Nordic Ecolabelling for

Painting services

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CONSULTATION

Nordic Ecolabelling

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Appendix 1 Non-ecolabelled paints and varnishes and chemical building products.

Contact information

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

Denmark

Ecolabelling Denmark

www.svanemaerket.dk

Iceland

Ecolabelling Iceland

www.svanurinn.is

Finland

Ecolabelling Finland

www.joutsenmerkki.fi

Norway

Ecolabelling Norway

www.svanemerket.no

Sweden

Ecolabelling Sweden

www.svanen.se

1 Summary

The criteria for painting services applies to companies that offer ordinary painting and related surface-treatment tasks on building surfaces. This includes painting, plastering, varnishing and wallpapering of common building substrates such as walls, ceilings, floors, wooden panels, and metal parts such as pipes and radiators. Both indoor and outdoor tasks are included.

The overall aim of this first generation of the criteria is to secure environmental benefits through ecolabelling. This is done by establishing simple yet effective requirements. These criteria are intended to position Nordic Swan Ecolabel as a leading, stringent, and trusted tool for the painting service industry, and to make it an attractive option for public procurers and B2B customers when selecting painting services.

To obtain an overview of the key environmental impacts in painting services' life cycle, an environmental assessment of the product group was performed. This was followed by an analysis of the potential and steerability for the licensees to do an environmental difference. They are both stated in section 6 Environmental impact of painting services. The conclusion of the analysis was that a significant environmental benefit can be achieved by developing criteria for painting service. Several environmental hotspots with potential for improvement have been identified.

The requirements have been defined within the main hotspots, where the greatest potential for reducing environmental impacts has been identified:

- Choice and quality of paints and varnishes and chemical building products
- Selection and use of covering materials
- Transportation of staff and materials
- Waste handling, including microplastic emissions
- Cleaning of painting tools
- Quality control
- Health and working environment

2 Environmental communication guideline for Nordic Swan Ecolabel painting services

A Nordic Swan Ecolabel Painting service contributes to a circular economy and reduced climate impact. It meets strict requirements for the whole life cycle of the service, including quality requirements for the painted surfaces, minimising release of microplastic, correct handling of waste for recycling and transportation.

The service also ensures that the used paints and varnishes and chemical building products, to a high degree are certified with ISO 14024 Ecolabels Nordic Swan Ecolabel or EU

Ecolabel. Thereby, ensuring all the environmental requirement set in the criteria for those, included exclusion of hazardous substances and quality requirements.

A Nordic Swan Ecolabel Painting service:

- Uses 100% ecolabelled paints and fillers for interior walls and ceilings.
- Uses at least 80% ecolabelled exterior paints and varnishes for wood.
- Restricts or exclude substances harmful to health and/or the environment in all paints and varnishes and chemical building products.
- Uses protective covering materials that are either reusable or recycled and made from consumer or commercial waste.
- Prevents release of microplastics and other harmful substances by collection of dust/scrapings and correct waste handling.
- Works to minimise discarded paint leftovers and overall waste generation.
- Delivers painted surfaces of high quality, to ensure a long-lasting surface - and extended maintenance intervals.
- Reduces environmental impact of transport by using electric vehicles.

The overall environmental impact in the lifecycle of this product group and Nordic Swan Ecolabel identification of where ecolabelling can have the greatest effect is described in section 6 Environmental impact of Painting services.

3 What service can carry the Nordic Swan Ecolabel?

Product group definition

Companies that offer ordinary painting and related surface-treatment tasks on building surfaces. This includes painting, plastering, varnishing and wallpapering of common surfaces such as walls, ceilings, floors, wooden panels, and metal parts such as pipes and radiators. Both indoor and outdoor tasks are included.

An applicant is not prevented from offering special painting services or other contractor services that are not covered by the criteria. However, these may not be marketed as part of the Nordic Swan Ecolabelled painting services.

Special painting services is not included in the product group. Nordic Ecolabelling considers the following types of services to be special painting services: Conservation work on cultural-historic buildings, decorative coating (e.g. intended to imitate marble), epoxy/PU flooring, car painting, industrial surface treatments, installation of tiles, joint sealing not related to paint work (e.g., of windows and doors), painting of materials and products that are not related to building surfaces.

3.1 Justification of the product group definition

For a description of the product group definition, see “What can carry the Nordic Swan Ecolabel” in the criteria document.

The scope of the product group reflects that ordinary painting services constitutes the bulk of professional painting services in the Nordic countries and represents the areas where ecolabelling can have the greatest environmental impact.

Painting companies do sometimes also perform other special services. For instance, if a small room needs epoxy flooring and the painting service company is already doing all other paint work in the building. Special painting services are excluded because they differ substantially in technique, product composition, and environmental impacts. Excluding these activities maintains a coherent and technically manageable scope, ensuring that requirements can be applied consistently and meaningfully across the sector.

The definition allows companies to offer special painting services in parallel with their Nordic Swan Ecolabelled painting services. However, these may not be marketed as covered by the ecolabel. This approach recognizes the reality that many painters also perform broader construction-related services, while still maintaining the integrity and clarity of the ecolabel.

The requirements in the criteria do not apply to any services falling under the category of special painting services, that might be provided by the certified painting service.

4 How to read this criteria document

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

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

- Upload
- Requirement checked on site

Before a licence is issued, the Nordic Ecolabelling organization will normally carry out an inspection visit to the applicant and/or to a site where the service is being performed. If necessary, multiple inspection visits may be carried out.

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

5 Requirements and justification of these

5.1 Definitions

Terms	Definition
Ordinary painting service	Painting and related surface-treatment tasks on building surfaces. This includes painting, plastering, varnishing and wallpapering of common substrates such as walls, ceilings, floors, wooden panels, and metal parts such as pipes and radiators. Both indoor and outdoor tasks are included.

Special painting service	All other services than the ones covered by ordinary painting service. This includes for instance conservation work on cultural-historic buildings, decorative coating (e.g. intended to imitate marble), epoxy/PU flooring, car painting, industrial surface treatments, installation of tiles, joint sealing not related to paint work (e.g., of windows and doors), painting of materials and products that are not related to building surfaces.
Paint and varnishes	Paints and varnishes, wood stains and related products, which, for decorative, functional, and protective purposes, are applied to buildings, their decorations and fixed furnishings as well as associated structures and are intended for use by professionals.
Chemical building products	Liquid or non-hardened products for use in building work both indoors and outdoors, and on different substrates. This includes for instance adhesives, including multipurpose adhesives and construction adhesives, sealants, fillers, putty and levelling compound (screed) (including primers to these), mortars and plasters (including primers to these). Cleaning products are not included in this category.
Impurities in paints and varnishes and chemical building products	Residuals, pollutants, contaminants etc. from production, incl. production of raw materials that remain in the raw material/ingredient and/or in the chemical product in concentrations of less than 1000 ppm (0.100 w-%, 1000 mg/kg) in the chemical product. Examples of impurities are residues of the following: Residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.
Ingoing substances in paints and varnishes and chemical building products	All substances in the chemical product regardless of amount, including additives (e.g., preservatives and stabilizers) in the raw materials. Substances known to be released from ingoing substances (e.g., formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
Nanomaterials in paints and varnishes and chemical building products	Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01): 'Nanomaterial' means a natural, incidental, or manufactured material consisting of solid particles that are present, either on their own or as identifiable constituent particles in aggregates or agglomerates, and where 50 % or more of these particles in the number-based size distribution fulfil at least one of the following conditions: (a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm; (b) the particle has an elongated shape, such as a rod, fibre or tube, where two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm; (c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.
Protective covering materials	Protective materials used to shield surrounding surfaces, fixtures, and objects from paint, dust, debris, and other impacts during painting work. This includes for instance protection paper, plastic sheeting and painter's mats/blankets made from e.g. tech felt or cotton. Tape is not considered a protective covering material in the context of these criteria.
Post-consumer/commercial recycled material (PCR)	Post-consumer/commercial recycled material is defined according to ISO 14021:2016: "post-consumer/commercial" is defined as material generated by households or commercial, industrial or institutional facilities in their role as end-users of the product that can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

5.2 Description of the painting service

O1 Description of the company and service

Description of the company and painting services, including the following information:

- Painting services offered, including both ordinary services covered by the certification and special services not covered by the certification
- Business location(s)
- Customer segments, including size and distribution of B2B and B2C clients

- Number of employees
- Annual revenue
- Use of subcontractors: Extent of the use and types of delivered services

T̄ Description of the company and painting services according to the points above.

Background to O1 Description of the company and service

This requirement is intended to outline the fundamental aspects of the service and to ensure a clear overview of responsibilities within the company, including those assigned to any subcontractors. Such clarity is essential for Nordic Ecolabelling to carry out an efficient certification process and to gain an accurate understanding of the service being assessed. To support this, Nordic Ecolabelling requires a detailed description of the business, providing the necessary basis for offering accurate guidance and advice throughout the application process.

O2 Information about products and materials used

List of all paints and varnishes, chemical building products and protective covering materials used in the ordinary painting services covered by the certification. This also includes products used by subcontractors that provide services covered by the product group definition.

As a minimum, the list must contain information about the following:

- Product name
- Name of producer
- Product type and/or use
- For ecolabelled products: Licence number

The list of materials must always be updated and be presented to Nordic Ecolabelling upon request. New paints and varnishes, chemical building products or protective covering materials cannot be used without approval from Nordic Ecolabelling.

Ecolabelled is here defined as certified under Nordic Swan Ecolabel or EU Ecolabel.

See definition of "ordinary painting service" and definition of paints and varnishes, chemical building products and protective covering materials in section 5.1 Definitions.

T̄ List of all paints and varnishes, chemical building products and protective covering materials used when performing the Nordic Swan Ecolabel ordinary painting service, according to the requirement.

T̄ List of materials compared to the licensee’s stock of materials and purchasing statistics (invoice/report from suppliers) from the past year.

Background to O2 Information about products and materials used

The licensee must deliver a list of all paints and varnishes; chemical building products and protective covering materials used in the ordinary painting services covered by the certification. This is the basis for the product requirement O3-O5, and necessary for Nordic Ecolabelling to be able to verify whether the requirements are met.

Please note that any new paints and varnishes, chemical building products and protective covering materials that have not been previously approved must be approved by Nordic Ecolabelling before they can be used for an ordinary painting service project. Products used for special painting service are not included in the certification, and do not need to be listed or approved.

5.3 Product requirements

The requirements only apply to the products that are used in the ordinary painting services, which are the ones included in the certification. The requirements do not apply to products used for special painting services.

O3 Share of ecolabelled paints and varnishes, and chemical building products

The following share of ecolabelled paints and varnishes and chemical building products must be used when performing the Nordic Swan Ecolabel ordinary painting service. This also includes products used by subcontractors.

- 100% of paints and fillers for interior walls and ceilings:
  - Wall paint
  - Ceiling paint
  - Interior wall filler / ready-mixed filler
  - Joint filler for walls and ceilings
- Minimum 80% of exterior paints and varnishes for wood:
  - Exterior wood paint
  - Exterior wood primer
  - Exterior opaque wood stain
  - Exterior wood stain / varnish
  - Exterior wood oil
  - Window and door paint for exterior wood
  - Decking / fence wood coatings
- Minimum 80% of the remaining chemical building products.
- Minimum 50% of the remaining paints and varnishes.

The most appropriate unit (kilograms or litres) may be used if only one unit is applied for each of the above calculations.

The shares are calculated as the percentage of ecolabelled products relative to the total amount of products within the category that is used per year.

Ecolabelled is here defined as certified under Nordic Swan Ecolabel or EU Ecolabel.

See definition of "ordinary painting service" and definitions of paints and varnishes and chemical building products in section 5.1 Definitions.

T̄ Calculation of the share of ecolabelled products in accordance with the requirement. If the requirement is not met based on purchases in the year prior to certification, a product replacement plan to ensure compliance must be provided.

Background to O3 Share of ecolabelled paints and varnishes, and chemical building products

The use of paints and varnishes and chemical building products plays a significant role in the painting service's environmental impact[1].

A minimum share of ecolabelled paints, varnishes and chemical building products used in the ordinary painting services covered by the certification is set because they are a better environmental choice, compared to non-ecolabelled products. Ecolabelled paints and varnishes and chemical building products meet strict requirements, for instance[2]:

- Quality requirements to promote long-lasting, durable, and efficient products which lead to less use of resources in a lifecycle perspective
- Requirements regarding chemicals that are hazardous to health or the environment
- Requirements for emissions of harmful substances, securing a better indoor environment
- Requirements for the manufacturing of raw materials with a high climate impact such as titanium dioxide and cement/hydraulic binders
- Has packaging that includes recycled material, which contributes to a circular economy
- Ensures that if renewable raw materials are used, they originate from more sustainably produced and controlled sources

A large proportion of the products can be certified under an ISO 14024 ecolabel. On the Nordic Market this mainly includes Nordic Swan Ecolabel, EU Ecolabel and Good Environmental choice (Bra Miljöval). Only products certified under Nordic Swan Ecolabel and EU Ecolabel is included in the calculation of the share of ecolabelled products, as the criteria for Good Environmental choice (Bra Miljöval) apply to the broad category of chemical products and lack quality requirements specific to paints, varnishes and chemical building products.

The required percentages are based on the market availability of ecolabelled products. Paints and fillers for interior walls and ceilings account by far for the largest volumes used in painting services and have the highest availability of ecolabelled alternatives. Requiring 100% of these products to be ecolabelled therefore both reflects market maturity and contributes to a good indoor environment in painted rooms.

Special painting services are not covered by the certification. Product used, for example, for conservation work on cultural-historic buildings, decorative coatings or epoxy/PU flooring must therefore be excluded from the calculation of the share of ecolabelled products.

O4 Non-ecolabelled paints and varnishes, and chemical building products

Non-ecolabelled paints and varnishes and chemical building products used when performing the Nordic Swan Ecolabel ordinary painting service, must comply with the requirements in Appendix 1. This also includes products used by subcontractors.

[1] See more information in section 6 Environmental impact of Painting services.
[2] Criteria documents for Nordic Swan Ecolabel paints and varnishes and chemical building products.

The products used must be documented in Nordic Ecolabelling's SCDP (Supply chain declaration portal).

The requirements in Appendix 1 are aligned with the following requirements in the criteria for 089 New Buildings generation 4 or later (the mentioned O-numbers is referring to 089 New Buildings generation 4): O14 Classification of chemical products, O15 CMR substances, O16 Preservatives in indoor paint and indoor varnish, O17 Preservatives in other chemical products intended for indoor use, O18 Prohibited substances and O19 Nanoparticles in chemical products.

Login to the SCDP is only provided to the licensee and not to e.g. subcontractors.

- List of approved paints and varnishes and chemical building products used when performing the Nordic Swan Ecolabel ordinary painting service in Nordic Ecolabelling's SCDP.

Background to O4 Non-ecolabelled paints and varnishes, and chemical building products

The use of paints and varnishes and chemical building products plays a significant role in the painting service's environmental impact[3]. Non-ecolabelled paints and chemical building products accounts for a sufficiently large share of the products used to justify efforts to minimize their health and environmental impact. Non-ecolabelled products must therefore comply with the requirements in Appendix 1 and be documented in Nordic Ecolabelling's SCDP (Supply chain declaration portal).

See background for appendix 1 for specific details on the individual material requirements.

O5 Protective covering materials (choice and use)

This requirement concerns both the types of covering materials used and how they are applied when performing the Nordic Swan Ecolabel ordinary painting service, including products and services provided by subcontractors.

- Plastic sheeting must be made from minimum 70% post-consumer/commercial recycled materials (PCR).
- Protection paper must be made from minimum 70% post-consumer/commercial recycled wood raw materials (PCR) or wood raw material originating from forestry certified under the FSC (Forest Stewardship Council) or PEFC (Program for the Endorsement of Forest Certification) schemes or a combination.
- The painting service must have routine(s) in place to ensure that protective covering materials are used in an environmentally responsible way. The routine(s) must specify the following:
  - Painter's mats/blankets or other reusable covering materials must be used for as many applications as possible and re-used as many times as possible. Specific applications for which they are to be used must be described.
  - Plastic sheeting must be used only when it's not possible to use other types of protective covering materials. Specific applications for which they are allowed to use must be described.

See definition of "ordinary painting service", PCR and protective covering materials in section 5.1 Definitions.

[3] See more information in section 6 Environmental impact of Painting services.

- For each type of plastic sheeting and protection paper: Technical data sheet (TDS) or other documentation from the supplier showing that the quantity of recycled materials (PCR) is met.
- Routine(s) for choice and use of protective covering materials in accordance with the requirement.
- Training plan describing how the painters and other relevant staff are trained in the routine (documented through requirement O14 Information and training of staff).
- Compliance with routine(s) for choice and use of protective covering materials are checked during on-site inspection visit.

Background to O5 Protective covering materials (choice and use)

Large amounts of protective covering materials are used in painting services, especially for indoor work, making them highly relevant in the lifecycle of painting services. The most used materials are protection paper, plastic sheeting and re-usable painter's mats/blankets made from e.g. tech felt or cotton (in that order). Plastic sheeting is always single-use, while protection paper is typically single-use but may in some cases be reused on the same worksite. Reusable painter's mats/blankets can be used multiple times over a long service life.

The production and disposal of single-use covering materials contribute significantly to resource use, waste generation and climate impact. By setting requirements for minimum 70% post-consumer/commercial recycled materials (PCR) in plastic sheeting, the demand for virgin raw materials is reduced and recycling of plastic is supported, thereby contributing to a more circular economy. Using recycled content also lowers the climate and environmental impacts associated with material production and end-of-life.

For protection paper, wood raw material originating from forestry certified under the FSC (Forest Stewardship Council) or PEFC (Program for the Endorsement of Forest Certification) schemes are accepted as an alternative to recycled wood raw materials, due to the low availability of protection paper made from recycled raw materials. The requirement limit, a minimum of 70% of all wood raw material (virgin or recycled), corresponds to the FSC and PEFCs requirement limits for use of the respective labels on products, such as "FSC Mix" and "PEFC certified".

There is a particularly high environmental and climate potential in reducing the use of single-use covering materials altogether by shifting towards reusable alternatives. Therefore, the requirement prioritises the use of painter’s mats/blankets and other reusable covering materials for as many applications as possible, and their reuse over multiple jobs. Reusable covering materials can, for example, be used for renovation work that does not involve ceilings or dust-generating activities.

Where single-use covering materials are still required, paper-based products are generally preferable to plastic, as paper is based on renewable raw materials, whereas plastic is fossil-based. For this reason, plastic sheeting must only be used where other types of covering materials are not technically suitable. Plastic covering cannot be completely avoided, as it is necessary for certain applications, such as spray painting or the protection of windows and smaller objects.

As the need for surface protection varies depending on the specific conditions at the worksite and is not fully under the control of the painting service, it is not feasible to set quantitative requirements for the amounts of covering materials used. Instead, the requirement focuses on material choice and proper application. To ensure that the intended environmental benefits are achieved in day-to-day practice, painting services must have routines that clearly describe which applications require the use of reusable covering materials as a minimum, and in which specific cases plastic sheeting may still be used (or alternatively must not be used).

Indoor and outdoor tapes are not covered by this requirement, as they are used in relatively small amounts compared to other covering materials and therefore have a more limited climate and environmental potential.

5.4 Risk assessment

O6 Risk assessment

The painting service and any subcontractors must have routine(s) to request a hazardous materials survey from the client / building owner and to ensure appropriate handling and disposal of such materials, where relevant based on the age of the building and the types of materials involved.

If hazardous substances are suspected and the content cannot be determined, the materials must be treated as hazardous waste in accordance with national legislation.

- Routine(s) describing when to ask for a hazardous material survey and how to handle identified hazardous materials.
- Training plan describing how the painters and other relevant staff are trained in the routine (documented through requirement O14 Information and training of staff).
- Hazardous material survey reports from relevant projects must be presented upon request.

Background to O6 Risk assesment

Painting services working in older buildings or on older building components may encounter materials that may pose a risk to workers health and/or to the environment. In such cases, the painting service must request a hazardous material report stating the potential risks and they must be able to understand and assess this information to take appropriate precautions, for example when sanding or doing surface preparation. If there is suspicion of hazardous substances and the content cannot be determined, the materials in question must be handled as hazardous waste as required by national legislation.

For assignments in private households or smaller projects, a formal hazardous material survey is often not available. In such cases, Nordic Ecolabelling recognises that the assessment lies with the painting service. The requirement ensures that, where a risk assessment or hazardous materials survey exists, the painting service handles the materials appropriately to minimise risks to workers' health and the environment. If hazardous substances are suspected and the content cannot be determined, the materials must be treated as hazardous waste in accordance with national legislation.

Relevant building materials/elements that may contain hazardous substances include, for example, old windows and window frames, adhesives and sealants, concrete floors with old paint layers, industrial buildings, bathrooms constructed before 1990, and schools or public institutions from the 1960's and 1970's. Typical hazardous substances found in building elements, that are relevant for painting services in Nordic buildings is summarized in table 1. Please note that remaining stock may have been used for some years after the bans entered into force.

Table 1 Typical hazardous materials relevant for painting services

Risk type	Time period	Building materials to be aware of
PCB (polychlorinated biphenyl)	Ca. 1950 - mid/late 1970s	Sealants and mastics, elastic joints, window joints, slip-resistant floor coatings, and in some cases surface coatings and paints[4,5,6].
PCB in windows	Before 1980	Window units installed before 1980, particularly sealants and joint materials around windows and façades
PCB in paints	Ca. 1952-1975[7]	Mainly outdoor paints but also paints on windows and window frames.
Chlorinated paraffins (SCCP and MCCP)	1950 - 2012[8]	Sealants around windows, doors and façades, rust-protective paints and glues[9].
Asbestos	Before national bans: Prohibited in 1982 (Sweden)[10] Prohibited in 1982 (Iceland)[11] Prohibited in 1985 (Norway)[12,13] Prohibited in 1986 (Denmark)[14] Prohibited in 1993 (Finland)	Surface coatings, fillers, joint compounds, adhesives and other chemical products[15].
Lead	Before 1950	Paints, varnishes and surface treatments on windows, doors and other interior or exterior surfaces[16].
Lead in paints	Before 1970s	Particularly paints on woodwork and metal surfaces.
Other heavy metals, e.g. cadmium o chromium	Mainly 1950s-1970s	Paints, coatings, sealants and other surface treatments.

[4] https://svanurinn.is/wp-content/uploads/2024/03/background-document-102-renovation-102-english2.pdf
[5] https://svanemerket.no/content/uploads/2023/09/102eo_2_0_BD.pdf
[6] https://renover-sikkert.dk/hvor-findes-pcb-pcb/
[7] https://lovdata.no/dokument/SFO/forskrift/2000-04-17-413
[8] https://vcob.dk/vcob/nedrivning/hvad-er-byggeaffald/problematiske-stoffer/organiske-stoffer/klorerede-paraffiner/
[9] https://renover-sikkert.dk/hvor-findes-klorerede-paraffiner-klorerede-paraffiner/
[10] Vilka dolda källor till exponering av asbest finns? - IVL.se
[11] https://pubmed.ncbi.nlm.nih.gov/31411568/
[12] https://illvit.no/naturen/rastoffer/asbest
[13] https://www.arbeidstilsynet.no/risikofylt-arbeid/kjemikalier/asbest/hvor-kan-det-finnes-asbest/
[14] https://bygtek.dk/artikel/nedrivning-og-miljoesanering/danmark-er-nordisk-mester-i-lungehindekrft
[15] https://asbest-huset.dk/
[16] https://renover-sikkert.dk/hvor-findes-bly-og-andre-tungmetaller-bly-og-andre-tungmetaller/

5.5 Waste reduction and handling

O7 Actions to prevent spreading of paint residues and microplastics

The painting service and subcontractors providing services must have routine(s) in place to ensure that the spread of paint residues and microplastics to the environment is reduced. The routine(s) must specify the following:

- Dust and debris generated during the work (e.g. by sanding or stripping) must be removed regularly throughout the day by sweeping or vacuuming to prevent it from spreading to other areas.
- When using a sander, it must be connected to a vacuum.
- Protective covering materials must be laid out to catch and collect all scrapings and dust generated.

Routine(s) for reducing the spread of paint residues and microplastics in accordance with the requirement.

Training plan describing how the painters and other relevant staff are trained in the routine (documented through requirement O14 Information and training of staff).

Compliance with routine(s) for reducing the spread of paint residues and microplastics are checked during on-site inspection visit.

Background to O7 Actions to prevent spreading of paint residues and microplastics

Microplastics are very small fragments of plastic materials, smaller than 5 mm. Due to their size, surface properties, resistance to degradation, and ability to carry harmful chemicals, microplastics can be harmful to both human health and the environment. Nordic Ecolabelling applies the precautionary principle and therefore seeks to limit the use and release of microplastics wherever possible. Read more about Nordic Ecolabelling's position on Microplastics on our Nordic website[17]. Microplastics are commonly divided into primary and secondary microplastics:

- **Primary microplastics** are deliberately manufactured and added to products for a specific function, such as scrubbing agents in detergents and in personal care products. They are also used in certain construction products, as well as in fertilizers and pesticides for agriculture. Microplastics released from production and washing of textiles can also be considered primary microplastics.
- **Secondary microplastics** are formed through the wear and degradation of larger pieces of plastic. Important sources include tyres, rubber granules used on artificial turf, pellets, synthetic textiles, single-use plastic products and paints.

Most modern paints contain synthetic polymer binders which form a plastic film when the paint dries. During use, maintenance, renovation, or ageing of painted surfaces, this film can be worn down, sanded, or otherwise degraded, leading to the release of secondary microplastics to air, soil, and water.

[17] Microplastics – Policies & Definitions | Nordic Ecolabelling,

A meta study on paints and microplastics indicates that paints may be one of the largest sources of microplastics released unintentionally to aquatic and terrestrial environments[18]. This is supported by the Swedish Environmental Protection Agency, which has identified paint as one of the most important sources of microplastics and estimates that losses related to painting buildings amount to 130-250 tonnes per year[19]. Microplastics as an environmental issue is therefore of high relevance in the life cycle of a painting service.

The release of microplastics from paint cannot be fully avoided. During surface preparation and painting activities, several potential sources of plastics and microplastics may arise, particularly from the removal of existing paint layers, unused paints, and painting tools. Microplastic particles can be released throughout the life cycle of paints if dust, scrapings, and paint residues are not properly collected and disposed of in the correct waste fractions.

Residues from old paints and chemical building products can also contain a number of other harmful substances (see background text for requirement O6 Risk assessment).

To reduce the risk of pollution and dispersion of microplastics and other harmful substances to the environment, and to limit painters' exposure to dust and harmful substances, the painting service must have routines in place to ensure regular removal of dust and debris during the work, the use of vacuum-connected sanding equipment, and the use of protective covering materials to collect and contain scrapings and dust to prevent their spread to other areas.

O8 Waste reduction and use of leftover paint

The painting service and subcontractors providing services must actively work to minimise discarding paint leftovers and overall waste generation, through the following:

- Policy for reducing the amount of waste generated by the painting service, with targets for year-to-year waste reduction and measures to improve recycling, like for example changing tools, types of covering materials, and other practices aimed at reducing waste generation.
- Routine(s) for using up paint and varnishes and chemical building products (instead of discarding half-full containers).

Policy for reducing the amount of waste generated in accordance with the requirement.

Routine(s) for using up paint buckets and chemical building products.

Training plan describing how the painters and other relevant staff are trained in the routine (documented through requirement O14 Information and training of staff).

Compliance with routine(s) for using up paint buckets and chemical building products are checked during on-site inspection visit.

O9 Waste handling and sorting

The painting service and subcontractors providing services must have routine(s) for sorting all waste into the relevant fractions in accordance with national waste legislation, the local

[18] Paint: a ubiquitous yet disregarded piece of the microplastics puzzle | Environmental Toxicology and Chemistry | Oxford Academic
[19] https://diva-portal.org/smash/get/diva2:1720234/FULLTEXT01.pdf

municipal waste schemes, as well as the instructions of the waste contractor. The routine(s) must specify the following:

- Specific descriptions of how waste is sorted into as many fractions as possible. As a minimum, the following fractions must be included: Paper and cardboard, metal, plastic, hazardous waste, and waste for incineration.
- Liquid or uncured paints and varnishes and chemical building products must be sorted as hazardous waste. Painting equipment or paint containers contaminated with liquid or uncured products must also be sorted as hazardous waste.
- Vacuum bags, sweepings, dust, scrapings of old paints and sealants etc. must be disposed as hazardous waste if it may contain hazardous materials.
- Specific descriptions of where the waste is sorted and disposed of (e.g. at the customer's site, a recycling point/station, or another appropriate facility). At larger construction sites, the waste sorting fractions provided on site may be used. If sufficient waste fractions are not available, the waste must be collected and sorted at the painting service's own site or at an authorised waste treatment facility.

Routine(s) describing how the waste sorting is performed according to the requirement, and which waste fractions are used. The documentation can include photos and contracts as well.

Training plan describing how the painters and other relevant staff are trained in the routine (documented through requirement O14 Information and training of staff).

Report and/or invoice from waste contractor showing which waste fractions are collected from the painting service. Amounts of hazardous waste must be specified.

Compliance with routine(s) for waste handling and sorting are checked during on-site inspection visit.

Background to O8 Waste reduction and use of leftover paint and O9 Waste handling and sorting

Painting services generate waste from the use of materials, tools, and covering materials during painting activities. Reducing the overall amount of waste generated is an effective way to lower environmental impacts and resource use. Setting targets for year-to-year waste reduction and implementing practical measures ensures that painting services work systematically with waste prevention alongside recycling.

Leftovers of paints and chemical building products represent a significant waste fraction if not managed properly. Nordic Ecolabelling's dialogue with paint producers and painting services indicates a substantial potential for re-using leftover paint for other assignments, which may also result in financial savings. Painting services are therefore required to implement routines for using up paint and chemical building products instead of discarding half-full containers.

Nordic Ecolabelling aims to ensure correct waste sorting to achieve the highest possible degree of material recycling. The number of fractions alone is not a reliable indicator of good waste sorting practices. Instead, clear routines, accurate descriptions of how waste is sorted, and adequate training of painters and other relevant staff are key factors in ensuring correct and consistent waste handling.

Painting services must comply with national waste legislation, municipal waste schemes, and the instructions of the waste contractor. At larger construction sites where waste management is organised by the main contractor, the available on-site waste sorting system may be used, provided that waste can be disposed of into the correct fractions. If this is not possible, the painting service must ensure correct sorting and disposal at its own site or at an authorised waste treatment facility.

According to the EU Waste Framework Directive (2008/98/EC), liquid or uncured paints, varnishes, and chemical building products must be classified as hazardous waste if they exhibit one or more hazardous properties listed in Annex III[20]. As these products are generally difficult to assess at the point of disposal and are commonly treated as hazardous waste in practice, all remaining liquid or uncured paints and varnishes and chemical building products should be sorted as hazardous waste. This also applies to equipment and materials contaminated with liquid or uncured products, such as brushes, rollers, covering materials, paint containers, and packaging.

Covering materials and packaging contaminated only with dried or cured paint residues cannot be materially recycled and should therefore be sorted as waste for incineration. Vacuum bags, sweepings, dust, and scrapings from old paints, sealants, or similar materials must be disposed of as hazardous waste if they may contain hazardous substances.

5.6 Re-use and cleaning of painting tools

O10 Re-use and cleaning of painting tools

The painting service and subcontractors providing services must have routine(s) in place for re-use and cleaning of painting equipment. The routine(s) must specify the following:

- Brushes and rollers must be re-used until they are worn out or cleaned, e.g. by keeping them in the paint bucket or wrapping them in plastics after use.
- Cleaning of painting tools must not be carried out directly in sinks under running water or in containers from which the contents are subsequently disposed of into drains or the natural environment.
- If painting tools are cleaned, it must take place in a designated cleaning station that is intended for controlled collection and handling of paint residues, and the cleaning station must be approved by Nordic Ecolabelling.
- If painting tools are cleaning, excess paint must be removed as thoroughly as possible prior to cleaning, e.g. by scraping or wiping.

Routine(s) for re-use and cleaning of painting tools in accordance with the requirement.

If cleaning stations are used: Name of manufacturer, name of the instrument/system and/or technology, and a description of how the cleaning station operates.

Training plan describing how the painters and other relevant staff are trained in the routine (documented through requirement O14 Information and training of staff).

Compliance with routine(s) for re-use and cleaning of painting tools are checked during on-site inspection visit.

[20] https://eur-lex.europa.eu/eli/dir/2008/98/oj/eng

Background to O10 Re-use and cleaning of painting tools

Painting services generate significant amounts of waste, and the use of painting tools such as brushes and rollers contribute to this. Waste from painting tools can be reduced by re-using brushes and rollers for the same colour within a project by preventing paint from drying out, for example by keeping them in the paint container or wrapping them in plastic.

Dialogue with the industry shows that many painting companies' clean brushes and equipment directly in sinks under running water. This practice leads to the release of paint residues, hazardous substances, and microplastics into wastewater systems and the environment. Cleaning painting tools directly in sinks, or in containers from which the contents are subsequently discharged into drains or the natural environment, is therefore not permitted.

In addition to emissions, cleaning tools under running water results in significant water consumption. According to estimates published by a producer of a closed-system cleaning station, washing a single brush under running water uses approximately 15–30 litres of freshwater. For a painter cleaning around 15 brushes, this can result in more than 300 litres of contaminated wastewater, compared with approximately 1.5 litres when using a closed cleaning station. At a national level, brush and tool cleaning in sinks may contaminate more than 100 million litres of water annually in Sweden alone[21].

Cleaning brushes and rollers can extend their service life and thereby reduce environmental impact. However, as cleaning in designated cleaning stations may be considered time-consuming or costly, it is not set as a mandatory requirement. Where cleaning is carried out, it must nevertheless take place in a responsible manner, in designated cleaning stations, to minimise water use and prevent contamination.

5.7 Transportation

O11 Purchase of new vehicles

All vans and other light vehicles acquired after the licence has been granted and used in the daily operations of the painting service, excluding materials delivered by suppliers, must comply with the latest applicable EU emission standards for vehicles (Euro norm) and be emission free (100% electric or powered by hydrogen). This also includes vehicles acquired by subcontractors.

This requirement concerns all vehicles newly purchased, leased or rented by the company, whether the vehicles are new or pre-owned.

Exemptions from the requirement:

- Subcontractors that individually account for less than 10% of the total painting service.
- Vehicles with a lift and/or transporting scaffolding.

T̄ Purchasing procedures according to the requirement.

[21] https://www.lavabrush.com/pages/faq#:~:text=A%20Swedish%20painter's%20water%20consumption%20to%20clean,under%20running%20water%20harmful%20to%20the%20environment

- Purchasing records documenting that vehicles purchased from the date the licence was awarded must be available upon request.

O12 Share of electric vehicles

For the daily operations of the painting service, excluding materials delivered by suppliers, a defined share of the total number of vans and other light vehicles used by the painting service must comply with the latest applicable EU emission standards for vehicles (Euro norm) and be emission free (100% electric or powered by hydrogen). This also includes vehicles used by subcontractors. Depending on the country in which the painting service operates, the following minimum share must be met:

- Norway: 70%
- Denmark: 40%
- Sweden: 40%
- Finland: 20%
- Iceland: 20%

This requirement concerns all vehicles purchased, leased or rented by the company.

Exemptions from the calculation:

- Vehicles used by subcontractors that individually account for less than 10% if the total painting service.
- Vehicles with a lift and/or transporting scaffolding.

- Overview of all vehicles used in the painting services daily operations. Include information about type of car (e.g. van, passenger car), registration number, age, and type of energy carrier (e.g. electric, hydrogen).
- Calculation of the share of electric vehicles, according to the requirement.

Background to O11 Purchasing of new vehicles and O12 Share of electric vehicles

Transportation in traditional gasoline/diesel engine vehicles contribute to greenhouse gas (GHG) emissions and air pollution. The use of vehicles powered by electricity or hydrogen significantly reduces these impacts, and Nordic Ecolabelling therefore aims to incentivise painting services to transition towards zero-emission transport.

Fuel consumption from transports is a major contributor to the climate impact of painting services. To greatest steerability of vehicle-related emissions lies in decisions related to purchasing, leasing or renting vehicles, as vehicle fleets are typically renewed gradually over time. For this reason, all newly acquired vans and other light vehicles must be emission free, i.e. 100% electric or powered by hydrogen. Plug-in hybrid electric vehicles (PHEV) are not accepted. For the existing fleet, the criteria set requirements on a minimum share of electric vehicles rather than requiring a full conversion at the time the licence is granted. This approach ensures steady progress while considering fleet renewal cycles, investment planning and leasing arrangements.

The minimum required share of electric vehicles differs between the Nordic countries to reflect differences in market maturity, infrastructure development and current fleet composition. The level of electrification in new vehicle registrations, combined with dialogue

with stakeholders from the painting sector, have been used as key indicators for setting country-specific requirements. Electric vehicles are widely available across the Nordic countries, but uptake varies, particularly for light commercial vehicles.

The painting service sector mainly relies on light commercial vehicles. In Norway, the share of newly registered electric vans increased to 45.2% in 2025[22]. In Denmark electric vans accounted for 27% of newly registered vans in 2025[23]. In Sweden electric vehicles accounted for 23% of new registrations in the light commercial vehicle segment[24]. In Finland, electric vehicles represented 10.4% of newly registered light commercial vehicles in 2025[25]. In Iceland, data for light commercial vehicles indicate a lower but growing share of electric vehicles[26,27]. Electrification levels are generally higher for passenger cars than for light commercial vehicles across the Nordic countries[28].

Nordic Ecolabelling considers zero-emission vehicles to be the long-term sustainable solution for the transport sector. Renewable biofuels such as HVO100, RME100 and FAME100 can be suitable transitional solutions for existing vehicles, but they are not considered equivalent to zero-emission technologies due to factors such as raw material use, generally higher life-cycle climate impact and a lack of control over which fuel is used. Consequently, biofuels are not accepted for newly acquired vans and light vehicles.

To ensure proportionality, the requirements only apply to subcontractors that individually account for 10% or more of the total painting service. Vehicles equipped with lifts or used for transporting scaffolding are exempt, as they are necessary tools for some painting services and typically have higher weight and fuel consumption, and Nordic Ecolabelling currently lack sufficient data to set appropriate requirements for these vehicle types.

5.8 Quality control

The purpose of the quality control requirements is to ensure consistent service that delivers durable results while securing safety and compliance with the requirements.

O13 Quality control of the painting service

The painting service must have a self-monitoring system to ensure the quality of the painting service. This includes control of pre-paint moisture; control of surfaces prepared for painting and quality of the final painted surface.

[22] https://www.yrkesbil.no/elektrisk-ofv-opplysningsradet-for-veitrafikken-registreringer/naer-halvparten-av-alle-nye-varebiler-i-2025-var-elektriske/4156989#:~:text=N%C3%A6r%20halvparten%20av%20alle%20nye%20varebiler%20i%202025%20var%20elektriske
[23] Bilstatistik.dk
[24] https://alternative-fuels-observatory.ec.europa.eu/general-information/news/sweden-reaches-15-ev-car-fleet-2025
[25] https://alternative-fuels-observatory.ec.europa.eu/general-information/news/finland-nearly-60-finlands-new-car-market-was-rechargeable-2025
[26] https://www.eea.europa.eu/en/analysis/indicators/new-registrations-of-electric-vehicles/newly-registered-electric-cars
[27] https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/iceland
[28] https://www.eea.europa.eu/en/analysis/indicators/new-registrations-of-electric-vehicles

Furthermore, an instruction for clear agreements and dialogue with the customer must be implemented.

The following must be accounted for:

- An instruction for clear agreements and dialogue with the customer, including how the quality of the work is agreed upon, how follow-up of the results is carried out, how and who carries out quality checks and what reporting system is used.
- A procedure for control and preparation of surfaces prior to painting.
- A procedure for the painter to check the quality of final painted surfaces, including descriptions of preferred lighting, and viewing distance and angles for each painted surface/substrate*.
- A procedure for the supervisor's control of the finished work.

The results of the quality controls must be stored for a minimum of 5 years and must be shown to Nordic Ecolabelling upon request.

**If the painting service has a system for evaluation of painting quality in accordance with national guidelines like for instance "Visuel bedømmelse af malerarbejde[29]", a separate procedure for checking the quality of final painted surfaces is not needed.*

If the painting service has a quality certification such as ISO 9001, this is sufficient to fulfil the whole requirement.

Instructions, procedures and any forms used in connection to the quality control.

Results of selected controls performed by the painter and/or supervisor.

Background to O13 Quality control of the painting service

This requirement aims to ensure a solid quality self-monitoring system for the painting service. A low-quality painting job, with poor preparatory work or poorly executed painting work can cause lower lifetime of the painted surfaces, especially for outdoor surfaces. This will result in shorter periods between repaints, and unnecessary use of resources. Similarly, a clear agreement with the customer on how the quality is assessed, reduces the amount of resource demanding repair-work.

The requirement is designed to include the most critical elements in a typical job performed by a painting service company and defines that both painter and supervisor must control the work performed. Important points to check are typically pre-paint moisture, control of surfaces prepared for painting and quality of the final painted surface.

If recognised national guidelines for visual evaluation of painting quality (e.g. “Visuel bedømmelse af malerarbejde[30]”) are applied, no separate procedure for final surface inspection is required, as the guidelines already define the inspection method, including lighting, viewing distance and angles.

If the painting service has a quality certification such as ISO 9001, this is considered sufficient to fulfil the requirement. The certification includes documented procedures for quality agreements with the customer, defined inspection methods, assignment of responsibilities, supervisory control, and documented follow-up and reporting.

[29] https://malermestre.dk/media/3906/visuelvurderingokt2021.pdf
[30] https://malermestre.dk/media/3906/visuelvurderingokt2021.pdf

During the on-site visit, Nordic Ecolabelling will check selected results of controls performed by the painter and/or supervisor.

O14 Information and training of staff

Employees involved in the painting service, including painters, supervisors, subcontractors and other personnel performing services or handling cleaning or waste must receive documented training according to a training plan in a language familiar to them.

The training plan must ensure that employees have sufficient knowledge to fulfil the requirements and to apply appropriate health and safety measures, and include at least the following key topics:

- Content and scope of the training, depending on the role of the employee.
- Frequency of the training, and how soon after employment it is to take place.
- What being Nordic Swan Ecolabelled means for the company, including training in the requirements and explaining why they exist.
- Training in handling paints and varnishes and chemical building products.
- Training in choice and use of protective cover materials.
- Training in risk assessments and safety precautions, including handling hazardous materials and use of personal protective equipment.
- Training in actions to prevent spreading of paint residues and microplastics.
- Training in waste handling, including waste reduction and sorting.
- Training in re-use and cleaning of painting tools
- Training in quality control, methods, and equipment.

Training plan according to the requirement and routine in the quality management system.

List of employees that have completed the training programme.

Background to O14 Information and training of staff

The requirement covers the need for the licensee to define the training programme, showing the content and scope of the training. The aim is to provide information on the Nordic Ecolabelling requirements and how the requirements can affect standard processes and routines. All relevant employees must have the necessary knowledge, so that they are clear on what to do in their day-to-day work to ensure compliance with the requirements. The training will also help to improve the working environment.

It is important to point out that using temporary employees does not prevent licence holders from ensuring that these employees also have a suitable level of training, enabling them to fulfil the ecolabelling requirements.

Knowledge of the company's environmental work and what it means to hold the Nordic Swan Ecolabel is important in giving employees a shared understanding of their environmental work. With proper training, employees will be able to use information about the business’s environmental work in their communication, which can be a major competitive advantage in dialogue with potential and existing customers.

5.9 Licence maintenance

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

O15 Planned changes and non-conformities

Planned change and unforeseen non-conformities affecting Nordic Ecolabelling's requirements must be reported to Nordic Ecolabelling immediately. This must be done in accordance with the licensee's commitment.

- Routine(s) describing how planned changes and unforeseen non-conformities will be handled.
- In the event of changes or unforeseen non-conformities: Written report on the change or non-conformity.

Background to O15 Planned changes and non-conformities

This requirement ensures that proper routine(s) are defined so that planned changes and unforeseen non-conformities will be handled in the licence period.

O16 Customer complaints

The licensee must guarantee that the quality of the Nordic Swan Ecolabel product or service does not deteriorate during the validity period of the licence. Therefore, the licensee must keep an archive over customer complaints and have a routine for handling the complaints.

Note that the original routine must be in one Nordic language or in English.

- Routine(s) for handling and archiving customer complaints.

Background to O16 Customer complaints

Nordic Ecolabelling requires that your company has implemented a customer complaint handling system. To document your company’s customer complaint handling, you must upload your company’s routine describing these activities. The routine should be dated and signed and will normally be part of your company’s quality management system.

If your company does not have a routine for customer complaint handling, it is possible to upload a description of how your company perform these activities. During the on-site visit, Nordic Ecolabelling will check that the customer complaint handling is implemented in your company as described. The customer complaints archive will also be checked during the visit.

5.10 Appendix 1

Background to Appendix 1: Non-ecolabelled paints and varnishes and chemical building products

This Appendix describes all the requirements that must be meet for all chemical products and construction products. The requirements are directly aligned with the following requirements in the criteria for Nordic Swan Ecolabel New Buildings (089, generation 4):

- O14 Classification of chemical products
- O15 CMR substances
- O16 Preservatives in indoor paint and indoor varnish
- O17 Preservatives in other chemical products intended for indoor use
- O18 Prohibited substances
- O19 Nanoparticles in chemical products

All materials must be documented in Nordic Ecolabelling's supply chain declaration portal (SCDP).

Background to Classification of chemical products

Nordic Ecolabelling seeks to ensure that the health and environmental effects of chemical products are as low as possible. The requirements therefore specify that products classified as environmentally hazardous, highly toxic, toxic, carcinogenic, mutagenic or reprotoxic must not to be used.

The requirement concerns the classification of the actual chemical products and not the individual compounds in the products, which are governed by subsequent requirements.

There are a few exemptions from the prohibited classifications of chemical products where the functionality requires substances for which unclassified alternatives are not available.

Background to CMR substances

In addition to the requirement concerning the classification of the chemical products, it is also required that chemical products cannot contain substances that are carcinogenic, mutagenic or reprotoxic (CMR substances cat 1A and 1B). Nor may chemical products contain substances that are suspected to be carcinogenic, mutagenic or reprotoxic (category 2).

Substances that may cause cancer, change genetic material or interfere with reproduction are prioritised substances within the EU's chemical legislation, due to their inherently dangerous properties. It is therefore of central importance to considerably reduce, and in the long term move away entirely from, the use of CMR substances.
There are a few exemptions from the prohibited CMR substances where the functionality requires substances for which unclassified alternatives are not available.

Background to Preservatives in indoor paint and varnish, and other chemical products intended for indoor use

The requirement and the levels for highest permitted preservatives are partly harmonised with equivalent requirements in the criteria for Nordic Swan Ecolabel indoor paints and varnishes and for products for indoor use in the criteria for Nordic Swan Ecolabel chemical building products respectively. Levels for the highest permitted concentrations of the respective preservatives are partly the same as those that apply to Nordic Swan Ecolabel indoor paints and varnished. For all other chemical products for indoor use, the levels are the same as for Nordic Swan Ecolabel fillers, which is considered reasonable for a Nordic Swan Ecolabel building.

Updates for total preservatives and total isothiazolinone compounds in indoor paint and indoor varnish have been updated to 900 ppm and 600 ppm respectively, in accordance with corresponding updates for Nordic Swan Ecolabel indoor paints and varnishes.

Background to Prohibited substances

Several harmful substances are banned in paints and varnishes and chemical building products used for Nordic Swan Ecolabelled painting services. This is to ensure a minimum impact on both health and environment.

The Candidate List identifies substances of very high concern which fulfil the criteria in article 57 of the REACH Regulation (EC 1907/2006). The list includes carcinogenic; mutagenic; and reprotoxic substances (CMR, categories 1A and 1B in accordance with the CLP Regulation); and PBT (persistent, bioaccumulative and toxic) and vPvB (very persistent and very bioaccumulative) substances (as defined in REACH Annex XIII). In addition, two more substance groups are included if they are of equivalent level of concern (ELoC) as the ones previously mentioned. These are endocrine disruptors and substances which are environmentally hazardous without fulfilling the requirements for PBT or vPvB. Based on these adverse characteristics, Nordic Ecolabelling prohibits substances on the Candidate List. This means that we act ahead of the legislation and ban the substances before they are subject to authorisation and restriction in accordance with REACH.
PBT and vPvB are abbreviations for substances that are persistent, bioaccumulative and toxic, and very persistent and very bioaccumulative, respectively, in accordance with REACH Annex XIII. This means that they are not biodegradable and that they accumulate in living organisms. Based on these adverse characteristics they pose a threat to the environment and human health. They are prohibited in all Nordic Swan Ecolabel products/Services.

Endocrine disruptors (EDs) are chemicals that alter the functioning of the endocrine (hormone) system and consequently cause adverse health effects. The term potential EDs is used for chemicals with properties that make them suspected to be EDs. The hormone system regulates many vital processes in living organisms and when normal signalling is disturbed, adverse effects may result. EDs raise high concern for their risk of causing serious negative impact on the environment as well as on human health specifically. Special concern is raised for effects on reproduction and development and about possible links to

increases in public health diseases. While effects in wildlife populations have been confirmed, evidence is pointing to effects also in humans.

Per- and polyfluoroalkyl substances (PFAS) are used in many types of products due to their water and dirt repellent properties. These compounds constitute a group of substances that have highly problematic intrinsic hazardous properties. They are extremely persistent and accumulate in the body. They are spread all over the globe, from the large oceans to the Arctic, and are found in e.g. wild birds and fish and their eggs. Also, shorter chain compounds (2–6 carbon atoms) have been discovered in nature. The substances in this group are suspected to be endocrine disruptors, carcinogenic and to have a negative impact on the human immune system. PFOA, APFO (ammoniumpentadecafluorooctanoate) and certain fluoro acids are included in the Candidate List due to being reprotoxic, as well as having PBT properties.

The non-ionic APEO group of surfactants are produced in large volumes and their uses lead to widespread release to the aquatic environment. APEOs are highly toxic to aquatic organisms and degrade to more environmentally persistent compounds (APDs). Ethoxylated nonylphenol and several other alkylphenols are included in the Candidate List due to endocrine disrupting properties.

Flame retardants are suspected of contributing to a number of unwanted health effects. Several of the substances are suspected of causing birth defects, cancer, and endocrine disrupting effects. Many of them are on the EU candidate list under REACH. Many brominated flame retardants are persistent and bio accumulative chemicals that can now be found dispersed in nature. The focus on phasing out brominated flame retardants has led to the use of alternatives such as phosphorus and nitrogen-based flame retardants.

A number of phthalates are identified as endocrine disruptors and some of them are classified as reprotoxic. For these reasons several phthalates are included in the Candidate list. Based on their hazardous properties’ phthalates pose a threat to the environment and human health and there is a ban on this group of substances.

Bisphenol A, CAS No. 80-05-7, is used as a monomer in, inter alia, the following relevant areas and products: Various plastic and epoxy mixes, various building parts, paint, varnish, glue (binding agents, hardeners) and polyol in the production of polyurethane. Bisphenol A can be released into the environment from the production process. Bisphenol A (BPA) is on the Candidate List of substances that may have serious effects on human health and the environment, and the goal is to eliminate emissions by 2020. BPA is identified as damaging to the eyes, irritating to the respiratory tract, skin sensitizing and may also affect reproductive performance. The substance may be endocrine disrupting and is toxic to aquatic organisms. Bisphenol F and S can be used as substitutes for bisphenol A. A screening programme conducted to determine the occurrence of environmental toxins in surface water, sediment and biota in Norway found bisphenols A, F and S in the samples that were taken. These are substances with the same properties as bisphenol A.

Nordic Ecolabelling restricts heavy metals because they are toxic to humans and other organisms, both on land and in the aquatic environment. Mercury, cadmium and lead are

toxic to the human nervous system, kidneys and other organs, and the metals can accumulate in living organisms. Chromium (VI) is classified as very toxic, CMR and harmful to the environment.

Volatile aromatic hydrocarbons (VAH) are volatile organic compounds where one or more benzene rings are contained within the molecule, e.g. toluene, benzene, and xylene. VAHs are very stable and have a specific impact on the environment and human health, including damage to DNA. Exposure to these products should be minimised. For this reason, no more than 1% by weight is permitted in the chemical product.

Organotin compounds mainly originated from antifouling paints, but more commonly used as catalysts in industrial production, stabilizers, biocides, and surface disinfectants. Organotin compounds are harmful and toxic to the aquatic organisms at low concentration and have been linked to adverse effects in humans, such as reproductive toxicity and therefore many of these compounds are listed as substances of very high concern.

An exemption is given for the use of naphtha-based primers and adhesives classified H411 for outdoor use (containing up to 20% by weight of VAH). This is needed to ensure proper attachment. No alternatives have been found.

Dibutyltin (DBT) compounds and dioctyltin (DOT) compounds is allowed in sealing products ≤5000 ppm (0.5% by weight) in the final product as no alternatives are currently available.

Background to Nanoparticles in chemical products

There is still uncertainty related to how nanoparticles affect health and the environment[31]. Nordic Ecolabelling wishes to take a restrictive approach to the use of nanoparticles, and the requirement is based on the environmental consequences when nanoparticles are released to the surroundings (indoor environment or the surrounding environment, seen over the entire life cycle).

The definition of nanomaterials follows the European Commission’s definition of nanoparticles[32], see section 5.1 Definitions.

The requirement means that newer nanomaterials produced with the intention of containing nanoparticles must not be used. Examples of such nanoparticles are fullerenes, carbon nanotubes, nano silver, nano copper and nano-titanium dioxide.

6 Environmental impact of Painting services

Nordic Ecolabelling sets requirements concerning the topics and processes in the life cycle that have a high environmental impact – also called hotspots. Based on the MECO analysis, an RPS tool is used to identify where ecolabelling can have the greatest effect. R represents

[31] European Council, Recommendation 2017 (2013), Provisional version, Nanotechnology: balancing benefits and risks to public health and the environment. Available on page: (21/5-13).
[32] COMMISSION RECOMMENDATION of 18 October 2011 on the definition of nanomaterial (2011/696/EU).

the environmental relevance. P is the potential to reduce the environmental impact, and S is the steerability on how compliance with a requirement can be documented and followed up. The criteria contain requirements in those areas in the life cycle that have been found to have high RPS, since there is potential to achieve positive environmental gains.

You will find a summary of the RPS in chapter 1, “Summary”.

RPS scheme

Life cycle stages	Area and assessment of R, P, S (high, medium or low)	Comments
Raw materials		
	Choice of paint and chemical building product R: High P: High S: High RPS: High	**High Relevance** The choice of paint and chemical building products has a large effect on both the extraction of raw materials, painter’s exposure to harmful substances, indoor climate and environmental emissions. Use of resources can be lowered by using paints and varnishes with high quality performance, which both affects the amount of paint needed to cover a surface and the lifetime of the painted surface before the next repainting is needed. **High Potential** Ecolabelled products are readily available and among the best painting products in terms of both constituents and quality. The whole life cycle is considered, and strict requirements are set concerning the environmental and health effects of the ingoing substances and the quality of the paint. By choosing ecolabelled products with strict quality requirements for high performance, the consumption of paint is also decreased, and the lifetime of the painted surface is increased, resulting in a lower overall environmental impact. **High Steerability** The painting services company has very high steerability in which paint and chemical building products they purchase. Setting a requirement which requires a high share of ecolabelled products is an easy way of improving and documenting this main aspect of the painting services.
	Choice and use of covering materials R: High P: Medium S: Medium RPS: Medium	**High Relevance** Large amounts of material are used for covering (covering paper, plastic sheeting and painters' mat/blankets). Plastic and in most cases, paper is often single use materials. The relevance for tape is smaller, due to the limited amounts. **Medium Potential** There is potential to steer towards reusable covering materials (painter's blankets, e.g., tech felt or cotton-based) or materials based on recycled material (plastic and paper). There is also a climate potential in steering from plastic to cardboard. However, due to technical reasons plastic covering is necessary when spray painting. The potential for tape is smaller due to the amounts used. **Medium Steerability** For many standard assignments, the painting service company has steerability in what covering material is used and can therefore ensure repeated use through instructions to the staff. Such a requirement can be documented by work instructions.
Transport		
	Transport of staff and materials R: High P: High	**High Relevance** In painting services, vans (and cars) are used extensively as part of the service provision, and transport therefore contributes a significant share of the painting service’s total climate impact. Transport using traditional gasoline/diesel vehicles contributes to GHG emissions and air pollution.

	S: Medium RPS: High	**High Potential** The best alternatives to traditional gasoline/diesel vehicles are electric vehicles (EV), and not hybrid cars. Electric vehicles are widely available across the Nordic countries, also for the light commercial vehicle segment. Alternatives running on hydrogen are in theory available but do not seem to be used in practice. Dialogue with both SE and DK painting service companies shows that they are moving towards EV and away from diesel. **Medium Steerability** High steerability for setting a requirement for procedures for new purchases and documenting of purchase records, and for require ring a minimum share of EV in the existing fleet. Steerability over the maximum consumption of fuel for transport is however low, as it is strongly influenced by project-specific factors beyond the service provider's control, such as geographical location, logistics, and coordination with other contractors.
Painting/Use of painted areas		
	Quality control R: High P: Medium S: Medium RPS: Medium	**High Relevance** It is important to ensure customer satisfaction and limit resource demanding repair work. Bad quality will result in both repair work and shorter periods between repaints, and unnecessary use of resources. **Medium Potential** It is possible to set requirements for haven procedures for control of the surface prepared for painting and systematic supervisor control and work instructions. Furthermore, instruction for clear agreements and dialogue with the customer can be implemented. **Medium Steerability** Can be controlled by procedures and checklists. Reference can be made to relevant national guidelines, e.g., "Visuel bedømmelse af malerarbejde" or quality certification (ISO 9001). The company has high steerability of their own procedures and processes but assessing the visual paint work systematically can be challenging.
	Energy for drying and dehumidifying R: Medium P: Low S: Low RPS: Low	**Relevance** The drying of the building during the painting process consume energy. Especially when fast drying is required or the weather affects the drying process. Energy consumption is typically related to direct heat supply and dehumidifiers. **Potential** Various technologies are available for heating and dehumidifying the building: Mobile heat pumps, use of existing building heating system, IR-heating and traditional electric heaters. There is most likely a potential to use more energy efficient dehumidifiers, but no official energy labelling scheme. There is a potential to plan the paint work with longer drying periods, but it can be challenging in relation to time planes of the project. **Steerability** It is possible to steer towards more energy efficient heating sources which can be documented at a technology level (e.g., heat pumps and existing heating systems preferred over electrical heaters), at least for purchase of new equipment or rental of equipment. But as the paint jobs vary in size and complexity it can be difficult to set a requirement that fits for all. In addition, the energy efficiency of dehumidifiers seems difficult to assess due to the lack of labelling schemes. Also, dialogue with the DK/SE industry has shown that equipment on the larger projects is often delivered by the contractor.
	Health and working environment R: Medium P: Medium	**Relevance** Due to the large number of people engaged in cleaning, work environment conditions are a significant factor. Working conditions, such as exposure during paint application and sanding, ergonomic factors, skin exposure to chemicals and general work conditions are all relevant factors.

	S: Medium RPS: Medium	**Potential and steerability** There is medium potential and steerability in ensure ring that safety and health measures are taken by require ring that employees receive appropriate training. There is low potential and steerability in setting requirements to working conditions by referring to collective agreements (see further explanation in section 7 Areas without requirements).
End of life		
	Re-use and cleaning of painting tools R: Medium P: Medium S: Low/Medium RPS: Medium	**Medium Relevance** Discarding used brushes and paint rollers instead of cleaning them is an unnecessary use of resources. Cleaning brushes and paint rollers in the sink leads to unnecessary emissions of microplastic and other harmful substances into the environment. In addition, it causes unnecessary consumption of both paint and water. **Medium Potential** There is a potential for reusing brushes and rollers if the same colour is painted, by keeping them wrapped, instead of cleaning them every day (or discarding them before they are worn out). Use of one of the closed cleaning systems for brushes and rollers on the market. Less water is used, and the contaminated water can be collected and handled properly in the waste system. Cleaning enables reuse of the painting tools, but the associated costs and working hours might be too high for some painting service companies. **Low/Medium Steerability** Require a routine for reuse of brushes and rollers, by keeping them in the bucket or wrapped in plastic. Documentation of cleaning systems in place and invoice from collection of chemical paint waste from the cleaning system.
	Waste handling, including risk assessment and actions to prevent spreading R: Medium P: Low/Medium S: Medium RPS: Medium	**Medium Relevance** Older building components may contain materials that pose a risk to workers health and/or to the environment. Microplastic particles and other hazardous chemicals can be released throughout the life cycle of paints if dust, scrapings, and paint residues are not properly collected and disposed of in the correct waste fractions. Painting services generate significant amounts of waste, including covering materials, empty buckets and tubes, paint waste, and used brushes and paint rollers. Typical waste fractions include waste for incineration, paper, plastic, metal, and paint waste. Correct waste sorting can be challenging, particularly on construction sites. **Low/Medium Potential** Procedures for waste handling and risk assessment can help correct identification of hazardous waste, improve correct sorting and minimize the amounts of waste sent for incineration and hazardous waste. Procedures for waste reduction and use of leftover paints can further reduce overall waste generation. **Medium Steerability** Compliance can be documented through routines, invoices, and waste reports from waste management companies. However, on larger construction projects, the licensee will not always have full steerability over the waste sorting systems in place.

MECO scheme

	Raw material	Transport	Painting/use of painted areas	End of life
Material	Extraction of oil, gas, metals, and minerals for non-renewable raw materials for paints and varnishes, chemical building products or other products used in the painting service, like paint rollers, brushes, cover materials, tape etc. Agricultural production for renewable raw materials for paints and varnishes, chemical building products or products used in the painting service, like paint rollers, brushes, cover materials, tape etc. Forestry, petrochemicals or renewables for cover materials (paper, plastic sheeting or painters' mat/blankets).	Fuel used for vehicles transporting goods and personnel.	Consumption of paints and varnishes and chemical building products in the service. Consumption and durability depend on the product's quality. Consumption of other products used in the painting service, like paint rollers, brushes, cover materials, tape etc. Water for cleaning of re-used paint rollers and brushes. Water and cleaning products, i.e. "ultrapure" water for cleaning of surfaces prior to painting Satisfaction with painted areas limits resource demanding repair-work and re-painting. It is influenced by both the painting process (moisture control etc.) and products.	Loss of material value due to discarding or use of water for cleaning of used brushes and painting rollers. Loss of material value due to single-use and discarding of covering materials. If packaging, leftovers, and used cover materials are not handled correct: Excessive generation of waste, instead of recycling materials.
Energy	Energy consumption to extract/cultivate and process raw materials for production of products used in the service.	Electricity used for vehicles transporting goods and personnel.	Electricity for operating spray equipment. Electricity for operating direct heat supply or dehumidifiers for drying of the building before/during the painting process. Electricity for operating work lighting.	Emissions from transportation.
Chemicals	Exposure to hazardous chemicals in the work environment or nearby communities when manufacturing the products used in the service.	Transport via traditional gasoline/diesel vehicles contributes to GHG emissions and air pollution.	Painter's exposure to allergens, biocides, VOC, and other hazardous chemicals in the paint and chemical building products during painting. Exposure to the indoor climate of the painted buildings users, including VOC, allergens, and other hazardous chemicals.	If used brushes and painting rollers are discarded, and waste is not handled correct: Direct release of microplastic and other hazardous chemicals into the aquatic environment. If used brushes and painting rollers are cleaned and re-used:

				Wastewater emissions of microplastic and other hazardous chemicals (high levels, if cleaned in a sink). If packaging, leftovers, and used cover materials are not handles correct: Direct release of microplastic and other hazardous chemicals into the aquatic environment.
Other	Biodiversity and ecosystem impacts from resource extraction, forestry, and agriculture.		Working conditions, such as exposure during paint application and sanding, ergonomic factors, skin exposure to chemicals and general work conditions.	

Sources for MECO

MECO in Nordic Swan Ecolabel criteria for paint and varnishes and Nordic Sean Ecolabel criteria for chemical building products.

Dialogue with potential licensees and material suppliers.

ETC HE Report 2024/15: https://www.eea.europa.eu/en/circularity/sectoral-modules/plastics/microplastics-unintentionally-released-into-the-environment-in-the-eu#ref-7EFnk

Cleaning station webpage: https://www.lavabrush.com/

Vehicle market: Bilstatistik.dk, Bilstatistik.se, OFV.no

Vehicle market: https://www.fragt.dk/nyheder/danske-fragtmaend-skifter-til-baeredygtig-hvo-biodiesel-og-sparer-aarligt-miljoeet-for-300-tons-co2e/

7 Areas without requirements

Many reported occupational health and safety challenges in the painting sector appear primarily to be linked to insufficient training on hazardous substances and work practices, as well as incorrect or inadequate use of personal protective equipment. These issues are addressed through O14 Information and training of staff.

The criteria do not include other occupational and social aspects, such as wages, employment conditions, subcontracting practices and labour relations, that are generally regulated through national legislation and collective agreements. The reason for this is that Nordic Ecolabelling does not have the authority to assess compliance with collective agreements, which in most countries are voluntary arrangements.

8 How to apply and regulations for the Nordic Ecolabelling

Application and costs

For information about the application process and fees for this product group, please refer to the respective national website. For contact information see the beginning of this document.

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

Licence validity

The Nordic Swan Ecolabel licence is valid providing the criteria are fulfilled and until the criteria expire. The validity period of the criteria may be prolonged or adjusted, in which case the licence is automatically prolonged, 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.

Responsibility for Compliance with Applicable Legislation

When applying for the Nordic Swan Ecolabel, the applicant/licensee confirms compliance with all current regulatory requirements related to both the exterior and interior environment in connection with the service covered by the application. Furthermore, the applicant declares that all applicable regulatory requirements within the Nordic region are met for the service. Compliance with these regulations is a prerequisite for obtaining a licence.

On-site inspection

In connection with handling of the application, Nordic Ecolabelling normally conduct on-site inspection visit/-s to ensure adherence to the requirements. Scope and timing of on-site inspection is evaluated per product group and adapted to the specific application situation.

Queries

Please contact Nordic Ecolabelling if you have any queries or require further information. See contact info in the beginning of this document. Further information and assistance (such as calculation sheets or electronic application help) is available. Visit the relevant national website for further information.

Follow-up inspections

Nordic Ecolabelling may decide to check whether the Painting service fulfils Nordic Ecolabelling requirements during the licence period. This may involve a site visit, random sampling, or similar test. The licence may be revoked if it is evident that the Painting service does not meet the requirements.

Regulations for the Nordic Ecolabelling of painting services

To easily identify Nordic Swan Ecolabel services, the licence number and a descriptive sub text shall always accompany the Nordic Swan Ecolabel.

The descriptive sub text for 120 Painting services is Nordic Swan Ecolabel Painting service.

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

Appendix 1 Non-ecolabelled paints and varnishes and chemical building products

This Appendix describes all the requirements that must be meet for all chemical products and construction products.

The requirements are directly aligned with the following requirements in the criteria for Nordic Swan Ecolabel New Buildings (089, generation 4):

- O14 Classification of chemical products,
- O15 CMR substances
- O16 Preservatives in indoor paint and indoor varnish
- O17 Preservatives in other chemical products intended for indoor use
- O18 Prohibited substances
- O19 Nanoparticles in chemical products

All materials must be documented in Nordic Ecolabelling's supply chain declaration portal (SCDP).

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the paints and varnishes and chemical building products. Impurities are not regarded as ingoing substances and are exempt from the requirements. Ingoing substances and impurities are defined in section 5.1 Definitions.

Classification of chemical products

Paints and varnishes and chemical building products must not be classified according to Table 2.

Table 2 Classification of the product

Classification of chemical products CLP Regulation 1272/2008		
Classification	**Hazard class and category**	**Hazard code**
Hazardous to the aquatic environment	Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2	H400 H410 H411
Hazardous to the ozone layer	Ozone	H420
Acute toxicity	Acute Tox. 1 or 2 Acute Tox. 1 or 2 Acute Tox. 1 or 2 Acute Tox. 3 Acute Tox. 3 Acute Tox. 3	H300 H310 H330 H301 H311 H331
Specific target organ toxicity: single or repeated exposure	STOT SE 1 STOT RE 1	H370 H372
Carcinogenicity	Carc. 1A or 1B Carc. 2	H350 H351

Germ cell mutagenicity	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362

The classifications in the table concern all classification variants. For example, H350 also covers classification H350i.

Exemptions:

Naphtha-based primers and adhesives classified H411 for outdoor use.

Finland: Classifications H351 and H362 for spray polyurethane foams used in element factories and at construction sites for sealing of windows and balcony doors when temperature is below 5˚C.

- Declaration from the manufacturer of the chemical product, in accordance with Appendix 6 in the criteria for New Buildings 089 generation 4.
- Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

CMR substances

Paints and varnishes and chemical building products must not contain any ingoing substances classified as carcinogenic, mutagenic or reprotoxic according to CLP Regulation 1272/2008, see Table 3 below.

Table 3 Non-approved classifications of ingoing substances according to CLP Regulation 1272/2008

Classification of ingoing substances CLP Regulation 1272/2008		
Classification	**Hazard class and category**	**Hazard code**
Carcinogenicity	Carc. 1A or 1B Carc. 2	H350 H351
Germ cell mutagenicity	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362

The classifications in the table concern all classification variants. For example, H350 also covers classification H350i.

Exemptions:

- Glyoxal (CAS no 107-22-2) classified H341 ≤ 100 ppm (0.01% by weight) in the final product if the pH value in the final product is higher than pH 8.
- Trimethylolpropane (CAS no 77-99-6) self-classified H361 up to ≤ 5000 ppm (0.5% by weight) in the final product.
- Dibutyltin (DBT) compounds and dioctyltin (DOT) compounds in sealing products ≤ 5000 ppm (0.5% by weight) in the final product.

- Finland: 4,4´-methylenediphenyl diisocyanate, isomers and homologues (CAS no. 9016-87-9) classified as Carc. 2; H351 in spray polyurethane foams used at construction site for sealing of windows and balcony doors when temperature is below 5˚C.

  Declaration from the manufacturer of the chemical product, in accordance with Appendix 6 in the criteria for New Buildings 089 generation 4.

  Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

Preservatives in indoor paint and indoor varnish

Only preservatives compliant with PT 6 (in-can) and PT 7 (dry-film) according to Regulation (EU)528/2012 (The Biocidal Products Regulation) can be used.

The amount of preservative/combination of preservatives is in indoor paint, and indoor varnish is limited according to Table 4 and Table 5.

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

Table 4 Concentration limits for preservatives totally

Product type	Preservatives total
Paints, varnishes, base paints with tinting paints etc. for indoor use.	900 ppm (0.09% w/w)
Wet room paint specifically	1600 ppm (0.16% w/w)

Table 5 Concentration limits for specific compounds

Product type	Preservatives total
Isothiazolinone compounds in total*	600 ppm (0.06% w/w)
BIT (CAS no. 2634-33-5)	500 ppm (0.05% w/w)
CIT/MIT (CAS no. 55965-84-9)	15 ppm (0.0015% w/w)
MIT (CAS no. 2682-20-4)	15 ppm (0.0015% w/w)
OIT (CAS no. 26530-20-1)	15 ppm (0.0015% w/w)

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

Declaration from the manufacturer of the chemical product, in accordance with Appendix 6 in the criteria for New Buildings 089 generation 4.

Preservatives in other chemical products intended for indoor use

Only preservatives compliant with PT 6 (in-can) and PT 7 (dry-film) according to Regulation (EU)528/2012 (The Biocidal Products Regulation) can be used.

The amount of preservative/combination of preservatives in other chemical products for indoor use is limited according to Table 6.

Table 6 Concentration limits for preservatives in other chemical products for indoor use

Product type	Preservatives total
Isothiazolinone compounds in total*	600 ppm (0.06% w/w)
BIT (CAS no. 2634-33-5)	500 ppm (0.05% w/w)
CIT/MIT (CAS no. 55965-84-9)	15 ppm (0.0015% w/w)
MIT (CAS no. 2682-20-4)	15 ppm (0.0015% w/w)
OIT (CAS no. 26530-20-1)	15 ppm (0.0015% w/w)
IPBC (CAS no. 55406-53-6)	2000 ppm (0.2% w/w)
Bronopol (CAS no. 52-51-7)	500 ppm (0.05% w/w)

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

T̄ Declaration from the manufacturer of the chemical product, in accordance with Appendix 6 in the criteria for New Buildings 089 generation 4.

Prohibited substances

The following substances must not be an ingoing substance in paints and varnishes and chemical building products:

- Substances categorised as Substances of Very High Concern (SVHC) and included on the EU Candidate List.
- Substances evaluated by the EU to be persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB), in accordance with the criteria in Annex XIII of REACH.
- Endocrine disruptors: Substances on the EU member state initiative "Endocrine Disruptor Lists", List I, II and III, see the following links:
  - https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu
  - https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption
  - https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities

A substance that is transferred to one of the corresponding sublists called "Substances no longer on list" and no longer appears on any of Lists I–III, is no longer excluded. The exception is those substances on sublist II which were evaluated under a regulation or directive that does not have provisions for identifying EDs (e.g., the Cosmetics Regulation, etc.). For those substances, ED properties may still have been confirmed or suspected. Nordic Ecolabelling will evaluate the circumstances case-by-case, based on the background information indicated in sublist II.

In addition, the following individual substances and substance groups are prohibited or restricted. There may be an overlap between the substances listed below and substances categorised above.

- Short-chain chlorinated paraffins (C10-C13) and medium-chain chlorinated paraffins (C14-C17).
- Perfluoroalkyl and polyfluoroalkyl substances (PFASs)
- Alkylphenols, alkylphenol ethoxylates (APEO) and other alkylphenol derivates (APD).
- Brominated flame retardants.
- Phthalates (Esters of phthalic acid (orthophthalic acid/phthalic acid /1,2- benzene dicarboxylic acid).
- Bisphenol A (CAS no. 80-05-7), bisphenol S (CAS no. 80-09-1) and bisphenol F(CAS no. 620-92-8).
- The heavy metals lead, cadmium, arsenic, chromium (VI), mercury and their compounds.
- Volatile aromatic hydrocarbons (VAH) >1% by weight.
- Organotin compounds.

  Exemptions:
- Primers and adhesives for outdoor use may contain up to 20% by weight of VAH.
- Dibutyltin (DBT) compounds and dioctyltin (DOT) compounds in sealing products ≤ 5000 ppm (0.5% by weight) in the final product.
- IPBC (3-iodo-2-propynyl butylcarbamate, CAS No. 55406-53-6) is exempted, however see requirements above for preservatives in indoor products.

T̄ Declaration from the manufacturer of the chemical product, in accordance with Appendix 6 in the criteria for New Buildings 089 generation 4.

T̄ Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

Nanoparticles in chemical products

Nanomaterials/-particles (see Definitions) must not be added or be present in chemical products. Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01) (see Definitions).

Exemptions:

- Pigments*

- Naturally occurring inorganic fillers**
- Synthetic amorphous silica***
- Ground Calcium Carbonate (GCC) and precipitated Calcium Carbonate (PCC)
- Polymer dispersions

** This exemption does not apply to pigments added for other purposes than imparting colour. Nano-titanium dioxide is not considered to be a pigment and is therefore not exempted from the requirement.*

*** This exemption applies to fillers covered by Annex V, item 7 of REACH.*

**** This applies to unmodified synthetic amorphous silica. Chemically modified colloidal silica can be included in the products if the silica particles form aggregates in the final product. Any surface treatment of nanoparticles must fulfil requirement for Classification of chemical products and requirement Prohibited substances.*

Declaration from the manufacturer of the chemical product, in accordance with Appendix 6 in the criteria for New Buildings 089 generation 4.