	obligatory	O1	Appendix 2	
	obligatory	O2	Appendix 2	
	obligatory	O3	Appendix 2	
	obligatory	O17	Appendix 7	
	obligatory	O18	Appendix 8	
	obligatory	O19	-	
	obligatory	O20	Appendix 8	
	obligatory	O21	Appendix 8	
	obligatory	O22	Appendix 8	
	obligatory	O31	Appendix 10	
	obligatory	O36	-	
	obligatory	O37	-	
	obligatory	O38	-	
	obligatory	O39	-	
Wood, cork and bamboo	More than 1% by weight	O4	Appendix 3a	
	More than 10% by weight	O5	Appendix 3b	
	More than 1% by weight	O6	Appendix 3a	
Wood and bamboo panels	More than 1% by weight	O4	Appendix 3a	Does not include HPL as a surface coating for laminate floors
	More than 10% by weight	O5	Appendix 3b	Does not include HPL as a surface coating for laminate floors
Vegetable fibres	More than 1% by weight	O7	Appendix 5	Applies to flax, bamboo and other bast fibres
Wool and other animal fibres	More than 1% by weight	O8	test report	
	More than 1% by weight	O9	test report	
Polyamide/nylon	More than 5% by weight	O10	test report	Both fibres and polymer material. Only virgin material.
Polyurethane	More than 5% by weight	O11	Appendix 5	Both fibres and polymer material. Only virgin material.
All fibres	obligatory	O12	Appendix 5	
	obligatory	O24	Appendix 9	
	obligatory	O25	Appendix 9	
	obligatory	O26	Appendix 9	
	obligatory	O27	Appendix 9	
Foam plastic/ foam rubber	More than 1% by weight	O13	test report	
Vulcanised foam	More than 1% by weight	O14	Appendix 6	
Synthetic latex (SBR) and natural latex	More than 1% by weight	O15	test report	Additional requirements for O13-14
Polyurethane foam	More than 1% by weight	O16	Appendix 6	Additional requirements for O13-14

2 Description of products and materials

O1 Information about the flooring

The applicant must provide the following information about the floor covering:

- Brand/trade name
- A description of the product/products and the materials involved. State the percentage composition of the material in the floor. State any additives, surface treatments and fillers. Product data sheets or equivalent covering all materials/more materials must be included in the application.
- A description of the manufacturing process. Suppliers must be described with the name of their business, production site, contact and the production step(s) carried out.

✉ A description in line with the requirement above. The template in Appendix 2 can be used to describe the composition of the materials. Product data sheets can be part of the documentation

3 Raw material requirements

3.1 Raw materials in general

O2 Renewable and/or recycled raw materials

At least 80% of the flooring by weight must consist of:

- Recycled materials and/or
- Materials originating from renewable raw materials.

Non-organic fillers in the flooring may be exempted from the calculation of the percentage of the flooring by weight where these are in principle available to an unlimited extent in nature.

Renewable raw material is defined as a raw material that is continually and at a relatively fast pace reproduced in nature.

Recycled material is defined in line with ISO 14021 and covers both pre-consumer material and post-consumer material.

✉ Summary of the raw materials included in the floor stating the proportion of the raw materials as a percentage by weight. State which raw materials are renewable and which are recycled. Appendix 2 can be used.

O3 Chlorinated plastics in flooring

Chlorinated plastics such as PVC (polyvinyl chloride) and PVDC (polyvinylidene chloride) must not be included in Nordic Ecolabelled flooring.

✉ Declaration from the flooring manufacturer that the flooring is free from chlorinated plastics. Appendix 2 can be used.

3.2 Solid wood, cork, bamboo and manufactured board

The traceability requirement covers all parts of products that contain solid wood, cork or bamboo. The requirement also covers fibreboard, such as chipboard, MDF and OSB and parallel veneers and cross veneers/plywood. The exception is small details included in the flooring to a maximum of 1% by weight.

The requirement for raw materials from certified areas applies to solid wood, cork or bamboo and wood-based board included in the flooring at 10% or more by weight.

If the wood-based board is Nordic Ecolabelled, the requirements in this section are met. State the manufacturer, licence number and name of the manufactured board.

O4 Origin and traceability of wood and fibre raw materials, cork and bamboo

The requirement applies to both certified and uncertified raw materials.

The licensee must:

- demonstrate traceability for all wood and fibre raw materials. State the name (in Latin and one Nordic language) and geographic origin (country/state and region/province) of the kinds of wood and bamboo used.
- have a written procedure for sustainable wood, cork and bamboo supply.

Wood, cork and bamboo raw materials may not be sourced from:

- protected areas or areas in the process of being awarded protected status
- areas where ownership or usage rights are unclear
- genetically modified trees or plants.

Furthermore, forestry operations must not damage:

- standing natural timber, biodiversity, special ecosystems or important ecological functions
- important social and/or cultural values.

The requirement applies to wood chips, wood shavings, waste wood, untreated demolition wood and recycled fibre from other industrial activities used in manufactured board, but these must only meet the final documentation requirement (written procedure).

The requirement does not cover HPL (High pressure laminate), which is used as a surface finish on laminate flooring.

Nordic Ecolabelling may require further documentation if there is any uncertainty surrounding the origin of the raw material.

✉ Name (in Latin and one Nordic language) and geographic origin (country/state and region/province) of the kinds of wood, cork and bamboo used. Appendix 3a can be used.

The manufacturer of flooring must have a written procedure for sustainable supply of wood, wood fibre, cork and bamboo. The procedure shall include up-to-date lists of all suppliers of wood, wood fibre, cork and bamboo raw material.

O5 Wood, manufactured board, cork and bamboo from certified forestry

The requirement applies to flooring that comprises a total of at least 10% wood, manufactured board/fibreboard, cork and/or bamboo by weight.

On an annual basis:

- at least 70% of the wood and raw material content and/or
- at least 50% of the bamboo and cork content and/or
- at least 50% of the wood and bamboo raw material content of manufactured board/fibreboard*

shall be derived from areas where forestry operations are certified pursuant to a forestry standard and certification system that meet the criteria stated in Appendix 4 or be certified as organically grown or in transition towards organic production.

** Wood chips, wood shavings, waste wood, untreated demolition wood and recycled fibre from other industrial activities used in manufactured board are not covered by the requirement. Nor does the requirement cover HPL (High pressure laminate) which is used as a surface finish on laminate flooring.*

Nordic Ecolabelling may request the submission of further documentation to enable it to assess whether the requirements of the standard and certification system and certified proportion have been fulfilled. Such documentation may comprise copies of the certification body's final report, a copy of the forestry standard, including the name, address and phone number of the organisation that established the standard, as well as references to individuals representing parties and interest groups who have been involved in the development of the standard.

✉ The amount of timber derived from certified forests must be stated and the basis for calculations must be shown. Appendix 3b can be used.

✉ Copy of relevant forestry certificates that meet the guidelines for forestry certification and organic cultivation described in Appendix 4.

O6 Use of biocides in felling/harvesting

After felling, the timber or bamboo must not have been treated with pesticides classified as type IA and type IB by WHO.

The requirement refers to treatment of logs after felling.

WHO's website http://www.who.int/ipcs/publications/pesticides_hazard_2009.pdf contains guidelines and a list of pesticides and their classification. Any of the Nordic Ecolabelling secretariats can also be contacted.

✉ Account from the wood and bamboo supplier of the pesticides used and the declaration in line with appendix 3A for each individual product.

3.3 Textile fibres and polymers

The requirements in this section cover textile fibres and polymers contained in more than 1% of the flooring by weight. In general if the textile fibre is a raw material for textiles labelled with the Nordic Ecolabel or the EU Ecolabel, all the fibre requirements are met as the requirements are harmonised between the labelling systems. In this case, state the producer, licence number of the textile and the name of the fibre.

3.3.1 Vegetable fibres

O7 Flax, bamboo and other bast fibres

When growing bamboo, flax and other bast fibres (hemp, jute, coconut, etc.) the only pesticides which may be used are those permitted under the European Pesticides Regulation (1107/2009/EC).

The production of flax, bamboo and other bast fibres with water retting is only permitted if the effluent from the process is treated such that the chemical oxygen demand (COD) or the total amount of organically bound carbon (TOC) is reduced to at least:

- 75% for hemp
- 95% for flax and other bast fibres

Chemical oxygen demand (COD) must be analysed under ISO 6060 or another comparable method. The requirements for analysis laboratory and test methods for COD/TOC are stated in Appendix 1.

Analysis of PCOD or BOD can also be used to verify whether a correlation with COD can be demonstrated.

Bamboo must additionally meet the criteria for wood raw material (O4-O6)

✉ Declaration that only approved pesticides are used, Appendix 5 can be used.

✉ Analysis report from the producer of the bast fibre showing that the requirement has been met where water retting is used.

3.3.2 Animal fibres

O8 Harmful substances in unprocessed wool and other keratin fibres

The total content of the following substances must not exceed 0.5 ppm: γ-hexachlorocyclohexane (lindane), α-hexachlorocyclohexane, β-hexachlorocyclohexane, δ-hexachlorocyclohexane, aldrin, dieldrin, endrin, p,p'- DDT and p,p'-DDD.

The total content of the following substances must not exceed 0.5 ppm: cypermethrin, deltamethrin, fenvalerate, cyhalothrin and flumethrin.

The total content of the following substances must not exceed 2 ppm: diazinon, malathion, propetamphos, chlorfenvinphos, dichlorfenthion, chlorpyriphos, fenchlorphos.

The total content of the following substances must not exceed 2 ppm: diflubenzuron, triflumuron and dicyclanil.

The analysis shall be carried out on raw wool before wet treatment for each batch of wool that is used in the production of the Nordic Ecolabelled flooring.

The tests shall be in accordance with IWTO Draft Test Method 59 or the equivalent.

The requirement does not apply if the applicant can document which farmers have produced at least 75% of the weight of the wool or keratin fibres, and that the farmers can confirm that the substances mentioned in the criteria are not used in the relevant areas or on animals.

The requirement does not apply if the wool is organically certified.

Organic means wool produced in accordance with Council Regulation (EEC) No. 2092/91 on the organic production of agricultural products, or produced in the same way and under equivalent control measures. Examples are: KRAV, SKAL, IFOAM, IMO, KBA, OCIA, TDA, DEMETER.

✉ The tests shall be in accordance with IWTO Draft Test Method 59 or a declaration from the fibre producing farmer stating that the substances listed have not been used. Overview of the percentage of wool that this applies to or a valid certificate which shows that the wool is organic in accordance with European Council Regulation (2092/91/EEC) on the organic production of agricultural products or equivalent systems.

O9 Emissions from wool washing plants

COD emissions in scouring effluent must not exceed 20 g/kg unprocessed wool, expressed as an annual average, irrespective of whether the effluent is treated on-site/internally or off-site/externally.

When treated off-site, the COD discharge is calculated by multiplying the COD discharge from the scouring with the treatment plant's average cleaning effect.

Measuring of PCOD, TOC (total organic carbon) or BOD-7 (biochemical oxygen demand) can also be used if a correlation to COD is shown.

In addition, where the effluent is treated on-site:

- the pH value of the water that is discharged into the recipient watercourse must be 6-9 (unless the pH value in the recipient watercourse lies outside this range).
- the temperature of the water discharged into the recipient watercourse must be less than 40°C (unless the temperature of the recipient watercourse is higher).

Chemical oxygen demand (COD) must be analysed under ISO 6060 or another comparable method. The requirements for analysis laboratory and test methods are stated in Appendix 1.

✉ Description of how the effluent from wool washing plants is treated and how COD emissions are measured and monitored.

✉ Test report from the wool washing plant showing that the limit value for chemical oxygen demand (COD) is fulfilled.

✉ Reports from the wool washing plant showing measurements of pH and temperature in the effluent.

3.3.3 Synthetic fibres and synthetic polymers

The requirements apply to fibres and/or polymers that occur in the floor covering to a level of 5% or more by weight, and include:

- virgin synthetic fibres
- virgin synthetic polymers, for example in plastic flooring or as a backing material

Recycled fibres/polymers made from recovered raw material are exempted from these requirements.

If it were to become relevant to license synthetic fibres or polymers other than those contained in this section, Nordic Ecolabelling reserves the right to develop the criteria to include requirements equivalent to those in the Nordic Ecolabelling of Textiles, hides/skins and leather.

O10 Polyamide (nylon)

The annual average emissions to air of nitrous oxide (N_2O) from the manufacture of monomers must not exceed 10 g/kg manufactured polyamide 6 or 50 g/kg manufactured polyamide 6.6.

The requirements for analysis laboratory and test methods are stated in Appendix 1.

✉ Detailed information and/or test report from the manufacturer of the polyamide fibre, showing that the requirement is fulfilled on an annual basis by the manufacturing unit.

O11 Polyurethane

When manufacturing polyurethanes, isocyanate compounds must only be used in closed processes where recommended/prescribed safety equipment is worn.

Halogenated flame retardants must not be used.

✉ Declaration that the requirement is fulfilled. Appendix 5 can be used.

3.3.4 Requirement concerning all textile fibres

The requirement covers chemicals and chemical products that are used in the treatment of all types of fibres. Other chemicals/chemical products used at the plant, for example for cleaning production equipment, are not covered.

O12 Chemical additives in fibre production

None of the substances below may occur in any of the preparations/products/formulations used:

- alkylphenol ethoxylates (APEO)
- linear alkylbenzene sulphonates (LAS)
- dihydrogenated tallow dimethyl ammonium chloride (DHTDMAC)
- distearyl dimethyl ammonium chloride (DSDMAC)
- ditallow dimethyl ammonium chloride (DTDMAC)
- ethylenediaminetetraacetic acid (EDTA)
- diethylenetriamine pentaacetate (DTPA)

✉ Declaration from the fibre manufacturer that the requirement is fulfilled. Appendix 5 can be used.

3.3.5 Foam material

Foam material is used as a carrier and backing for many different types of floor covering, both on a roll and as tiles. The requirements below apply to foam material that makes up over 1% by weight of the floor covering, irrespective of the flooring material/type.

The requirement does not apply to foam material in packaging and protective material used during storage and transport, and that is not part of the floor covering.

O13 Emissions to water from production of foam plastic/foam rubber

Emissions of oxygen demanding substances to water from the production of foam plastic/foam rubber must be reduced by 90% measured as COD or TOC. The reduction may be achieved through on-site or off-site treatment. In the case of off-site treatment, the average treatment level of the effluent treatment plant may be used.

Chemical oxygen demand (COD) must be analysed under ISO 6060. The requirements for analysis laboratory and test methods are stated in Appendix 1.

✉ Description of how the effluent from foam plastic production is treated and how COD emissions are measured and monitored.

✉ Test report showing that the limit value for chemical oxygen demand (COD) is fulfilled.

O14 Vulcanised foam

Vulcanised foam may not be used on Nordic Ecolabelled floor coverings.

✉ Declaration from the applicant that the requirement is fulfilled. Appendix 6 can be used.

O15 Supplementary requirement for synthetic latex (SBR) and natural latex

The content of 1,3-butadiene must be less than 1 mg/kg latex.

The content of the PAHs below must not exceed a total of 0.2 mg/kg latex.

- Benzo[A]Pyrene, CAS no.: 50-32-8
- Benzo[E]Pyrene, CAS no.: 192-97-2
- Benzo[A]Anthracene, CAS no.: 56-55-3
- Dibenzo[A,H]Anthracene, CAS no.: 53-70-3
- Benzo[B]Fluoranthene, CAS no.: 205-99-2
- Benzo[J]Fluoranthene, CAS no.: 205-82-3
- Benzo[K]Fluoranthene, CAS no.: 207-08-9
- Chrysene, CAS no.: 218-01-9

The concentration of N-nitrosamines must not exceed 0.0005 mg/m^3 measured in a climate chamber.

The impurity limit of 1000 ppm does not apply in this requirement.

The requirements for analysis laboratory and test methods are stated in Appendix 1.

✉ Results of an analysis/test of the content in latex of 1,3-butadiene and the PAHs listed in the requirement, plus N-nitrosamines.

O16 Supplementary requirement for polyurethane foam

Tin in its organic form (tin bonded to a carbon atom) is not permitted.

CFC, HCFC, HFC (hydrofluorocarbons) or methylene chloride must not be used as a foaming agent.

Isocyanate compounds may only be used in closed processes were recommended/prescribed safety equipment is worn.

Production must not involve N,N-dimethylacetamide (DMAc).

✉ Declaration from the applicant that the requirement is fulfilled. Appendix 6 can be used.

3.4 Chemical requirements

The chemical requirements cover all chemicals and chemical products added to the floor covering or used in the manufacture of the floor covering, including surface treatments. Here, manufacture is defined as all manufacturing/treatment conducted by the manufacturer, but also by its suppliers of raw materials or constituent products. All the chemical requirements that are relevant for each flooring type must be fulfilled.

The requirements relate to areas such as adhesives, paints, stains, lacquers, impregnation, sealants, pigments, bleaching chemicals, binders, and so on. The requirements also apply to chemicals in the constituent parts of the flooring, such as manufactured board.

There are also specific chemical requirements for certain materials, in addition to the general chemical requirements below. These specific supplementary requirements appear in the section for the flooring material in question.

The following sections have specific supplementary requirements concerning chemicals:

- 3.3.4 Requirement concerning all textile fibres
- 3.5.2 Paints, colourants and pigments in textile flooring
- 3.5.3 Chemical requirements applicable only to surface treatment (applies to surface treatment of all flooring types, relevant requirements fulfilled)

For definition of the term" constituent substance", see section 1.1 Terms and definitions.

3.4.1 General chemical requirements

O17 Classification of chemical products

Chemical products used to manufacture Nordic Ecolabelled floor coverings must not be classified/labelled pursuant to the table below. The product must be classified in line with current legislation (CLP Regulation (EC) No 1272/2008 or the EU's Dangerous Preparations Directive 1999/45/EC as amended in 2008 or later).

Note that classification under the Dangerous Preparations Directive may only be used until 31 May 2015.

Chemical products for surface treatment are exempted from the requirement concerning the classification "Toxic to aquatic organisms/Dangerous to the environment" since these are regulated in a separate requirement, O29.

Adhesive products that contain isocyanates and/or formaldehyde are exempted from the requirement concerning the classification R40 (category 3)/H351 (Carc 2).

Classification under CLP Regulation 1272/2008		**Classification under Dangerous Preparations Directive 1999/45/EC 2008**
Hazard class and category	**Hazard phrases**	**Hazard class and risk phrases**
Toxic to aquatic organisms Category acute 1 Chronic 1-2	H400, H410, H411, H412	N with R50, R50/53, R51/53, R52/53
Hazardous to the ozone layer	H420	R59
Acute toxicity Category 1-3	H300, H310, H330, H301, H311, H331,	T+ with R26, R27, R28, R39 T with R23, R24, R25, R39, R48
Specific target organ toxicity (STOT) with single and repeated exposure STOT SE category 1-2 STOT RE category 1-2	H370, H371, H372, H373	T+ with R39 T with R39, R48 Xn with R68
Carcinogenic Carc 1A/1B/2	H350, H350i or H351	T with R45 and/or R49 (Carc 1 or Carc 2) or Xn with R40 (Carc 3)
Mutagenic Mut 1A/B/2	H340, H341	T with R46 (Mut 1 or Mut 2), Xn with R68 (Mut 3)
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362	T with R60, R61, R64, R33 (Repr 1 or Repr 2), Xn with R62, R63, R64, R33 (Repr 3)
Skin or respiratory sensitisation	Category 1, 1a or 1b with H334, Category 1, 1a or 1b with H317 or labelled as follows: "Contains (name of sensitising substance). May cause an allergic reaction."*	Xn with R42, Xi with R43

** Exemption from this risk phrase if it is due to the content of in-can preservatives, see also O19 concerning preservatives.*

✉ Declaration from the manufacturer of the chemical product, in accordance with Appendix 7. In addition, safety data sheets pursuant to prevailing European legislation for all chemical products.

O18 CMR substances

The chemical products used in the manufacture of Nordic Ecolabelled floor coverings must not contain chemical substances that are or may degrade into substances that are classified as carcinogenic (Carc), mutagenic (Mut) or toxic for reproduction (Rep), according to CLP Regulation (No) 1272/2008 or the EU's Dangerous Substances Directive 67/548/EEC as amended, see table below. Note that classification under the Dangerous Preparations Directive may only be used until 31 May 2015.

Classification under CLP Regulation 1272/2008		**Classification under Dangerous Preparations Directive 1999/45/EC 2008**
Hazard class and category	**Hazard phrases**	**Hazard class and risk phrases**
Carcinogenic Category Carc 1A/1B/2	H350, H350i, H351	T with R45 or R49 or Xn with R40
Mutagenic Mut 1A/B/2	H340, H341	T with R46 or Xn with R68
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362	T with R60 or R61. Or Xn with R62, R63 and/or R64

Adhesive products that contain isocyanates and/or formaldehyde with the classification R40 (category 3)/H351 (Carc 2) are exempted from the requirement.

✉ Declaration from the manufacturer of the chemical product, in accordance with Appendix 8. In addition, safety data sheets pursuant to prevailing European legislation for all chemical products.

O19 Isothiazolinones

The following preservatives are excluded from use in chemical products:

- Isothiazolinones at more than 500 ppm
- A blend (3:1) of CMIT/MIT (Chloromethylisothiazolinone CAS no. 26172–55-4 and Methylisothiazolinone CAS no. 2682-20-4) at more than 15 ppm
- Methylisothiazolinone at more than 200 ppm

✉ Calculation clearly showing that the requirement concerning isothiazolinones is fulfilled.

O20 Other substances excluded from use

The following substances are not permitted in Nordic Ecolabelled floor coverings or in chemicals and chemical products used in the manufacture of Nordic Ecolabelled floor coverings:

- Substances on the Candidate List*.
- Persistent, bioaccumulative and toxic (PBT) organic substances**.
- Very persistent and very bioaccumulative (vPvB) organic substances**.
- 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 following link:

http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf (Annex L, page 238 onwards)

- APEO – alkylphenol ethoxylates and other alkylphenol derivatives (substances that release alkylphenols on degradation).
- Halogenated organic substances***
- Phthalates
- Aziridine and polyaziridines
- Pigments and additives based on lead, tin, cadmium, chromium VI and mercury, or compounds of these. There is an exemption for chromium for dyeing textile fibres, see O24.
- Volatile organic compounds at more than 1% by weight

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

*** PBT and vPvB substances are defined in Annex XIII of REACH (Regulation (EC) No 1907/2006). Substances that meet, or substances that form substances that meet, the PBT or vPvB criteria are listed at http://esis.jrc.ec.europa.eu/index.php?PGM=pbt. Substances that are "deferred" or substances "under evaluation" are not considered to have PBT or vPvB properties.*

**** Halogenated organic paint pigments that meet the EU's requirements concerning colourants in food packaging under point 2.5 of Resolution AP (89) are exempted.*

✉ Declaration from the manufacturer of the chemical product, in accordance with Appendix 8. In addition, safety data sheets pursuant to prevailing European legislation for all chemical products.

O21 VOC in adhesives

Adhesives are permitted to contain no more than 3% by weight volatile organic compounds (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.

✉ Declaration from the manufacturer of the chemical product, in accordance with Appendix 8. In addition, safety data sheets pursuant to prevailing European legislation for all chemical products.

O22 Antibacterial substances and biocides

The following substances must not be added to fibres or to the finished floor covering for the purpose of achieving a disinfectant or antibacterial treatment or a disinfectant or antibacterial surface:

- Antibacterial substances (including silver ions, nanosilver and nanocopper) and/or
- Biocides in the form of pure active substances or as biocidal products.

✉ Declaration from the flooring manufacturer showing that the requirement is fulfilled. Appendix 10 can be used.

O23 Nanoparticles

Nanoparticles (from nanomaterial*) must not occur in chemical products or in the finished Nordic Ecolabelled floor covering. The following are exempt from the requirement.

- Pigments**
- Naturally occurring inorganic fillers***
- 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 is not considered a pigment, and is thus not covered by the requirement*

**** this applies to fillers covered by Annex V point 7 in REACH.*

***** this applies to traditional synthetic amorphous silica. Chemically modified colloidal silica may occur as long as the silica particles form an aggregate in the end product. For surface treated nanoparticles, the surface treatment must meet the chemical requirements in O20 (Classification of constituent chemical substances) and O22 (Other substances excluded from use).*

✉ The manufacturer must declare any nanomaterials that occur in the product.

Declaration in line with Appendix 8 from the manufacturer of the Nordic Ecolabelled floor covering and the manufacturer of each raw material.

3.4.2 Paints, colourants and pigments in textile flooring

The requirements below relate to the dyeing of yarn and fibres used in the manufacture of textile floor coverings by flooring manufacturers and their suppliers.

O24 Chromium mordants

Chromium mordants are not permitted.

✉ Declaration from the dyeworks that chromium mordants have not been used. Appendix 9 can be used.

O25 Metal complex dyes

Metal complex dyes are only permitted for the dyeing of wool or wool blend fibres. Emissions to water from treatment must not exceed:

- 5 mg/kg fibre for copper (Cu)
- 3 mg/kg fibre for chromium (Cr) and
- 5 mg/kg fibre for nickel (Ni)

Emissions of Cu and Ni are to be analysed in line with ISO 8288 and emissions of Cr are to be analysed in line with EN 1233 or equivalent methods. The requirements for analysis laboratory and test methods are stated in Appendix 1.

✉ Declaration from the dyeworks that metal complex dyes are not used and/or test reports showing fulfilment of the requirement. Appendix 9 can be used.

O26 Azo dyes

Azo dyes that may release any of the aromatic amines stated in the table below must not be used.

Azo dyes	**CAS no.**
4-aminobiphenyl	92-67-1
Benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphthylamine	91-59-8
o-aminoazotoluene	97-56-3
2-amino-4-nitrotoluene	99-55-8
p-chloraniline	106-47-8
2,4-diaminoanisole	615-05-4

4,4′-diaminodiphenylmethane	101-77-9
3,3′-dichlorobenzidine	91-94-1
3,3′-dimethoxybenzidine	119-90-4
3,3′-dimethylbenzidine	119-93-7
3,3′-dimethyl-4,4′-diaminodiphenylmethane	838-88-0
p-cresidine	120-71-8
4,4′-oxydianiline	101-80-4
4,4′-thiodianiline	139-65-1
o-toluidine	95-53-4
2,4-diaminotoluene	95-80-7
2,4,5-trimethylaniline	137-17-7
4-aminoazobenzene	60-09-3
o-anisidine	90-04-0
2,4-xylidine	95-68-1
2.6-xylidine	87-62-7

Azo dyes are to be analysed in line with EN 14362-1 and EN 14362-3. The requirements for analysis laboratory and test methods are stated in Appendix 1.

✉ Declaration from the dye manufacturer that these dyes are not used and/or a test report showing fulfilment of the requirement. Appendix 9 can be used.

O27 Allergenic dyes

The allergenic dyes listed in the table below must not be used.

Generic Name	**CAS no.**
Disperse Blue 1	2475-45-8
Disperse Blue 3	2475-46-9
Disperse Blue 7	3179-90-6
Disperse Blue 26	3860-63-7
Disperse Blue 35	12222-75-2
Disperse Blue 102	12222-97-8
Disperse Blue 106	12223-01-7
Disperse Blue 124	61951-51-7
Disperse Brown 1	23355-64-8
Disperse Orange 1	2581-69-3
Disperse Orange 3	730-40-5
Disperse Orange 37	12223-33-5
Disperse Orange 76	
Disperse Orange 149	85136-74-9
Disperse Red 1	2872-52-8
Disperse Red 11	2872-48-2
Disperse Red 17	3179-89-3
Disperse Yellow 1	119-15-3
Disperse Yellow 3	2832-40-8
Disperse Yellow 9	6373-73-5
Disperse Yellow 23	6250-23-3
Disperse Yellow 39	12236-29-2
Disperse Yellow 49	54824-37-2

✉ Declaration from the dyeworks that these dyes are not used and/or a test report showing fulfilment of the requirement. Appendix 9 can be used.

3.4.3 Chemical requirements applicable only to surface treatment

The requirements in this section apply to all surface treatment of floor coverings, irrespective of material/flooring type.

O28 Quantity applied and application method

The following is to be documented: number of coats, quantity applied (g/m²) and application method(s) used.

When calculating quantities applied, the following efficacy rates* are to be used:

- Automatic spray application, no recycling, 50%
- Automatic spray application with recycling, 70%
- Spray application, electrostatic, 65%
- Spray application, bell/disc, 80%
- Roller coating, Curtain coating, Vacuum coating, Dipping or Rinsing 95%

** The efficacy rates are model values. Other efficacy rates may be applied if they can be documented.*

✉ Number of coats, application method and quantity applied per coat per m² surface area. Appendix 10 can be used.

O29 Environmentally harmful products and substances in surface treatment systems

Chemical products used in surface treatment systems (e.g. fillers, oils, stains, lacquers) must fulfil one of the following two alternatives.

a) None of the chemical products are classified as environmentally harmful according to the table below.

or

b) The quantity of environmentally harmful substances applied in the surface treatment system may be no more than 100 g/m², calculated in a wet state. One of the formulas below is to be used to first calculate the total amount of environmentally harmful substances in the surface treatment system (%):

100*H410 + 10*H411 + H412

or

100*(R50/53) + 10*(R51/53) + (R52/53)

H410 is the concentration of substances classified as H410 (same method for R50/53) in percent

H411 is the concentration of substances classified as H411 (same method for R51/53) in percent

H412 is the concentration of substances classified as H412 (same method for R52/53) in percent

All environmentally harmful substances included in the unhardened chemical products are to be included in the calculation. Classification according to the table below.

Hazard class	Hazard category and hazard phrase in line with CLP Regulation 1272/2008	Hazard designations and risk phrases in line with EU Dangerous Substances Directive 67/548/EEC
Toxic to aquatic organisms	Chronic 1 with H410	N; R50-53
	Chronic 2 with H411	N; R51-53
	Chronic 3 with H412	R52-53

The quantity of environmentally harmful substances applied is then calculated as follows:

Applied quantity (g/m²) x proportion VOC in surface treatment (%)
/surface treatment efficacy

When calculating quantity applied, the same efficacy rates are used as those stated in O28.

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.

For tinting systems, a worst case calculation is made for the colour with the most tinting paste in the base paint containing the most environmentally harmful substances.

☒ Alternative a) requires a declaration that no chemical products used in the surface treatment are classed as environmentally harmful according to the table above. Appendix 10 can be used.

☒ Alternative b) requires a declaration from the manufacturer/supplier of the surface treatment product stating the content of environmentally harmful substances. Appendix 10 can be used. For each constituent classified substance, the concentration in the chemical product must be stated as a percentage by weight. Confidential details from the chemical manufacturer in the form of content declarations/formulations can be sent directly to Nordic Ecolabelling.

☒ Alternative b) requires details of the number of coats, the application method and the quantity applied per coat, stated as g/m² flooring. Appendix 10 can be used.

☒ Both alternatives a) and b) require safety data sheets pursuant to prevailing European legislation for all chemical products.

O30 Volatile organic compounds (VOC) – surface treatment systems only

Within each surface treatment system, the total content of volatile organic compounds (VOC) in surface treatment products must either:

a) be below 5% by weight in total, or

b) amount to a maximum of 2 g/m² treated surface in total.

The requirement relates to the total VOC in the chemical products with the chemical composition they have in wet form. If the products required dilutions, the calculation is to be based on the content in the dilutive product. When calculating quantity applied, the same efficacy rates are used as those stated in O27.

Volatile organic compounds (VOC) are defined 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.

The applied quantity of VOC according to alternative b) is calculated using the following formula:

Applied quantity (g/m²) x proportion VOC in surface treatment (%)
/surface treatment efficacy

☒ Alternative a) requires a declaration that the VOC content in each surface treatment system is below 5% by weight. Appendix 10 can be used.

☒ Alternative b) requires a declaration from the manufacturer/supplier of the surface treatment product stating the VOC content. Appendix 10 can be used. For each VOC, the concentration is to be stated as a percentage by weight. If necessary, details from the chemical manufacturer in the form of content declarations can be sent directly to Nordic Ecolabelling.

☒ Alternative b) requires details of the number of coats, the application method and the quantity applied per coat, stated as g/m² flooring. Appendix 10 can be used.

✉ Both alternatives a) and b) require safety data sheets pursuant to prevailing European legislation for all chemical products.

O31 UV lacquering

Hexanediol diacrylate (HDDA) CAS no. 13048-33-4 must not occur in UV lacquers.

✉ Appendix 10, duly completed and signed by the chemical manufacturer.

3.5 Indoor climate

Alternative 1

O32 Emissions from the floor covering (deleted if O33-O34 are introduced)

The floor covering is to be tested in accordance with CEN/TS 16516, ISO 16000-3/-6/-9/-10 or an equivalent method. Sampling is to be carried out by an accredited third-party.

Emissions from Nordic Ecolabelled floor coverings must meet the emission levels expressed either in mg/m²h or mg/m³ as set out in the table.

Substances or groups of substances	Limit value after 28 days in mg/m²h*	Limit value after 28 days in mg/m³ *
TVOC (C6-C16)	< 0.2	< 0.16
Formaldehyde in textile flooring Formaldehyde in other flooring	< 0.005 < 0.05	< 0.01 < 0.04
Carcinogenic substances**	< 0.005	< 0.004

** Conversion between mg/m²h and mg/m³, plus requirements for analysis laboratory and test methods are described in Appendix 1.*

*** Classified as Carc. 1A or 1B, Annex VI, CLP Regulation 1271/2008*

Other analysis methods can be accepted if they are judged to be equivalent by an independent and competent body.

✉ Test report showing that the limits in the table above have been met. A valid certificate from one of the following indoor climate labelling schemes may be used as documentation: M1 after 01.07.2014 and GUT (for textile flooring). The testing standard used, the laboratory that conducted the analysis and the accreditation of the analysis laboratory by an independent third party must be clearly stated, see Appendix 1.

✉ A certificate and supporting test report from other indoor climate labelling schemes, such as Dansk Indeklimamærkning, may be used as verification/documentation if an independent expert confirms that the certificate from that indoor climate labelling scheme fulfils the requirements.

Alternative 2.

O33 Formaldehyde in wood-based board in flooring (deleted if O32 is introduced)

Manufactured board in flooring that contains formaldehyde-based additives or substances that emit formaldehyde must fulfil a) or b) below.

Nordic Ecolabelled manufactured board already meets the requirements. In this case, state the name and license number of the manufactured board.

a) The average content of free formaldehyde must not exceed 5 mg formaldehyde/100 g dry substance for MDF board and 4 mg/100 g dry substance for other types of manufactured board in accordance with the current version of EN 120 or an equivalent method approved by Nordic Ecolabelling, see Appendix 1.

The requirements apply to wood-based board with a moisture content of H = 6.5%.

If the board has a different moisture content within the range 3-10%, the measured perforator value must be multiplied by the factor F, which is calculated using the following formula:

For chipboard: F = -0.133 H + 1.86

For MDF panels: F = -0.121 H + 1.78

b) The average emission of formaldehyde must not exceed 0.124 mg formaldehyde/m^3 air for MDF panels and 0.07 mg formaldehyde/m^3 air for other types of manufactured board in accordance with the current version of EN 717-1 or an equivalent method approved by Nordic Ecolabelling, see Appendix 1.

✉ Analysis report, including measurement methods, measurement results and measurement frequency. It must be clearly stated which testing standard was used, which laboratory conducted the analysis, and that the analysis laboratory is an independent third party, see Appendix 1.

O34 Formaldehyde in textile flooring (deleted if O32 is introduced)

Textile flooring that contains formaldehyde-based additives or substances that emit formaldehyde must fulfil the following:

The average emission of formaldehyde must not exceed 0.01 mg formaldehyde/m^3 air in accordance with the current version of EN 717-1 or an equivalent method approved by Nordic Ecolabelling, see Appendix 1.

✉ Analysis report, including measurement methods, measurement results and measurement frequency. It must be clearly stated which testing standard was used, which laboratory conducted the analysis, and that the analysis laboratory is an independent third party, see Appendix 1.

O35 Cleaning quality

Textile floor coverings are to be tested for cleaning in accordance with INSTA 800 and achieve a dust index level of 5.

✉ Test report showing that the requirement is fulfilled.

3.6 Energy requirements

Energy consumption is calculated as an annual average. The following delimitations apply for what is included in the energy calculation:

- Electricity and fuel consumed in drying and sawing is included in the calculation for parquet flooring, bamboo flooring and solid wood floor.
- For flooring that includes wood-based board in its structure, the energy consumed in the manufacture of the board is to be included.
- For other flooring, the only thing included is the energy used in the final manufacturing of the flooring/in the flooring factory.

At least 95% by weight of the raw materials in the flooring must be included in the calculation of energy consumption. Energy consumption in the manufacture of adhesives and lacquers used in the manufacture of the flooring is not included in the calculation.

For energy, Nordic Ecolabelling has chosen the unit kWh/m^2, but this can be converted as follows: 1 kWh = 3.6 MJ.

O36 Energy consumption for Nordic Ecolabelled floor coverings

An energy calculation is to be made, and the total must amount to at least:

$$E = \frac{A}{20} + (5 - \frac{B}{3}) + (5 - \frac{C}{7})$$

- E shall be at least 11.0 for solid wood flooring and laminate flooring
- E shall be at least 8.0 for linoleum flooring, parquet flooring, bamboo flooring and cork flooring
- E shall be at least 8.5 for textile flooring and plastic flooring.

The following applies for the individual energy components:

Environmental parameters	Requirement/limit value
A = Proportion of renewable fuel (%)	—
B = Electricity consumption (kWh/m^2)	Maximum 15 kWh/m^2
C = Fuel consumption (kWh/m^2)	Maximum 35 kWh/m^2

Energy consumption relates to electricity purchased from an external supplier.

If the manufacturer has surplus energy and sells this in the form of electricity, steam or heat, the amount sold is deducted from the fuel consumption figure. Only fuel that is actually consumed in the manufacture of the floor coverings is to be included in the calculation.

The energy content of different fuels can be found in Appendix 12.

☒ Enclose the calculation of E as set out above.

☒ State which types of fuel have been used in the manufacture of the floor covering over the past year, and which fuels are renewable. State how much electricity has been used and how much flooring (m^2) has been produced over the past year. Appendix 11 can be used.

3.7 Waste requirement

O37 Handling of waste and production waste

The flooring manufacturer shall sort waste at source into the fractions that arise during production, including production waste. Furthermore, a plan for separating waste must be drawn up, stating waste fractions and describing how the waste is dealt with (e.g. recycling, landfill and incineration).

Hazardous waste must be treated and dealt with in accordance with the regulations applicable in the country of manufacture.

☒ Waste plan featuring waste fractions and waste recipients. Declaration of hazardous waste, if applicable, and a statement on how hazardous waste is handled in accordance with the regulations applicable in the country of manufacture.

3.8 Functional requirements

O38 Durability

Only the requirements associated with the specific type of flooring have to be fulfilled.

If the flooring has been tested according to a test method other than what is specified below, this may be acceptable if the test methods are comparable in the opinion of an independent third party.

All Nordic Ecolabelled floor coverings must achieve at least:

- class 22+ for floor coverings intended for private use
- class 33 for floor coverings intended for professional/public use, see table below.

Semi-hard flooring, textile flooring and laminate flooring is to be tested and classified in accordance with the standards EN 14041 and ISO 10874 or EN 12104 (cork tiles).

Wood flooring, including solid wood flooring, factory lacquered wood flooring and parquet flooring, is to be tested and classified for durability/wear resistance in accordance with EN 14354, EN 335 or EN 438.

Textile flooring is to be classified in accordance with EN 1307 (textile flooring with pile), EN 15114 (textile flooring without pile) or EN 1470 (needle-pile carpets).

Area of use	**Class of use**	**Intensity of use**
Private use/Domestic	21	Moderate/light
	22	General/average
	22+	General
	23	Hard
Professional/public use/offices and commercial premises	31	Moderate
	32	General
	33	Hard
	34	Very hard

The requirements for testing institutes and test methods are stated in Appendix 1.

✉ Test report from an independent testing institute that the requirement is fulfilled.

O39 Product information

The following product information is to be enclosed with the Nordic Ecolabelled floor covering:

- Recommended subfloor for the floor covering.
- Recommended upper limit for the subfloor's relative humidity and temperature when laying the floor covering.
- Which adhesive is recommended for joining the flooring together and gluing to the subfloor. If there are suitable Nordic Ecolabelled adhesives, these are to be recommended. Recommended methods for laying and joining the flooring are also to be provided.
- If the flooring is to be welded together, a method for this is to be stated.
- Recommended cleaning method including cleaning products. If there are suitable Nordic Ecolabelled cleaning products, these are to be recommended.
- Recommended maintenance methods, including maintenance products. If there are suitable Nordic Ecolabelled maintenance products, these are to be recommended.
- Treatment is to be recommended for oiled and untreated flooring (type/quantity of oil or lacquer) in order to achieve the intended durability.
- The flooring's areas of use are to be stated. See classes in requirement O38.
- The flooring manufacturer is to inform the customer about how the service life of the flooring can be extended through renovation, e.g. sanding and surface treatment.

✉ Enclose a copy of the product information given to customers.

O40 Wet room approval

Floor coverings marketed and sold for wet rooms are to be approved for their intended use in wet rooms according to the national industry standard:

- approved as a surface layer in wet rooms and/or
- approved as a waterproof barrier in wet rooms, (acting as a barrier behind ceramic materials and natural stone)

Installation instructions tailored to wet rooms are to accompany the flooring and be made available on the manufacturer's website.

✉ Approval according to national industry standards.

✉ Installation instructions that accompany the flooring and are available on the website.

4 Quality and regulatory requirements

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

If the manufacturers 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.

O41 Legislation and regulations

The licensee must guarantee adherence to safety regulations, working environment legislation, environmental legislation and conditions/concessions specific to the operations at all sites where the Nordic Ecolabelled product is manufactured.

No documentation is required, but Nordic Ecolabelling may revoke the licence if the requirement is not fulfilled.

✉ Declaration from the licensee that the requirement is met, and details of the regulatory authority.

O42 Nordic Ecolabel licence person

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

✉ A chart of the company's organizational structure detailing who is responsible for the above.

O43 Documentation

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

🔑 Checked on site.

O44 Quality of floor coverings

The licensee must guarantee that the quality of the production of the Nordic Ecolabelled floor covering 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 floor covering.

O45 Planned changes

Written notice must be given to Nordic Ecolabelling of planned changes in products and markets that have a bearing on Nordic Ecolabel requirements.

✉ Procedures detailing how planned changes in products and markets are handled.

O46 Unplanned nonconformities

Unplanned nonconformities that have a bearing on Nordic Ecolabel requirements must be reported to Nordic Ecolabelling in writing and journalled.

✉ Procedures detailing how unplanned nonconformities are handled.

O47 Traceability

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

✉ Description of/procedures for the fulfilment of the requirement.

O48 Take-back system

Relevant national regulations, legislation and/or agreements within the sector regarding the recycling systems for products and packaging shall be met in the Nordic countries in which the Nordic Ecolabelled floor covering are marketed.

✉ Declaration from the applicant regarding adherence to existing recycling/take-back agreements.

O49 Marketing

Marketing of the Nordic Ecolabelled floor covering must comply with "Regulations for the Nordic Ecolabelling of products" 22 June 2011 or later versions.

✉ Appendix 1 duly completed.

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 floor covering is ecolabelled.

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

Design of the Nordic Ecolabel

Design of the Nordic Ecolabel:



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

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

Follow-up inspections

Nordic Ecolabelling may decide to check whether the floor covering 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 floor covering does not meet the requirements.

How long is a licence valid?

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

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

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

New criteria

- New
- Even more

Appendix 1 Laboratories and methods for testing and analysis

Requirements for testing and analysis laboratories

Sampling is to be carried out in a competent manner. The analysis laboratory/testing institute must be impartial and competent

If accreditation is not separately required, the testing and/or analysis laboratory shall fulfil the general requirements of standard EN ISO 17025 on general requirements for the competence of testing and calibration laboratories or have official GLP status.

The applicant's own testing laboratory may be approved for analysis and testing if:

- the authorities monitor the sampling and analysis process, or if
- the manufacturer has a quality management system encompassing sampling and analysis and has been certified to ISO 9001 or ISO 9002, or if
- the manufacturer can demonstrate agreement between a first-time test conducted at the manufacturer's own laboratory and testing carried out in parallel at an independent test institute, and that the manufacturer takes samples according to a set sampling plan.

Emissions to water, oxygen demanding substances (COD/TOC/BOD)

Analysis method: Oxygen demanding substances must be analysed in line with the international standard ISO 6060 Water quality-determination of the chemical oxygen demand. If another analysis method is used, the licence applicant must show that it is equivalent. Analysis of PCOD or BOD can also be used to verify whether a correlation with COD can be demonstrated. The measurement method for TOC is ISO 8245 Guidelines for the determination of total organic carbon (TOC) and dissolved organic carbon (DOC).

Sampling frequency: Emissions of oxygen demanding substances must be calculated as an annual average and based on at least one representative 24-hour measurement per week. Alternatively a sampling frequency approved by the authorities can be accepted.

Sampling: Water samples must be taken once the process wastewater has been treated in an internal purification plant, if available. The flow at sampling must be shown. If the process wastewater is treated externally together with other effluent, the documented treatment/efficiency level of the external treatment plant must be deducted from the analysis result. Analyses must be carried out on unfiltered and unsedimented samples in line with the international standard ISO 6060.

Metal complex dyes

Analysis method: Emissions of copper (Cu) and nickel (Ni) must be analysed in line with ISO 8288. Emissions of chromium (Cr) must be analysed in line with EN 1233 or using equivalent methods.

Harmful substances in unprocessed wool and other keratin fibres

Sampling and analysis of the specified substances must be carried out according to IWTO (Draft) Test Method 59.

Azo dyes

Analysis method: Standard EN 14362-1 for analysing aromatic amines derived from azo colourants in textile fibres. Standard EN 14362-3 describes a supplementary method for the determination of certain aromatic amines (aniline and 1,4-phenylenediamine) derived from azo colourants.

Polyester
Analysis method: The antimony content must be determined through the method of direct determination by atomic absorption spectrometry. The analysis must be carried out on the raw fibre before wet treatment.

Acrylic
Analysis method: Emissions of acrylonitrile must be measured and analysed through extraction with boiling water and quantification with capillary gas-liquid chromatography.

Butadiene in latex
Analysis method: Sampling with headspace sampler. The sample is pulverised and weighed. Analysis with gas chromatography and detection with a flame ionisation detector.

N-nitrosamines
Sampling: A test report completed in line with the chamber test method ENV 13419-1 must be presented. Sampling must be carried out within a week of the foam being produced. The latex sample must be wrapped individually in aluminium foil and vacuum packed in polythene. The wrapped sample must be kept at room temperature for at least 24 hours before being unwrapped and immediately placed in an environmental chamber.

Testing conditions: The latex sample is placed in a holder for the test substance that allows contact with the air on all sides. The environmental conditions of the chamber must comply with ENV 13419-1. For the test results to be comparable, the area specific ventilation rate (q=n/l) must be 1 and the ventilation rate must be within the range 0.5-1. Taking of air samples begins 24 hours and ends no later than 30 hours after the test substance being placed in the chamber.

The following method must be applied for taking and analysing the air samples: Hauptverband der gewerblichen Berufsgenossenschaften ZH ISO 1/120.23 (or equivalent).

Test methods emissions

Emissions from the floor covering
Emissions from the floor covering must be tested in line with the following relevant standards or equivalent methods:

- ISO 16000-3:2001 Indoor air – Part 3: Determination of formaldehyde and other carbonyl compounds –Active sampling method
- EN ISO 16000-6:2011 (E) Indoor air – Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TAsorbent, thermal desorption and gas chromatography using MS or MS-FID
- EN ISO 16000-9:2006, Indoor air –Part 9: Determination of the emission of volatile organic compounds from building products and furnishing – Emission test chamber method
- EN ISO 16000-10:2006 Indoor air – Part 10: Determination of the emission of volatile organic compounds from building products and furnishing – Emission test cell method
- CEN/TS 16516:2013 Construction products – Assessment of release of dangerous substances – Determination of emissions into indoor air

Other analysis methods can be accepted if the method/methods are judged to be equivalent by an independent and competent body/testing laboratory or similar.

Conversion between emission rate and concentration in a model room
SP Technical Research Institute of Sweden has drawn up a report for the Norwegian Green

Building Council (NGBC) which compares emissions requirements at M1 level with other emission tests[2]. Examples of conversion between the different tests are shown.

Information from this report is used as the basis for converting the requirement limits for E (emission rate, mg/m2h) to C (concentration in the model room, mg/m3) for requirement O34. The conversion assumes that the sampling is carried out in line with ISO 16000-9 or -10 at a temperature of 23 ± 2°C and a relative humidity of 50 ± 5%. The following formula is used:

$$C = \frac{E}{q} = \frac{EA}{nV}$$

C = concentration of a VOC in the model room (mg/m^3)

E = area specific emission rate (mg/m^{2}h)

q = area specific air flow rate (m^3/m^{2}h)

A = area of sample in the model room (m^2)

n = air exchange rate, in changes per hour

V = volume of the model room, in m^3

SP's report states that if a measurement is taken in line with ISO 16000-9 or -10, the concentration is calculated based on a model room with a volume of 17.4 m^3 and an air exchange rate of 0.5 h^{-1}. The floor area is 7 m^2 and the room height 2.4 to 2.5 m. This means that for flooring products q, "area specific air flow rate" is 1.25 m^3/m^{2}h. The conversion in O34 is carried out on the basis of these figures. Since 1 January 2014, M1 has referred on its website[3] to a model room of 30 m^3, but for floor coverings the ratio will remain the same[4]. The floor area is 12 m^2, making q 1.25. This change to the model room is in line with the standard CEN/TS 16516:2013.

It is worth noting that q varies depending on how much space the product is assumed to occupy in the model room. For example, it is different for floor and wall products (in line with ISO 16000-9 and -10). If converting emission rate (E) to concentration in the model room (C) for a wall product, q = 0.4 m^3/m^{2}h. In other words, C will be roughly 3 times higher for a wall product than for a flooring product. It is important to be aware of this for products that can be used for both walls and flooring, e.g. manufactured board.

Formaldehyde in wood-based board

To determine the content of free formaldehyde the latest applicable European standard for the perforator method must be used. Subsequently the EN 120 standard applicable at the time must be applied until the method is ultimately replaced by another EN method. Other test methods such as JIS A 1460 or equivalent can be used on application to Nordic Ecolabelling. It must be clearly stated which test method has been used and if conversion factors have been used, this must be documented.

European standard EN 717-1 is recommended as an appropriate chamber method for wood-based board. Subsequently the EN 120 standard applicable at the time for determining reference emission values must be applied. Other test methods such as ASTM D6007-2 or equivalent can be used on application to Nordic Ecolabelling. It must be stated which method has been used and if conversion factors have been used, this must be documented.

[2] Emission test methods in BREEAM-NOR and comparisons with other emission test methods, SP Technical Research Institute of Sweden, 2013, http://ngbc.no/sites/default/files/SP-rapport%20om%20emisjonskrav%20i%20BREEAM-NOR%20vs%20andre%20ordninger_3.pdf

[3] www.rakennustieto.fi

[4] Correspondence with SP Technical Research Institute of Sweden, January 2014

Appendix 2 Declaration of contents of plastic materials

This declaration shall be completed and signed by the floor coverings manufacturer.

Manufacturer/supplier
Name of the product

The table below shall give a description of:

- The materials involved and the percentage composition of the material in the floor and the name of all the suppliers of materials.'
- The function of every material/component (for example fillers and surface treatment agents).

Nordic Ecolabel will also accept complete worksheets or similar from the applicant as long as all required information is given.

Supplier	**Material/component**	**Function**	**Weight in kg**	**Weight %**

Is the flooring free from chlorinated plastics
(PVC/vinyl and PVDC/polyvinylidene chloride)? ☐ Yes ☐ No

Manufacturer's/supplier's signature

Date	Company
Signature by contact person	
Name of contact person	Phone

Appendix 3 a Specification of wood and bamboo raw materials (supplier)

Manufacturer of flooring:
Product/wood/bamboo raw material:
Manufacturer/supplier of wood/bamboo raw material:

For the documentation of wood raw material:

- Type of wood and geographical origin (country/state and region/province).

The following table can be used if a supplier supplies more than one product:

Component/part of flooring*	**Supplier of wood/bamboo raw material**	**Type of wood/bamboo(in a nordic language)**	**Geographical origin (country/state and region/province).**

** The column is filled in by the manufacturer of flooring*

Are the wood or bamboo raw materials treated with pesticides classified by WHO as type 1A and/or type 1B after felling? ☐ Yes ☐ No

Signature of supplier:

Date	Company
Signature by contact person	
Name of contact person	Phone

Appendix 3b Basis for calculation of certified amount wood or bamboo raw material

To verify that, at least 70% of the wood and bamboo material, on an annual basis, shall be derived from areas where forestry operations are certified pursuant to a forestry standard and certification system that meet the criteria stated in Appendix 4 the:

- Table and calculation below, shall be filled in by the manufacturer of floor coverings.
- Documentation shall be submitted, to verify that certified wood is delivered to the manufacturer of the Nordic Ecolabelled product. For example a copy of a contract and/or specified invoices.

Financial figures are not relevant and are not necessary to be cleared.

Supplier	**Type of wood**	**Amount***	**Geographical origin**	**Forest standard. Type of certification management system (FSC, PEFC)**	**Quantity (%) of timber from certified forests used in the product**

**Either volume or weight can be used as long as the same unit is used all through the table.*

The amount of timber/bamboo derived from certified forests = timber/bamboo derived from certified forests/total amount timber/bamboo in the floor covering.

Signature of manufacturer:

Date	Company
Signature by contact person	
Name of contact person	Phone

Appendix 4 Directions for forestry certification

Nordic Ecolabelling sets requirements on the standards to which forestry is certified. These requirements are described below. Each individual national forestry standard and each certification system is reviewed by Nordic Ecolabelling as to fulfilment of the requirements. When a forestry standard is revised, it is re-reviewed.

Requirements on forestry standards

- The standard must balance economic, ecological and social interests and comply with the Rio Declaration's forestry principles, Agenda 21 and the Forest Principles, and respect relevant international conventions and agreements.
- The standard must contain absolute requirements and promote and contribute towards sustainable forestry. Nordic Ecolabelling places special emphasis on the standard including effective requirements to protect the forest from illegal felling and that the requirements protect the biodiversity of the forest.
- The standard must be available to the general public. The standard must have been developed in an open process in which stakeholders with ecological, economic and social interests have been invited to participate.

The requirements related to forestry standards are formulated as process requirements. The basis is that if stakeholders agree on the economic, social and environmental aspects of the forestry standard, this safeguards an acceptable requirement level.

If a forestry standard is developed or approved by stakeholders with ecological, economic and social interests, the standard may maintain an acceptable standard. Accordingly, Nordic Ecolabelling requires that the standard balances these three interests and that representatives from all three areas are invited to participate in development of the forestry standard.

The standard must set absolute requirements that must be fulfilled for the certification of the forestry. This ensures that the forest management fulfils an acceptable level regards the environment. When Nordic Ecolabelling requires that the standard shall "promote and contribute towards sustainable forestry", the standard must be assessed and revised regularly to initiate process improvement and successively reduce environmental impact.

Requirements on certification system

- The certification system must be open, have significant national or international credibility and be able to verify that the requirements in the forestry standard are fulfilled.

Requirements on certification body

- The certification body must be independent, credible and capable of verifying that the requirements of the standard have been fulfilled. The certification body must also be able to communicate the results and to facilitate the effective implementation of the standard.

The purpose of certification is to ensure that the requirements regarding forestry standards are fulfilled. The certification system must be designed to verify that the requirements of the forest standard are fulfilled. The method used for certification must be repeatable and

applicable to forestry. Certification must be in respect to a specific forestry standard. The forest must be inspected prior to certification.

Requirements on Chain of Custody (CoC) certification

- Chain of Custody certification must be issued by an accredited, competent third party (as for forest certification).
- The system shall stipulate requirements regarding the chain of custody that assure traceability, documentation and controls throughout the production chain.
- If recycled fibre, wood shavings or sawdust are used, the pulp manufacturer must verify that this originates from recycled materials.

Requirements on organic production

With regard to certified organic fibre raw material or production that is in the transition to organic production, the vegetable raw materials must be produced and checked in accordance with Council Regulation (EEC) No 2092/91 or 834/2007, or produced and checked in an equivalent way according to an equivalent regulatory system such as KRAV, SKAL, IMO or OCIA.

NB! Bamboo may either be certified according to a sustainable forestry standard or organic production.

Documentation

Copy of forestry/ fiber raw material standard, name, address and telephone number to the organization who has worked out the standard and audit rapports.

References to persons who represents stakeholders with ecological, economic and social interests who have been invited to participate.

Nordic Ecolabelling may request further documents to examine whether the requirements of the forestry standard and certification system in question can be approved.

Appendix 5 Textile fibers and textile floorings

This declaration shall be completed and signed by the fibre supplier.

Manufacturer/supplier
Name of the product

Req. O7 Flax, bamboo and other bast fibres

Are all pesticides used, permitted under the European Pesticides Regulation (1107/2009/EC)? ☐ Yes ☐ No ☐ Not applicable

Req. O12 Chemical additives in fibre production

Does any of the substances below occur in any of the preparations/ products/formulations used in fibre production? ☐ Yes ☐ No ☐ Not applicable

- alkylphenol ethoxylates (APEO)
- linear alkylbenzene sulphonates (LAS)
- dihydrogenated tallow dimethyl ammonium chloride (DHTDMAC)
- distearyl dimethyl ammonium chloride (DSDMAC)
- ditallow dimethyl ammonium chloride (DTDMAC)
- ethylenediaminetetraacetic acid (EDTA)
- diethylenetriamine pentaacetate (DTPA)

Signature of fibre supplier:

Date	Company
Signature by contact person	
Name of contact person	Phone

Appendix 6 Foam materials

This declaration shall be completed and signed by the foam material supplier.

Manufacturer/supplier
Name of the product

Req. O14 Vulcanised foam

Is vulcanised foam used on Nordic Ecolabelled floor coverings? ☐ Yes ☐ No

Req. O16 Polyurethane foam

Is tin in its organic form (tin bonded to a carbon atom) used? ☐ Yes ☐ No

Is CFC, HCFC, HFC (hydrofluorocarbons) or methylene chloride used as a foaming agent? ☐ Yes ☐ No

Is N,N-dimethylacetamide (DMAc) used in production? ☐ Yes ☐ No

Describe the expansion process: _____

_____

_____

Are isocyanates used in a closed process? ☐ Yes ☐ No

Is prescribed protective equipment used? ☐ Yes ☐ No

Are requirements from authorities regarding the use of icocyanates followed? ☐ Yes ☐ No

If no, please explain:

_____

_____

Signature of foam material supplier:

Date	Company
Signature by contact person	
Name of contact person	Phone

Appendix 7 Classification of chemical products

The chemical requirements cover all chemicals and chemical products added to the floor covering or used in the manufacture of the floor covering, including surface treatments. Here, manufacture is defined as all manufacturing/treatment conducted by the manufacturer, but also by its suppliers of raw materials or constituent products.

This declaration is completed and signed by the chemical supplier 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.

Product name:
Manufacturer/supplier:
Product's function/product group (e.g. adhesive, paint):

Req. O17 Classification of chemical products

Is the product/raw material classified according to the table below? ☐ Yes ☐ No

If Yes, which classification?

Classification under CLP Regulation 1272/2008		**Classification under Dangerous Preparations Directive 1999/45/EC 2008**
Hazard class and category	**Hazard phrases**	**Hazard class and risk phrases**
Toxic to aquatic organisms Category acute 1 Chronic 1-2	H400, H410, H411, H412	N with R50, R50/53, R51/53, R52/53
Hazardous to the ozone layer	H420	R59
Acute toxicity Category 1-3	H300, H310, H330, H301, H311, H331,	T+ with R26, R27, R28, R39 T with R23, R24, R25, R39, R48
Specific target organ toxicity (STOT) with single and repeated exposure STOT SE category 1-2 STOT RE category 1-2	H370, H371, H372, H373	T+ with R39 T with R39, R48 Xn with R68
Carcinogenic Carc 1A/1B/2	H350, H350i or H351	T with R45 and/or R49 (Carc 1 or Carc 2) or Xn with R40 (Carc 3)
Mutagenic Mut 1A/B/2	H340, H341	T with R46 (Mut 1 or Mut 2), Xn with R68 (Mut 3)
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362	T with R60, R61, R64, R33 (Repr 1 or Repr 2), Xn with R62, R63, R64, R33 (Repr 3)
Skin or respiratory sensitisation	Category 1, 1a or 1b with H334, Category 1, 1a or 1b with H317 or labelled as follows: "Contains (name of sensitising substance). May cause an allergic reaction."	Xn with R42, Xi with R43

Chemical products for surface treatment are exempted from the requirement concerning the classification "Toxic to aquatic organisms/Dangerous to the environment" since these are regulated in a separate requirement, O29.

Adhesive products that contain isocyanates and/or formaldehyde are exempted from the requirement concerning the classification R40 (category 3)/H351 (Carc 2).

Signature of chemical product supplier:

Date	Company
Signature by contact person	
Name of contact person	Phone

Appendix 8 Declaration on the contents of chemical products and/or flooring

The chemical requirements cover all chemicals and chemical products added to the floor covering or used in the manufacture of the floor covering, including surface treatments. Here, manufacture is defined as all manufacturing/treatment conducted by the manufacturer, but also by its suppliers of raw materials or constituent products.

This declaration is completed and signed by the chemical supplier 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.

Product name:
Manufacturer/supplier:
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 (0.01% 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% 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.

For two-component products it is the added ingredients in the separate components that shall comply with the requirement. Alternatively, if it can be documented that protective equipment was worn when the hardener was mixed with the paint/varnish and the finished two-component product was applied in a closed system, the requirement may apply to the hardened product.

Req. O18 CMR sustances

Does the chemical product contain any of the following CMR substances? ☐ Yes ☐ No

- Carcinogenic category 1A/1B (Carc with R45/H350 and/or Carc R49/H350i)
- Mutagenic category 1A/1B (Mut with R46/H340)
- Toxic for reproduction category 1A/1B (Rep with R60/H360F and/or R61/H360)

Does the chemical product contain any of the CMR substances? ☐ Yes ☐ No

- Carcinogenic category 2 (Carc with R40/H351)
- Mutagenic category 2 (Mut with R68/H341)
- Toxic for reproduction category 2 (Rep with R62/H361 and/or R63/H361)

If Yes specify the quantity as a percentage by weight of each substance:

% by weight: _____

Is the declaration about CMR substances done for a hardened two component product? ☐ Yes ☐ No

If yes, the chemical product is part of a two component product, is safety equipment used when the hardener is mixed with the paint/lacquer and is the application of the finished two-component product done in a closed system? ☐ Yes ☐ No

Req. O20 Other substances excluded from use

Does the chemical product contain any of the following:

- Substances on the Candidate List*. ☐ Yes ☐ No
- Persistent, bioaccumulative and toxic (PBT) organic substances**. ☐ Yes ☐ No
- Very persistent and very bioaccumulative (vPvB) organic substances**. ☐ Yes ☐ No
- 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. ☐ Yes ☐ No
- APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation). ☐ Yes ☐ No
- Halogenated organic substances*** ☐ Yes ☐ No
- Phthalates? ☐ Yes ☐ No
- Aziridine and polyaziridines ☐ Yes ☐ No
- Pigments and additives based on lead, tin, cadmium, chromium VI and mercury, or compounds of these. There is an exemption for chromium for dyeing textile fibres, see O24. ☐ Yes ☐ No
- Volatile organic compounds at more than 1% by weight ☐ Yes ☐ No

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

*** PBT and vPvB substances are defined in Annex XIII of REACH (Regulation (EC) No 1907/2006). Substances that meet, or substances that form substances that meet, the PBT or vPvB criteria are listed at http://esis.jrc.ec.europa.eu/index.php?PGM=pbt. Substances that are "deferred" or substances "under evaluation" are not considered to have PBT or vPvB properties.*

**** Halogenated organic paint pigments that meet the EU's requirements concerning colourants in food packaging under point 2.5 of Resolution AP (89) are exempted.*

Req. O21 VOC in adhesives

Does the adhesive contain VOC (volatile organic compounds) in more than 3% by weight? ☐ Yes ☐ No

Req. O22 Antibacterial substances and biocides

Has any of the following substances been added to fibres or to the finished floor covering for the purpose of achieving a disinfectant or antibacterial treatment or a disinfectant or antibacterial surface? ☐ Yes ☐ No

- Antibacterial substances (including silver ions, nanosilver and nanocopper) and/or
- Biocides in the form of pure active substances or as biocidal products.

Req. O23 Nanoparticles

Does any chemical product used or in the finished Nordic Ecolabelled floor covering contain nanoparticles (from nanomaterial*)? ☐ Yes ☐ No

The following are exempt from the requirement.

- Pigments**
- Naturally occurring inorganic fillers***
- 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 is not considered a pigment, and is thus not covered by the requirement*

**** this applies to fillers covered by Annex V point 7 in REACH.*

***** this applies to traditional synthetic amorphous silica. Chemically modified colloidal silica may occur as long as the silica particles form an aggregate in the end product. For surface treated nanoparticles, the surface treatment must meet the chemical requirements in O20 (Classification of constituent chemical substances) and O22 (Other substances excluded from use).*

Date	Company
Signature by contact person	
Name of contact person	Phone

Appendix 9 Paints, colourants and pigments in textile flooring

This declaration shall be completed and signed by the dye manufacturer.

Manufacturer/supplier
Name of the product

Req. O24 Chromium mordants

Is chromium mordants used? ☐ Yes ☐ No

Req. O25 Metal complex dyes

Are metal complex dyes used for the dyeing of wool or wool blend fibres? ☐ Yes ☐ No

If yes, which fibres? _____

If yes, how high are the emissions to water from treatment? (please enclose test report according to the requirement):

- Copper: _____
- Chromium: _____
- Nickel: _____

Req. O26 Azo dyes

Are any of the Azo dyes stated in the table below used? ☐ Yes ☐ No

If Yes, which? _____

_____

Azo dyes	**CAS no.**
4-aminobiphenyl	92-67-1
Benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphthylamine	91-59-8
o-aminoazotoluene	97-56-3
2-amino-4-nitrotoluene	99-55-8
p-chloraniline	106-47-8
2,4-diaminoanisole	615-05-4
4,4′-diaminodiphenylmethane	101-77-9
3,3′-dichlorobenzidine	91-94-1
3,3′-dimethoxybenzidine	119-90-4
3,3′-dimethylbenzidine	119-93-7

3,3'-dimethyl-4,4'-diaminodiphenylmethane	838-88-0
p-cresidine	120-71-8
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
o-toluidine	95-53-4
2,4-diaminotoluene	95-80-7
2,4,5-trimethylaniline	137-17-7
4-aminoazobenzene	60-09-3
o-anisidine	90-04-0
2,4-xylidine	95-68-1
2.6-xylidine	87-62-7

Req. O27 Allergenic dyes

Are any of the dyes listed in the table below used? ☐ Yes ☐ No

If Yes, which? _____

_____

Generic Name	**CAS no.**
Disperse Blue 1	2475-45-8
Disperse Blue 3	2475-46-9
Disperse Blue 7	3179-90-6
Disperse Blue 26	3860-63-7
Disperse Blue 35	12222-75-2
Disperse Blue 102	12222-97-8
Disperse Blue 106	12223-01-7
Disperse Blue 124	61951-51-7
Disperse Brown 1	23355-64-8
Disperse Orange 1	2581-69-3
Disperse Orange 3	730-40-5
Disperse Orange 37	12223-33-5
Disperse Orange 76	
Disperse Orange 149	85136-74-9
Disperse Red 1	2872-52-8
Disperse Red 11	2872-48-2
Disperse Red 17	3179-89-3
Disperse Yellow 1	119-15-3
Disperse Yellow 3	2832-40-8
Disperse Yellow 9	6373-73-5
Disperse Yellow 23	6250-23-3
Disperse Yellow 39	12236-29-2
Disperse Yellow 49	54824-37-2

Date	Company
Signature by contact person	
Name of contact person	Phone

Appendix 10 Chemical requirements applicable only to surface treatment

This declaration shall be completed and signed by the surface treatment part.

Manufacturer/supplier
Name of the product

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 (0.01% 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% 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.

For two-component products it is the added ingredients in the separate components that shall comply with the requirement. Alternatively, if it can be documented that protective equipment was worn when the hardener was mixed with the paint/varnish and the finished two-component product was applied in a closed system, the requirement may apply to the hardened product.

Req. O28 Quantity applied and application method

Give a short description of the surface treatment:

_____

_____

_____

Number of coats: _____

Quantity applied (g/m^2): _____

Application method(s): _____

Req. O29 Environmentally harmful products and substances in surface treatment systems

Are any of the chemical products classified as environmentally harmful according to the table below? ☐ Yes ☐ No

If Yes; is the quantity of environmentally harmful substances applied in the surface treatment system not more than 100 g/m^2, calculated in a wet state? ☐ Yes ☐ No

One of the formulas below is to be used to first calculate the total amount of environmentally harmful substances in the surface treatment system (%):

100*H410 + 10*H411 + H412

or

100*(R50/53) + 10*(R51/53) + (R52/53)

H410 is the concentration of substances classified as H410 (same method for R50/53) in percent

H411 is the concentration of substances classified as H411 (same method for R51/53) in percent

H412 is the concentration of substances classified as H412 (same method for R52/53) in percent

All environmentally harmful substances included in the unhardened chemical products are to be included in the calculation. Classification according to the table below.

Hazard class	**Hazard category and hazard phrase in line with CLP Regulation 1272/2008**	**Hazard designations and risk phrases in line with EU Dangerous Substances Directive 67/548/EEC**
Toxic to aquatic organisms	Chronic 1 with H410	N; R50-53
	Chronic 2 with H411	N; R51-53
	Chronic 3 with H412	R52-53

The quantity of environmentally harmful substances applied is then calculated as follows:

Applied quantity (g/m^2) x proportion VOC in surface treatment (%)
/surface treatment efficacy

Req. O30 Volatile organic compounds (VOC) – surface treatment systems only

Does the surface treatment system contain volatile organic compounds (VOC)? ☐ Yes ☐ No

It Yes, state chemical name, CAS-no and content in % by weight:

_____

_____

For alternative b) state the total amount of VOC in the surface treatment system in g/m^2 (see the calculation example below):

_____

_____

Calculation example sum of environmentally harmful substances (O29)and sum of VOC (O30) in surface treatment systems:

The manufacturer of flooring uses 3 products in the surface treatment system and roller coating technique is used (efficiency rate 95 %).

The products contain:
Product A: 10 % environmentally harmful substances; 0,5 % VOC; quantity applied 20 g/m^2
Product B: 5 % environmentally harmful substances; 1 % VOC; quantity applied 40 g/m^2
Product C: 7 % environmentally harmful substances; 0,7 % VOC; quantity applied 20 g/m^2

The calculation :

Sum environmentally harmful substances: $\frac{(0,10*20)+(0,05*40)+(0,07*20)}{0,95}$ = 5,7 g/m^2

Sum VOC: $\frac{(0,005*20)+(0,01*40)+(0,007*20)}{0,95}$ = 0,64 g/m^2

Req. O31 UV lacquering

Does Hexanediol diacrylate (HDDA) CAS no. 13048-33-4 occur in UV lacquers? ☐ Yes ☐ No

Date	Company
Signature by contact person	
Name of contact person	Phone

Appendix 11 Energy figures

To be completed after hearing.

Appendix 12 Energy content of fuel

The energy content of fuel is calculated based on the table below. If electrical energy is produced on-site, one of the following methods can be used for calculating fuel consumption:

- Actual annual consumption of fuel.
- Consumption of electricity produced on-site multiplied by 1.25.

Standard fuel values (1 kWh = 3.6 MJ)

Bränsle	**Värmevärde FIN[1] GJ/ton**	**Värmevärde SE[2] GJ/ton**	**Värmevärde DK[3] GJ/ton**	**Värmevärde NO[4] GJ/ton**	**2012/27/EC Energy content* GJ**
Petrol	44,3	43,7 (37,8 MJ/l)	43,8	43,9	44,0
Diesel	42,8	43,3 (35,3 MJ/l)	42,7	43,1	
LPG	46,2	46,0	46,0	46,1	45,2
Eo1 oil	42,8	40,6 (35,8 MJ/l, EO-1)	-	43,1	42,3
Eo5 oil	41,1 (sulphur<1 %)	43,1 (40,5 MJ/l, EO-5)	40,65 (fuel olie)	40,6	440,0
Natural gas	36,0 (GJ/1000 m^3)	44,1 (GJ/1000 m^3)	39,55 (GJ/1000 m^3)	40,3 (GJ/1000 Sm^3)	47,2
Power station coal	25,0	27,2	24,23	28,1	28,5
Pellets (7% W)	16,0	16,8	17,5	16,8	16,8
Peat	10,1 - 12,3	9,3 - 12,8 (50 % - 35 % W)	-	-	7,8 - 3,8
Straw (15% W)	13,5		14,5		
Biogas	23,0 (GJ/1000 m^3)		23,0 (GJ/1000 m^3)		
Wood chips (45% W)	10,5		9,3		13,8 (25 %W)
Waste wood	12,0	12,1 (30 % W)	14,7	16,25 - 18 (dry)	

** Energy efficiency directive, 2012/27/EC, Annex IV, «Energy content of selected fuels for end use».*

1) Statistikscentralen i Finland, Fuel classification 2013.

2) Värmeforsk, Miljöfaktaboken 2011.

3) Energistyrelsen, Energy statistic 2012

4) Statistisk Centralbyrå. Notater Documents 30/2013. The Norwegian Emission Inventory 2013.

(% W) is the percentage by weight of water in the fuel and given the letter f in the formulas below. If nothing else is stated, f = 0% W and the ash content is average.

Formula for calculating the energy content of woodchips[5]:

The energy content of woodchips depends on the water content. An example of how to calculate the energy content of woodchips is given below.

The energy content of dry wood is 19.0 MJ/kg.

Energy is required to evaporate the water in the wood. This energy reduces the heat value of the woodchips. The energy content can be calculated as:

19.0 MJ/kg – 21.442 * f /100 = MJ/kg, where f is the water content in %W of the wood.

The factor "21.442" is the sum of water's heat of evaporation (2.442 MJ/kg) and the energy content of dry wood (19.0 MJ/kg).

If the applicant can refer to laboratory analyses of the heat value of a fuel, Nordic Ecolabelling may consider using this heat value for calculating the energy content.

[5] Reference: Centre for Biomass Technology, c/o dk-TEKNIK (tel. +45 39 555 999): Videnblad fact sheet 125.2 (in Danish) first published 29 June 1998, revised 26 March 1999.

Appendix 13 Marketing of Nordic Ecolabelled floor coverings

We hereby certify that we are well acquainted with the regulations governing the use of the Nordic Ecolabel, as detailed in "Regulations for the Nordic Ecolabelling of products" 22 June 2011 or later versions. We agree to follow these regulations when marketing the Nordic Ecolabelled floor coverings.

Further, we confirm that we are familiar with the criteria document regarding the Nordic Ecolabelling of floor coverings.

We undertake to advise those individuals within the company involved in marketing the Nordic Ecolabelled floor coverings of the criteria for the Nordic Ecolabelling of floor coverings and "Regulations for the Nordic Ecolabelling of products" 22 June 2011 or later versions.

Date and place	Company
Signature, contact person	
Clarification of name	Phone
Signature, marketing director	
Clarification of name	Phone

In case of a change in personnel, a new declaration must be submitted to Nordic Ecolabelling.