

Nordic Ecolabelling for

Renovation of buildings

Residential, educational, office and hotel buildings



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Consultation

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Addresses

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:

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What is a Nordic Swan Ecolabel renovated building?

A Nordic Swan Ecolabel renovated building is a better choice for both the environment, the climate and for the residents or people using the building. It meets strict obligatory requirements for the renovation, including extraction and production of materials, the demolition and construction process, the use of the building as well as the recycling and waste stages. The requirements promote resource efficiency, reduced climate impact and a nontoxic circular economy. High quality of the renovation and good indoor climate are also promoted.

A Nordic Swan Ecolabel renovated building:

- Has a low energy demand or a significantly reduced total demand for primary energy compared to before renovation*.
- Has a good indoor environment because it meets strict requirements for moisture control and minimised exposure to harmful substances.
- Meets strict chemical requirements for substances harmful to health and the environment – in both the construction materials and chemical building products. This applies to everything from paints and sealants to insulation, vapour barriers and floors.
- Meets requirements that promote circular economy, for instance harmful substances in the existing building are mapped and handled and a material logbook ensures traceability of the building components.
- Meets requirements for construction waste which promote reuse, recycling and other material recovery.
- Is of a high quality through strict requirements for moisture control and the contractor's self-monitoring in the building process.
- Is aligned with the technical screening criteria for substantial contribution to climate change mitigation in the EU taxonomy Annex 1** for renovation of existing buildings (7.2), including climate calculation for relevant buildings.

* *Except for protected buildings and buildings worthy of preservation covered by the exemption in O7.*

** *Except for Iceland and Norway which has not yet implemented Directive 2010/31/EU and Regulation (EU) 2020/852.*

Why choose the Nordic Swan Ecolabel?

- The licensee may use the Nordic Swan Ecolabel trademark for marketing. The Nordic Swan Ecolabel is a very well-known and well-reputed trademark in the Nordic region.

- The Nordic Swan Ecolabel is a simple way of communicating environmental work and commitment to customers.
- The Nordic Swan Ecolabel clarifies the most important environmental impacts and thus shows how a company can cut emissions, resource consumption and waste management.
- Environmentally suitable operations are better prepared for future environmental legislation.
- Nordic Ecolabelling can be seen as providing a business with guidance on the work of environmental improvements.
- The Nordic Swan Ecolabel not only covers environmental issues but also quality requirements, since the environment and quality often go hand in hand. This means that a Nordic Swan Ecolabel licence can also be seen as a mark of quality.
- Is aligned with the technical screening criteria for substantial contribution to climate change mitigation in the EU taxonomy Annex 1* for Renovation of existing buildings*.

** Except for Iceland and Norway, which has not yet implemented Directive 2010/31/EU and Regulation (EU) 2020/852.*

What can carry the Nordic Swan Ecolabel?

Nordic Swan Ecolabelled renovation of buildings is the result of an active renovation process. It is not possible for existing buildings to be Nordic Swan Ecolabelled without an ongoing renovation process. Only changing the energy system is not considered an active renovation process.

The size and scope of the renovation:

The renovation project must fulfil at least one of the following three options:

1. The total cost of the renovation relating to the building envelope* or the technical building systems is higher than 25% of the value of the building, excluding the value of the land upon which the building is situated**.
2. More than 25% of the surface of the building envelope* undergoes renovation.
3. Renovation leads to a reduction of primary energy demand (PED) of at least 30%. Documentation must be done according to the principles in O7 alternative 2.
4. Documentation for compliance with 1, 2 or 3 must be done in O1.

** The building envelope is the outer structure of the building i.e., the physical barriers that separate the inside from the outside, land or unheated space. The building envelope is usually walls, floors/foundation, roof, windows, and external doors.*

*** The value of the building should be understood as the cost that a reconstruction of the existing building would amount to.*

Building types that can be subject to Nordic Swan Ecolabelled renovation of buildings

The following building types can be certified as Nordic Swan Ecolabelled renovation according to the criteria for Renovation of buildings:

- Buildings classified as residential buildings, including student housing, homes for the elderly and homes for persons with disabilities.
- Educational buildings, including preschool buildings, kindergartens and day-care centres, schools, universities, and other schools for higher education.
- Office buildings, including all associated facilities in the building.
- Hotels and associated conference facilities.
- Buildings that are converted into any of these types of buildings.

Building types that cannot be Nordic Swan Ecolabelled

- Holiday homes and cottages.
- Permanent supplementary buildings, such as garages, refuse depots, bicycle storage rooms, and sheds constructed as separate projects. Supplementary buildings are included in the licence when planned and constructed along with the renovation of main building.
- Separate educational buildings that primarily accommodate laboratories, workshops and similar.
- Ice skating halls, public and private swimming pools.
- Gymnastics halls and sports halls constructed as separate projects.
- Hospitals, hospices, and other care facilities that are not used as permanent residential buildings or classified as premises according to the national legislation.
- Commercial buildings, shops, and shopping centres.
- Factories and other industrial buildings.

Who may be a licensee?

The following can be licensee in the product group Renovation of buildings.

- Contractor
- Building developer

- Property owner

The licensee must take full responsibility for the fulfilment of all requirements. Thus architects, technical consultants, or other parties can only be licensees if they can take full responsibility for all requirements.

How to apply

Application and costs

For information about the application process, various licence types and fees for this product group, please refer to the respective national web site. For addresses see in the beginning of this document.

What is required?

The application must consist of an application form/web form and documentation showing that all relevant requirements are fulfilled. Documentation is provided throughout the planning and construction process. Documentation is uploaded and handled in the Nordic Ecolabelling Portal (NEP) and the Supply Chain Declaration Portal (SCDP). For links, please see the respective national web site as mentioned above.

The criteria for Renovation of buildings consists of obligatory requirements, indicated by the letter “O”.

The requirement text describes how the applicant must demonstrate fulfilment of each requirement. The following icons are used:

☒ Enclose

To be awarded a Nordic Swan Ecolabel licence the following must be fulfilled:

- All obligatory requirements must be fulfilled.
- Nordic Ecolabelling must conduct an inspection on the construction site and/or module factory.

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

Licence types

Various licence types exist (e.g., base licence or project licence). For details on licence types please contact the relevant national Nordic Ecolabelling office (find information first in this document).

Licence validity

The Nordic Swan Ecolabel licence is valid providing that relevant requirements in the criteria are fulfilled and until the criteria expires. The validity period of the criteria may be extended or adjusted, in which case the licence is

automatically extended, and the licensee informed. The building is Nordic Swan Ecolabelled according to a specific generation of the criteria.

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

On-site inspection and other control measures

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

Nordic Ecolabelling can require measurements of relevant parameters to verify compliance with national legislation and/or requirements defined in these criteria. If the relevant requirement is not fulfilled, the applicant must pay for the testing and perform corrective measures.

Queries

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

1 What is subject to the requirements?

Buildings, supplementary buildings, and outdoor areas

The Nordic Swan Ecolabel renovated building, remodelled outdoor areas on the plot and any permanent supplementary buildings that are part of the renovation project and that are constructed, renovated, or marketed with the Nordic Swan Ecolabelled renovated main building must fulfil all relevant requirements. Supplementary buildings are refuse depots, bicycle sheds, storage buildings, garages (both as a separate structure or connected to the building), carports and similar constructions. Communal/shared areas for residents or occupants are included, e.g., gyms and hobby rooms in the building.

Commercial areas such as shop premises, hairdressers, restaurants etc. are exempt from the requirements. Please see the section “What can carry the Nordic Swan Ecolabel?”.

Any bomb shelters in the building must only comply with requirement O2, O4, O5 and O37.

General scope of the material requirements

- The requirements include all materials and products that are incorporated as a part of the renovation and extensions in the Nordic Swan Ecolabel renovated buildings and supplementary buildings included in the renovation project.
- The material requirements apply to all structures above the capillary layer. This includes materials used for insulation of the base plate (above or below the plate) and any radon barrier wherever it is placed.
- Materials used on outdoor areas that are included in the renovation project are covered by relevant requirements. This includes products and construction materials such as decking, fences, pergolas, permanently installed outdoor furniture, playground and park equipment and similar items.
- Installations up to the building are not included. This means, for example, that electrical cables up to the main fuse box are not included.
- Requirements apply to permanently installed fittings, furniture, and trimmings as well as loose fittings and furniture (e.g., wardrobes and lockers) that are included in the renovation project and sold/let with the residential unit or premise.

Exempted areas, materials and products

The following are not subject to any requirement:

- New Materials installed in technical service areas including lift cabins and lift shafts.
- Garage floors and floors in bicycle rooms where there is a need for waterproofing due to a dry level below the floors in question.
- Control units for water, ventilation, and heating.
- Marking paint, marking tape that is removed, cable/pipe lubricant and cleaning agents.
- Sealing foam, formwork oil, etc. used to seal or lubricate casting moulds.
- Touch-up paint for damage to white goods and fittings.
- Products and materials for minor repairs of existing surfaces or other construction components in the building. Each case must be approved by Nordic Ecolabelling.
- Rust protection paint to restore railings and beams after welding and when screw holes have been drilled or similar work.
- Builders' hardware (e.g., locks, handles, hole plates and hinges).

- Nails, screws, nuts, bolts, washers and similar fixings and fasteners.
- Palletising trays, plastic spacers, ground spacers, inflow and outflow pipes for white goods and similar items.
- Temporary products and structures used in the construction but later removed. Examples of temporary products and structures are moulds, struts, tarpaulins, or plastic film temporarily used for weather protection or sealing. However, wooden products are always covered by O29 such as wood in casting moulds.

Any other exemption must be communicated to Nordic Ecolabelling for approval.

Prefabrication

When anything that would normally have been built on site is built in a module/construction element factory the same chemical and material requirements apply. This for instance includes:

- Prefabricated bathroom modules.
- Sandwich elements and other modules for wall, floor, roof or similar.
- Concrete elements (incorporated building products and surface treatment).

Chemical curing products can be used in prefabrication if mixing and application takes place in designated areas and/or with methods and systems protecting from exposure (in accordance with national work environment legislation).

Curing is a chemical process that produces the hardening of a polymer material by cross-linking of polymer chains. One- or two-component products, where the curing can depend on various factors such as reactive substances, UV light, heat, humidity.

Industrial surface treatments

Examples where chemical requirements (chapter 8.2) apply:

- Primed and final-coated outdoor wooden panels and boards that are not covered by the bullet below.

Examples where chemical requirements (chapter 8.2) do not apply, but where material requirements on construction products (chapter 8.3 and 8.4) still apply:

- Outdoor wooden facade panels and boards that are primed with a biocidal product (PT8) according to Regulation (EU) 528/2012, if all other coatings (including products used at the construction site) are ecolabelled.

Examples where chemical requirements (chapter 8.2) do not apply, but where material requirements on construction products (chapter 8.3 and 8.4) still apply:

- Pre-painted windows, doors, and interiors (mouldings, kitchen and bathroom fittings, indoor stairs).

- Primed and final-coated indoor wooden panels, boards, and ceilings.
- Fire retardant-treated wood for indoor and outdoor use where the only purpose is to achieve a certain fire protection class.
- Surface-treated steel.

Complete renovations where only the load bearing structure remains

Since it is resource-efficient to reuse the load bearing structure, Nordic Ecolabelling shall not contribute to its demolition if it can be retained. Nordic Ecolabelling leans towards the national regulations for building and construction and the definitions for those regulations. If the construction regulations define a project as being a new-build project, the criteria for new production must be used. If the construction regulations define a project as a renovation project instead, the criteria for renovations must be used.

Demolition is a substantial part of complete renovations, and it is therefore reasonable that Nordic Ecolabelling sets requirements for environmental survey/analysis and remediation, regardless of definition. The requirements in the section on environmental survey/analysis and remediation for renovations must be met, regardless of how the rest of the renovation is defined (as new construction or renovation).

Renovations that result in increased area (extension)

If the floor space of the building is increased, i.e., the building is extended while it is being renovated, the project is a combination of two criteria documents and will be treated accordingly:

1. The renovated section of the building must comply with the requirements in the criteria for Nordic Swan Ecolabelled renovation of buildings.
2. The extension section must in addition to relevant requirements in the criteria for renovation of buildings (e.g., material- and quality requirements) meet the following requirements in the criteria for Nordic Swan Ecolabelled New buildings (089):

- O2 Points achieved (and related P-requirements)
- O3 Energy demand of the building
- O4 Lighting management
- O5 Energy efficient white goods
- O6 Climate calculation of the building
- O7 Cement and concrete
- O8 Steel Production
- O9 Aluminium production
- O11 Waste sorting inside the building
- O31 Assessment of the biodiversity on the plot*
- O32 Measures to preserve and improve the biodiversity*
- O33 Management plan for the biodiversity*
- O34 Acoustics

- O35 Daylight provision
- O36 Thermal comfort and overheating
- O37 Radon (applies only in Finland)
- O38 Air permeability

Extensions smaller than 50 m² heated area must only comply with the requirements in the criteria for renovation of buildings (e.g., material- and quality requirements).

** Only applies when the extension is built at ground level and affects the land use. Only the area affected by construction must be evaluated.*

2 Alignment with the EU Taxonomy framework

Disclaimer

There are many uncertainties on how EU Taxonomy compliance can be documented as well as uncertainties in the interpretation. Therefore, Nordic Ecolabelling cannot guarantee EU taxonomy alignment through our criteria for Renovation of buildings.

Nordic Swan Ecolabel do not take any legal responsibility for the (degree of) alignment, nor can a building project or a building material ecolabelled with the Nordic Swan Ecolabel (or listed in the SCDP) be claimed as taxonomy aligned based on the ecolabelling criteria.

The responsibility for documentation of EU taxonomy compliance solely belongs to the company who is claiming it.

This section describes how the Delegated Act on the objective climate change mitigation (Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021) is handled in these criteria for Renovation of buildings. Specifically, reference is made to the activity 7.2 "Renovation of existing buildings". From here on it will be referred to as "the EU Taxonomy".

The following two tables display how Nordic Ecolabelling assume the EU Taxonomy can be interpreted in relation the criteria for Renovation of buildings. This assessment is done to the best of our knowledge and no responsibility is taken on these interpretations.

Nordic Ecolabelling closely follow interpretations of the EU Taxonomy criteria in both the Nordic countries and from EU. In the end, the interpretation is a task for national authorities or other officially appointed bodies.

Implementation strategy

The overall implementation strategy for Nordic Ecolabelling is to:

- Implement the technical screening criteria for significant contribution to climate change mitigation as mandatory requirements in this Nordic

Swan Ecolabelling criteria generation 2 in all countries where it is feasible.

- Implement mandatory requirements for those Do-No-significant-harm criteria in generation 2, that are considered relevant and reasonable, and where the delegated act is relatively clear on what is required to fulfil the requirement.
- Do-No-significant-harm criteria that are handled as point requirements in the criteria for New Buildings (gen. 4) are not implemented in these criteria.
- Social minimum guarantees as defined in the EU Taxonomy are not evaluated or covered by these criteria.
- In generation 3 of the criteria (next generation) Nordic Ecolabel aims to become a tool for documentation of alignment with The EU Taxonomy Climate change mitigation.

The Technical Screening criteria are according to the internal assessment done by Nordic Ecolabelling assumed to be handled in the following way (please note the disclaimer in the beginning of this section):

Technical screening criteria in the EU Taxonomy	Nordic Ecolabelling's evaluation of the screening criteria compared to the criteria for Nordic Swan Ecolabelled Renovation of buildings, generation 2
<p>7.2.1: "Energy demand"</p> <p>a) The building renovation complies with the applicable requirements for major renovations (298).</p> <p>b) Alternatively, it leads to a reduction of primary energy demand (PED) of at least 30 % (299).</p> <p>(298) As set in the applicable national and regional building regulations for 'major renovation' implementing Directive 2010/31/EU. The energy performance of the building or the renovated part that is upgraded meets cost-optimal minimum energy performance requirements in accordance with the respective directive.</p> <p>(299) The initial primary energy demand and the estimated improvement is based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method and validated through an Energy Performance Certificate. The 30 % improvement results from an actual reduction in primary energy demand (where the reductions in net primary energy demand through renewable energy so</p>	<p>The energy performance of the Nordic Swan Ecolabelled building is regulated in requirement O14.</p> <p>DK/SE/FI: Options a) and b) in this requirement are aligned with the two alternatives a and b in the EU Taxonomy in the criteria for Nordic Swan Ecolabelled Renovation of buildings.</p> <p>NO/IS are currently not aligned with the EU Taxonomy.</p> <p>Alternative c) in O14 regarding protected buildings and buildings worthy of preservation is not aligned with the EU Taxonomy.</p> <p>See national details below:</p> <p>Denmark: has implemented Directive 2010/31/EU but is not directly using the definition of major renovation in the legislation. Correspondence with the Danish building legislation authorities indicates that the renovated building must fulfil renovation class 2 (BR18) in order to be aligned with a) in the EU Taxonomy. Alternative b) can be employed using the system of EPCs, see requirement for details.</p> <p>Finland: has implemented Directive 2010/31/EU and adopted the definition of major renovation. It is interpreted that alignment with alternative a) in the EU Taxonomy is achieved by fulfilling the Ministry of the Environment's regulation (4/2013) on improving the energy efficiency of buildings in conjunction with repair and modification works, for the building category in question. Alternative b) can be employed using the system of EPCs, see requirement for details.</p>

	<p>Sweden: has implemented Directive 2010/31/EU but is not directly using the definition of major renovation in the legislation. It is interpreted that the renovated building must fulfil the energy use equivalent to the maximum permitted in accordance with BBR for new buildings in order to be aligned with alternative a) in the EU Taxonomy. Alternative b) can be employed using the system of EPCs, see requirement for details.</p> <p>Norway: The authorities are currently working on how the EU Taxonomy can be implemented in Norway. We are following this closely. Norway has not implemented Directive 2010/31/EU.</p> <p>Iceland: has not implemented Directive 2010/31/EU and EPCs are not implemented. EU Taxonomy alignment cannot be done at the moment.</p> <p>In conclusion, it is assessed that the documentation required to verify O14 a) or b) for DK, FI and SE can be used as documentation to verify taxonomy compliance. Calculation methods and documentation can be seen in O14.</p>
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The Do No Significant Harm criteria are, according to the internal assessment done by Nordic Ecolabelling, handled in the following way (please note the disclaimer in the beginning of this section):

DNSH criteria in the EU Taxonomy	Nordic Ecolabelling evaluation of the criteria compared to the Nordic Swan Ecolabel criteria for Renovation of buildings generation 2
<p>7.2.2.1: Climate Change adaption The activity complies with the criteria set out in Appendix A to this Annex.</p>	<p>The requirement is not covered by these criteria. The uncertainties related to the interpretation of the requirement is currently considered too high for a mandatory requirement. No point requirements are available in these criteria. Please refer to the criteria for New Buildings for further information on this EU Taxonomy requirement.</p>
<p>7.2.3.1: Sustainable use and protection of water and marine resources Where installed, except for installations in residential building units, the specified water use for the following water appliances is attested by product datasheets, a building certification, or an existing product label in the Union, in accordance with the technical specifications laid down in Appendix E to this Annex: (a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min. (b) showers have a maximum water flow of 8 litres In. (c) WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3,5 litres. (d) urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre.</p>	<p>The requirements are not covered by these criteria. Nordic Swan Ecolabel does not see it as relevant to implement on all renovation projects as the scope varies greatly for each project. Please refer to the criteria for New Buildings for further information on this EU Taxonomy requirement.</p>
<p>7.2.4.1: Transition to a circular economy At least 70% (by weight) of the non-hazardous construction and demolition waste (excluding naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC) generated on the construction site is prepared for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol (300).</p>	<p>The requirement is covered by "O13 Construction waste management" that requires a waste management plan in accordance with the EU Construction and Demolition Waste Management Protocol. Construction and demolition waste must be accounted for by reports from the waste management company showing the amounts of relevant waste fractions collected in relation to the total volume of the project's construction waste. The treatment form of the waste fractions and the receiver of the fractions must be stated.</p>

<p>Operators limit waste generation in processes related to construction and demolition, in accordance with the EU Construction and Demolition Waste Management Protocol and taking into account best available techniques and using selective demolition to enable removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling by selective removal of materials, using available sorting systems for construction and demolition waste.</p> <p>(300) EU Construction and Demolition Waste Protocol (version of 4.6.2021: https://ec.europa.eu/growth/content/eu-construction-and-demolition-waste-protocol-0_en).</p>	<p>Both construction site and module/prefabricated element factories must be accounted for. The mandatory level is in alignment with the requirement in the EU Taxonomy. Selective demolition must specifically be accounted for in O13.</p> <p>In conclusion, it is assessed that the documentation required to verify O13 can be used as documentation to verify taxonomy alignment.</p>
<p>7.2.4.2: Transition to a circular economy</p> <p>Building designs and construction techniques support circularity and in particular demonstrate, with reference to ISO 20887 (301) or other standards for assessing the disassembly or adaptability of buildings, how they are designed to be more resource efficient, adaptable, flexible and dismantlable to enable reuse and recycling.</p> <p>(301) ISO 20887:2020, Sustainability in buildings and civil engineering works - Design for disassembly and adaptability - Principles, requirements, and guidance (version of 4.6.2021: https://www.iso.org/standard/69370.html).</p>	<p>The requirement is not covered by these criteria. The uncertainties related to the interpretation of the requirement is currently considered too high for a mandatory requirement. No point requirements are available in these criteria.</p> <p>Please refer to the criteria for New Buildings for further information on this EU Taxonomy requirement.</p>
<p>7.1.5.1: Pollution and prevention control</p> <p>Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex.</p> <p>Annex C: The activity does not lead to the manufacture, placing on the market or use of:</p> <p>(a) substances, whether on their own, in mixtures or in articles, listed in Annexes I or II to Regulation (EU) 2019/1021, except in the case of substances present as an unintentional trace contaminant.</p> <p>(b) mercury and mercury compounds, their mixtures and mercury-added products as defined in Article 2 of Regulation (EU) 2017/852.</p> <p>(c) substances, whether on their own, in mixture or in articles, listed in Annex I or II to Regulation (EC) No 1005/2009.</p> <p>(d) substances, whether on their own, in mixtures or in an article, listed in Annex II to Directive 2011/65/EU, except where there is full compliance with Article 4(1) of that Directive.</p> <p>(e) substances, whether on their own, in mixtures or in an article, listed in Annex XVII to Regulation (EC) 1907/2006, except where there is full compliance with the conditions specified in that Annex.</p> <p>(f1) substances, whether on their own, or in mixtures or in an article, in a concentration above 0,1 % weight by weight (w/w), and meeting the criteria laid down in Article 57 of Regulation (EC) 1907/2006 and that were identified in accordance with Article 59(1) of that Regulation for a period of at least eighteen months, except if it is assessed and documented by the operators that no other suitable alternative substances or technologies are available on the market, and that they are used under controlled conditions*</p>	<p>Evaluation of the requirements in annex C:</p> <p>a) It is considered that the requirements in the EU taxonomy and the national legislations are the same. Applicants must always fulfil the current regulatory requirements in relation to their activities. No further documentation is therefore needed.</p> <p>b) The EU Taxonomy do not refer either to the annexes or to the exemptions in the directive and are therefore stricter than the regulation. These criteria regulate the content of mercury in all chemical products O18 and in buildings products covered by O25. For these product types the criteria are aligned with this EU Taxonomy requirement. Products or materials that are not covered by these requirements must be evaluated by the applicant for alignment with this requirement.</p> <p>c) The EU Taxonomy refers to Annexes I and II, but no reference is made to any exemptions, it is therefore stricter than the general regulation. However, the exemptions in question (e.g. (substances used as feedstock, process agents, destruction essential laboratory and analytical uses, hydrochlorofluorocarbons, methyl bromide and halons) do not seem relevant for the products in question.</p> <p>d) The EU Taxonomy refers to Annex II and Article 4(1). EEE placed on the market shall not contain the substances listed in Annex II. RoHS do however have exemptions in Annex III and IV (probably not relevant) which are not mentioned in the taxonomy. The EU taxonomy is therefore stricter than the legislation. In general, electronic equipment is not regulated in these criteria. The applicant should be aware if any exemptions in annex III are relevant as they are not covered by these criteria.</p> <p>e) The EU Taxonomy refers to Annex XVII in REACH. The EU Taxonomy and the national legislations have the same criteria. Applicants must always fulfil the current regulatory requirements in relation to their activities. No further documentation is therefore needed.</p>

<p>(f2) In addition, the activity does not lead to the manufacture, presence in the final product or output, or placing on the market, of other substances, whether on their own, or in mixtures or in an article, in a concentration above 0,1% weight by weight (w/w), that meet the criteria of</p> <p>Regulation (EC) No 1272/2008 in one of the hazard classes or hazard categories mentioned in Article 57 of Regulation (EC) 1907/2006, except if it is assessed and documented by the operators that no other suitable alternative substances or technologies are available on the market, and that they are used under controlled conditions.</p> <p>* The Commission will review the exceptions from the prohibition from manufacturing, placing on the market or use of the substances referred to in point (f) once it will have published horizontal principles on essential use of chemicals</p>	<p>f1) The EU Taxonomy refers to Article 57 and identified in accordance with 59(1), the Candidate List in REACH. This is a list for eventual inclusion in Annex XIV. The EU Taxonomy prohibit the manufacture, placing on the market or use of these substances and is therefore stricter than the national legislation. These criteria restrict the use of substances on the Candidate List for chemical products (O18) and specific listed construction products/materials specific (O25). Products or materials that are not covered by these requirements must be evaluated by the applicant for alignment with this requirement.</p> <p>f2) The EU Taxonomy refers other substances, whether on their own, or in mixtures or in an article, in a concentration above 0,1% weight by weight (w/w), that meet the criteria of Regulation (EC) No 1272/2008 in one of the hazard classes or hazard categories mentioned in Article 57 of Regulation (EC) 1907/2006. This means substances not yet on the Candidate List. This criteria for renovation of buildings restrict the use of the relevant hazard classes and categories (CMRs, PBT, vPvB and endocrine disruptors) for all chemical products and construction products/materials covered by O29.</p> <p>Overall conclusion: Products that are covered by O17-O21 or O29 are aligned with the requirements in Appendix C in the EU Taxonomy. Products that are not covered by O17-O21 or O29 must be evaluated by the applicant for EU Taxonomy alignment. In addition, please note the following:</p> <ul style="list-style-type: none"> • Electronic equipment is not regulated in these criteria. • The applicant should be aware if any exemptions in annex III are relevant as they are not covered by these criteria.
<p>7.1.5.2: Pollution and prevention control</p> <p>Building components and materials used in the building renovation that may come into contact with occupiers (302) emit less than 0,06 mg of formaldehyde per m3 of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m3 of test chamber air, upon testing in accordance with CEN/EN 16516 or ISO 16000-3:2011 (303) or other equivalent standardised test conditions and determination methods (304).</p> <p>⁽³⁰²⁾ Applying to paints and varnishes, ceiling tiles, floor coverings, including associated adhesives and sealants, internal insulation and interior surface treatments, such as those to treat damp and mould.</p> <p>⁽³⁰³⁾ ISO 16000-3:2011, Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method (version of 4.6.2021: https://www.iso.org/standard/51812.html).</p> <p>⁽³⁰⁴⁾ The emissions thresholds for carcinogenic volatile organic compounds relate to a 28-day test period.</p>	<p>These requirements are not covered by the Nordic Ecolabel criteria for Renovation of buildings. We do not require emission testing for individual building products but set chemical requirements on ingoing chemical substances.</p> <p>The uncertainties related to the interpretation of which materials are specifically covered by the requirement is currently considered too high for a mandatory requirement. No point requirements are available in these criteria.</p> <p>Please refer to the criteria for New Buildings for further information on this EU Taxonomy requirement.</p>
<p>7.2.5.3: Pollution and prevention control</p> <p>Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.</p>	<p>Handling of noise, dust and pollutant emissions during construction or maintenance work is considered to be covered by national legislation on working environment and environment.</p>

3 General requirements

01 Outline description of the renovation project

The application must include a description that includes the following elements for the renovation project and for the renovated building:

- a) Documentation that the renovation project complies with the building types and the size and scope of the renovation in the product group definition, section 1.
 - b) A description of the existing building's carcass/load bearing structure, façade, roof, foundations, heating system, ventilation system and other essential installation systems.
 - c) An outline description of the extent, purpose, and objectives of the renovation. The description must show which parts of the building are to be renovated and clearly state if a story, buildings, or parts of buildings are not included in the renovation work. The description must also include any supplementary buildings that are part of the renovation project, or which are to be newly constructed/erected.
 - d) Heated areas before and after the renovation must be specified.
 - e) Floor plans with details of the number of storeys, number of square metres of living space or premises (NO: BRA, SE: BOA,LOA, FI: A (netto), DK: Brutto and Netto, IS: A (brutto)). It must be clearly stated if, during renovation, the floor space of the building is increased (extension) or if the building category is changed (e.g., an office is converted into housing).
 - f) Number of residential units. For offices and educational buildings: intended number of users of the building.
 - g) Commercial spaces or other supplementary activities (canteen, gym etc.) in the building.
 - h) Outdoor areas including playgrounds and courtyards affected by the renovation project: layout and materials.
 - i) Option catalogue for the tenant/owner to choose from various layouts, materials, or fittings.
 - j) System to ensure that office buildings have individual metering of electricity for each residential / rentable unit or each floor.
- Documented description of the aforementioned items. Drawings, designs, illustrations, and other project documentation can constitute the basis.
- The extent of the renovation (excluding demolition) either reported as a proportion of the building envelope being renovated or in relation to the building's value (excluding the land value).

4 Prior to the renovation phase

Prior to the construction/renovation phase, the project must assess the existing building. The following requirements must be documented in the early phase of the project. Requirements O2, O4 and O5 must also be met by any bomb shelters belonging to the building.

O2 Environmental survey and remediation plan

Before the renovation work starts, an environmental survey must be performed by an expert*. The survey must at least cover the parts of the building that are to be renovated and where there is suspicion of hazardous waste or hazardous substances.

The environmental survey must as a minimum comply with national legislation. In addition, building components that are retained in the building must comply with the threshold limits stated in Appendix 1.

If there is suspicion of hazardous substances in building components, analysis of representative material samples must be performed to establish the concentration of hazardous substances. This is relevant for identifying both hazardous waste and compliance with Appendix 1.

Building parts that are suspected to contain asbestos must be marked with asbestos tape.

If a previously performed survey is more than three years old, the person/firm responsible for writing the report must assess whether there is a need to update the report.

The environmental survey must be documented in a remediation plan accounting all the findings and results of representative material samples and analyses. The remediation plan must at least include the following:

1. Responsible for the plan*.
2. When the plan is written.
3. Age of the building, year of major renovations and previous use of the building if known.
4. If only parts of the building are surveyed, it must be argued why there is no suspicion of hazardous substances in non-surveyed parts and surveyed parts must be clearly marked on drawings.
5. Results of performed material samples and analyses, for both materials for demolition and materials that are retained in the building.
6. Identification of the different types of hazardous substance/waste, must include the following:
 - a. The location identified by description, photographs, or drawings.
 - b. Amounts.
 - c. A description of measures for protecting the environment, human health and the risk of damage and theft during the remediation process.
 - d. A list of building parts and materials where hazardous substances are retained in the building. The following must in addition be documented:
 - e. Compliance with Appendix 1 and/or national threshold limits for hazardous waste.
 - f. When a material/building part contains hazardous substances that are not compliant with the threshold limits above, they can only be retained in the building if a risk assessment is performed. The risk assessment must contain a description of the relevant encapsulating method.

The follow-up of the remediation plan must be documented according to O5.

** The person performing the environmental survey must be qualified to conduct an environmental survey and have at least three years of relevant experience within the field of environmental surveys for the type of building in question.*

In cases where PCBs are identified in the building during the environmental survey, or in another stage, PCBs must be measured in the indoor air after remediation. For more information, see requirement O37.

- ☒ CV of the expert documenting relevant competence.
- ☒ Documented remediation plan that covers a) to h) above.

O3 Mapping of components and materials suitable for reuse

Before the demolition work takes place, the building must be mapped by an expert* to identify building parts and materials that are suitable for reuse. As a minimum the building parts and materials that will be removed during the demolition must be accounted for**.

The mapping must as a minimum result in a report containing the following information:

1. Person responsible for writing the plan.
2. When the plan is written.
3. Age of the building, year of major renovations and previous use of the building if known.
4. Building parts and materials* suitable for reuse must be summarised in a table providing the following information:
 - a. Description of product, e.g., dimensions, sound class, fire characteristics.
 - b. Estimated remaining lifetime.
 - c. Estimated amounts.
 - d. Deconstruction method based on the intended use of the material. Selective demolition must be used to facilitate reuse by selective removal of materials.
 - e. Recommended method of storage after deconstruction.
 - f. Existing documentation of the building parts and materials if it exists.
 - g. The technical documentation required, based on the intended use.
 - h. If any products or materials are covered by a take-back system, specify the type of material, receiving facility and approximate quantities.

Identified components and materials that are reused in the building at a later stage must fulfil O2.

** The expert must be trained in documenting building parts and materials suitable for reuse and have at least 3 years' experience in the field. This can be either an internal or an external person.*

*** The mapping must at least include carcass, technical installations, stairs, floors, interior and exterior doors, windows, building panels, roof covering, façades, bricks, concrete, structural timber, stone material, fixtures and sanitary ware.*

- ☒ A report of components and materials for reuse that includes all the bullet points above.
- ☒ CV of the expert documenting relevant competence.

O4 Moisture survey

Before the actual work of renovating the building has begins, a survey should be carried out to assess moisture damage, fungal growth, dry rot fungus, odours and water damage in the building that is to be renovated. The moisture survey must be performed by a competent moisture technician*.

The moisture survey must cover the entire building, as well as areas exempted from other requirements such as retail spaces and restaurants, and must at least include the following**:

- Foundation/base, cellar or corresponding.
- The building envelope (including roof).
- Moisture-sensitive elements indoors and outdoors.
- Technical installations.
- Interior surfaces that were exposed to moisture before the renovation (wet rooms, kitchens, showers, and washrooms).

The survey is initially, to be performed visually and non-destructively.

If the initial survey reveals a risk of moisture damage in the building, a detailed survey must be performed. The detailed survey must be carried out using destructive sampling, visual inspection with tape, analysis of material samples by microscopy, collection of air samples or another appropriate method. The choice of method must be justified in the survey.

If moisture or water damage is identified, it must be remedied/treated during the renovation process.

If any building components are identified as being at risk of moisture damage, they must be addressed during the planning stage and remedied during the renovation process.

If mould removal is necessary, the work must be carried out in compliance with national occupational health and safety guidelines and performed by a licensed/authorised contractor.

** The competent moisture expert technician must have documented knowledge and experience in building techniques, along with knowledge of moisture in materials and constructions and the consequences. Furthermore, the expert technician must have at least 2 years' experience in moisture prevention work or moisture damage assessment work and at least 2 years' experience in working on building projects, project planning and/or the management of buildings.*

*** If the whole building cannot be surveyed (e.g., technical installations in all residential units) a representative selection of areas must be surveyed, and the selection must be justified to Nordic Ecolabelling.*

- ☒ A report from the moisture survey stating whether harmful moisture or water damage has been found, whether structures are considered to be well designed and an assessment of the design of any wet rooms.
- ☒ Planned corrective actions to remediate moisture damage that has been found and building components that are at risk of moisture damage.
- ☒ CV of the expert documenting relevant competence.
- ☒ Report of any remediation conducted.

O5 Follow-up of remediation plan

The remediation contractors* must prepare a report on management of the hazardous waste. The report must include the hazardous waste identified and documented in the remediation plan, and any new findings during the remediation/demolition. The report must contain at least the following:

- Information on the type and amount of hazardous waste, using the waste codes set out in Commission Decision 2000/532/EC. Deviations from the remediation plan must be described with proper cause.
- Description of an appropriate method of removal of the hazardous waste, including how it will be stored and transported.
- Information to show that the remediation contractor has followed the procedures to safeguard human health and the environment, according to the remediation plan.
- Details of carrier(s) and receivers of the hazardous waste.

** Remediation contractors must be qualified to conduct remediation work within the parameters of the building type and the complexity in question.*

The total amounts of waste generated during the demolition /deconstruction phase and the handling must be documented in O13.

- A report from the completed remediation process that includes the above points.
- Receipts from hazardous waste recipients must be available upon request.
- Documentation of the remediation contractor showing relevant competence.

O6 Follow-up of mapping of components and materials for reuse

The potential use of components and materials listed as suitable for reuse in O3 must be followed-up during the early phases of the project.

All identified components and materials from O3 must be considered for reuse in the project or elsewhere (e.g., other projects or handing over to a platform specialised in reuse). The project's deliberations must result in a report.

Components and materials that are reused in the project must document compliance with threshold limits presented in O3.

- A report with all identified components and materials from O3, their intended use and compliance with threshold limits presented in O3 for relevant materials/components.

5 Energy

O7 The energy use of the building after renovation

The building must comply with one of the following three alternatives:

Alternative 1

Denmark:

- All requirements for renovation class 1 or 2 in BR18 are fulfilled.

Calculation method: BE18 or equivalent.

Finland:

Energy demand equivalent to maximum 80% of the Ministry of the Environment's regulation (4/2013) on improving the energy efficiency of buildings in conjunction with repair and modification works, for the building category in question.

Calculation method: The Ministry of the Environment's regulation on the energy performance of buildings or the equivalent.

Iceland:

All building types: 5% better than BRG.

For the building to be EU Taxonomy compliant, the energy demand must meet the requirement for DK, SE, or FI.

Calculation method: In accordance with BRG.

Norway:

Energy use equivalent to maximum permitted in accordance with the TEK 17 for new buildings.

Calculation method: NS 3031 or with a programme validated in accordance with the NS EN 15265 standard.

Sweden:

Energy use (EP_{pet}) equivalent to maximum permitted in accordance with BBR for new buildings.

Calculation method: BBR, BEN and national practice in the sector for Sweden, see Appendix 2.

The following applies to all countries:

New national regulations: If new national regulations and thresholds for energy consumption of buildings are introduced during the term of validity of the criteria, Nordic Ecolabelling will perform a new assessment of the energy requirement and may adjust the requirement. The adjustment may involve a national consultation round.

Any exemptions or reliefs for e.g., timber frame houses, temporary buildings, or buildings which, due to their size, are exempted from the energy requirements in the building regulations of the countries may not be used.

Alternative 2

Only applies for SE, FI, and DK:

Renovation of the building must lead to a reduction of primary energy demand (PED) of at least 30%. In addition, the renovated building must as a minimum have energy class E (SE, FI,) or D (DK).

The improvement must result from an actual reduction of primary energy demand, meaning that the reductions in net primary energy demand through installation of renewable energy sources are not taken into account.

The initial primary energy demand and the estimated improvement are based on a detailed building survey/energy audit conducted by an accredited independent expert with minimum 5 years' experience. The results must be validated through an Energy Performance Certificate and report.

Calculation method: according to the national implementation of the EU Directive 2010/31/EU.

If the building directive is renewed during the validity of these criteria, Nordic Ecolabelling will perform a new assessment of this energy requirement and may adjust the requirement. The adjustment may involve a national consultation round.

Alternative 3

Protected buildings and buildings worthy of preservation

The following building types are covered by this alternative:

Denmark:

Protected buildings and buildings worthy of preservation with high conservation value (class 1-4 in the SAVE method¹).

Finland:

Protected buildings and buildings worthy of preservation that are defined in the law on built heritage or in town plans.

Norway:

Protected buildings, as defined in the act kulturminneloven or svalbardmiljøloven, and buildings worthy of protection, as defined in the act plan- og bygningsloven, kirkeloven or naturmangfoldloven.

Sweden:

Protected buildings and buildings worthy of preservation are defined by Country administrative Board (Länstyrelsen). In addition, buildings q-marked by the municipalities in the local/zone plan, or alternatively buildings that are part of a municipality cultural environment programme or conservation programme.

Iceland:

Protected buildings and structures that are defined as protected by the Cultural Heritage Agency of Iceland, see here: Friðuð hús og mannvirki | Minjastofnun

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https://www.bygningsbevaring.dk/uploads/files/SAVE_Analyse_og_vaerdisaetning/SVAD_ny_SAVE_Metode_2017.pdf

The following must be documented in alternative 3:

- a) It must be documented that the building is covered by the building types above. Documentation from the relevant national authority must be sent to Nordic Ecolabelling.
- b) It must be described how the building as a whole or the renovated building parts fulfil the requirements in the national legislation. Documentation used for the building permit can be used.

Please note: When using alternative 3 the renovation will not be aligned with the EU Taxonomy.

- Alternative 1: Energy calculation according to the requirement.
- Alternative 2: Energy Performance Certificate and report documenting the initial primary energy demand of the building.
- Alternative 2: Energy calculation verifying that the planned measures will result in a 30% reduction of the primary energy demand.
- Alternative 2: Energy Performance Certificate and report documenting the primary energy demand of the renovated building.
- Alternative 3: Documentation for bullets a) and b).

O8 Lighting management

Lighting systems that are changed as a part of the renovation project must fulfil the following:

A: Outdoor lighting**All building types**

All outdoor lighting must have automatic demand control installed, that at least turns lighting off when there's sufficient daylight. The lighting control must be connected to the fixture and not only to/in the light source. This applies to lighting in all common areas, including shared courtyards, shared roof terraces and playgrounds, façade lighting, entrance areas and parking spaces.

All luminaires must be well shielded from the sky with <0.5% light above the horizontal line of the light fixture.

Lighting on private terraces and balconies is exempted from the requirement on automatic demand control.

B: Indoor lighting**Residential buildings**

- Automatic demand control must be installed in all communal areas such as entrance halls, stairwells, laundry rooms, storage rooms, hobby rooms, meeting rooms, communal kitchens, communal living rooms and communal dining areas.

Educational buildings

- Automatic demand control must be installed in all rooms.
- In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

Office

- Automatic demand control must be installed in all rooms.
- In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

Hotels and associated conference facilities

- Automatic demand control must be installed in all rooms.
- In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

General exemptions

- Dormitories in preschools.
- Technical service areas including lifts.
- Lighting for works of art.
- Workplace lighting, worktop lighting and lighting fitted into technical installations and equipment.
- Emergency lighting and lighting in bomb shelters.
- Rooms or spaces in homes for the elderly or persons with disabilities, where lighting for safety reasons cannot switch off.
- For classrooms, rooms for group working and studying as well as common areas in e.g., student housing, co-living apartments, homes for the elderly or persons with disabilities: The lighting should switch off automatically when the room is not in use. However, manual light switches can be used to control the lighting during use of the room.

☒ Description of the automatic demand control for indoor and outdoor lighting in accordance with the requirement.

☒ Product sheet or other product information stating that the outdoor light fixtures are well shielded from the sky with <0.5% light above the horizontal line of the light fixture.

09 Energy efficient white goods

Household appliances and professional kitchen appliances installed as a part of the renovation project must fulfil the energy class requirements in accordance with Tables 1 and 2 below.

If new legislation comes into force during the validity period of the criteria, Nordic Ecolabelling will assess the requirement and an adjustment may be implemented.

Table 1 Requirements for household white goods.

Product type	Energy labelling according to Energy Label Regulation 2017/1369 (including supplements)	Energy label in accordance with the Energy Labelling Directive 2010/30/EC (including supplements)
Washing machine	B	
Refrigerator	E	
Freezer	E	
Combined refrigerator and freezer	E	
Refrigerator for mini kitchen and minibars (height ≤ 80 cm)	F	
Drying cabinets	Must have an energy consumption of no more than 0.4 kWh/kg of laundry	
Tumble dryers		A+++
Combined wash and tumble dryer	D	
Dishwasher	C	
Integrated oven		A+
Oven in free standing stove		A
Electric water heater installed in individual apartments or single-family houses		C

Table 2 Requirements for professional kitchen appliances.

Product type	Requirement
Boiling pans	At least 90% energy efficiency according to EFCEM's Energy Efficiency Standard for boiling pans or equivalent.
Refrigerators	Class B or better*
Freezers	Class D or better*
Combined freezer/refrigerator cabinets	D or better*

* *Energy class according to Energy Labelling Directive 2010/30/EC (1094/2015/EU).*

Refrigerators and freezers with central cooling systems are not covered by the requirement.

- ☒ Household appliances: Overview of all household appliances installed in the Nordic Ecolabel building, which includes name/product specification, product type and energy label. For drying cabinets, additional documentation showing the drying cabinet's energy use.
- ☒ Product sheet or manual showing the energy class.
- ☒ For professional kitchen appliances: Overview of all products stating the type of product, product sheet, technical manual or similar document showing fulfilment of the requirement.
- ☒ For boiling pans: Results from tests performed in accordance with EFCEM's Energy Efficiency Standard for boiling pans or equivalent.

6 Climate

O10 Cement and concrete

The climate impact originating from newly installed concrete elements and ready-mix concrete used at the construction site must be accounted for according to the national requirements below.

EPDs must be produced in accordance with ISO 15804/ EN 16757:2017 and ISO 14025 and must either be:

- Third-party verified according to ISO 14025, or
- produced using a third-party reviewed EPD tool for cement or concrete according to ISO 14025.

The requirements for prefabricated elements can alternatively be met by using a minimum of 30% reused elements. The reused concrete must be assessed according to requirement O15.

Denmark:

Minimum 90% (weight or volume) of the ready-mix concrete used at the construction site must as a minimum have a GWP 15% lower than the GWP level in the corresponding industry EPD published by Dansk beton:

<https://www.epddanmark.dk/epd-databasen/dansk-beton-fabriksbetonforeningen/>. Only the phases A1-A3 must be accounted for.

The specific products must be documented by a product specific EPD.

EPD-generator from Dansk Beton can be used.

Finland:

Minimum 70% (weight or volume) of the ready-mixed concrete used at the construction site must document compliance with the concrete class GWP.85* or better in BY Low Carbon Classification, Finish concrete association.

[\(https://vahahiilinenbetoni.fi/in-english/\)](https://vahahiilinenbetoni.fi/in-english/)

Minimum 70% (weight or volume) of the concrete used in prefabricated elements** must document compliance with the concrete class GWP.85 or better in BY Low Carbon Classification, Finish concrete association.

[\(https://vahahiilinenbetoni.fi/in-english/\)](https://vahahiilinenbetoni.fi/in-english/)

The Finnish Concrete Associations Low-carbon calculator can be used.

** Alternatively, other concrete classes within the system may be used and weighted together if it can be shown that it will give the same result in global warming potential (GWP).*

*** Prefabricated elements include slabs between floors and roof slabs, walls between flats, outer or inner walls, lift shafts, stairs, facade elements and balconies.*

Iceland:

Minimum 90% (weight or volume) of the ready-mix concrete used at the construction site and 90% (weight or volume) of the concrete elements must be documented by a product specific EPD.

Norway:

Minimum 70% (weight or volume) of the ready-mixed concrete used at the construction site must comply with Low carbon concrete A* or better in the Norwegian Concrete Association's publication no. 37 Low carbon concrete (NB37).

Minimum 70% (weight or volume) of the concrete used in prefabricated elements** must document compliance with low carbon concrete A* or better in the Norwegian Concrete Association's publication no. 37 Low carbon concrete (NB37).

EPD generator provided through membership in Betongfokus and Betong Norge - Betongelementforeningen can be used.

** Alternatively, other concrete classes within the system may be used and weighted together if it can be shown that it will give the same result in global warming potential (GWP).*

*** Prefabricated elements include slabs between floors and roof slabs, walls between flats, outer or inner walls, lift shafts, stairs, facade elements and balconies.*

Sweden:

Minimum 70% (weight or volume) of the ready-mixed concrete used at the construction site must comply with level 2* of "Vägledning Klimatförbättrad betong", published by Svensk Betong.

Minimum 70% (weight or volume) of the concrete used in prefabricated elements** must document compliance level 2 of "Vägledning Klimatförbättrad betong", published by Svensk Betong.

** Alternatively, other concrete levels within the system may be used and weighted together if it can be shown that it will give the same result in global warming potential (GWP).*

*** Prefabricated elements include slabs between floors and roof slabs, walls between flats, outer or inner walls, lift shafts, stairs, facade elements and balconies.*

- FI/NO/SE: Product specific EPD from the concrete manufacturer showing that the relevant concrete products meet the requirement of the national concrete classification system for greenhouse gas emissions for the required strength class.
- DK/IS: Product specific EPD from the concrete manufacturer documenting the requirement.
- IS: Overview of the concrete construction part types that fulfil <70% of cement clinker and a calculation showing that the construction parts constitute at least 50 % of the need in the building.
- IS: Product data sheet, eBVD or EPD stating the cement clinker content for the cement/concrete construction parts.
- All countries: Total amount of delivered ready-mixed concrete and prefabricated elements and amount of delivered concrete that fulfils the required concrete class.

O11 Steel production

The requirement applies to the following newly installed construction materials/building parts:

- New facade panels in steel >20% of the total façade area (excluding window/door area).
- New load bearing constructions in steel >20% by weight of the total buildings loadbearing system.

Steel rebars are not covered by this requirement.

- Calculation showing that facade panels and load bearing constructions consist of <20% steel.

The relevant building parts must fulfil alternative A, B, or C.

A) High proportion of recycled content:

A minimum of 75% by weight of the steel must be recycled.

Recycled is defined as both pre- and post-consumer, according to definitions in ISO 14021.

Fulfilment is shown through either:

- A signed agreement between the steel supplier and the applicant stating that the requirement is met, the declaration from the steel supplier can be based on purchase records/average data from several steel sub suppliers/manufacturers, or
- eBVD or EPD based on product-specific data/data from the steel producer's own production stating the content of recycled steel in the product.

- Signed agreement as described above.

- eBVD or EPD as described above.

B) Reused steel parts:

At least 50 % of the façade panels or load-bearing steel construction must be reused building parts. Traceability back to the parts' most recent use in construction must be documented.

The reused steel parts must comply with requirement O15.

- Reused steel products must be accounted for and the traceability back to the parts' most recent use in construction must be documented.

C) Virgin steel production:

The requirement can be verified using either: Direct traceability through the supply chain or mass balance approach².

The requirement can be met by fulfilling one of the three alternatives (1-3) below.**1. Steel produced from traditional methods:**

The steel origins from a steel producer who has:

- Implemented at least 2 of the energy efficiency measures stated as BAT in the BREF document for iron and steel production (2013 or later version). The energy efficiency measures are listed in Appendix 3, and
- an active sustainability strategy focusing on reducing energy consumption and greenhouse gas emissions. The strategy for reducing energy consumption and greenhouse gas emissions shall be quantitative and time-based and must be determined by the company management.

- Enclose latest sustainability strategy report or equivalent documentation from the steel producer showing fulfilment of the requirement. The steel producer can also present specific targets from annual business report with reference to specific numbers and assumptions. Average numbers from steel producers with several steel melting plants is accepted.
- Description of which energy efficiency measures stated as BAT have been implemented at the production site.
- Information on type of traceability used to document the requirement.

2. Responsible steel certified production site:

A minimum of 50% by weight of the steel covered by the requirement comes from a production site that is certified according to the standard Responsible Steel³, version 1.0, 2019 or later versions.

- Enclose valid Responsible Steel certificate from the steel producer.
- Information from the supplier/manufacturer of the constituent steel part about which metal parts are from certified metal production (purchase records).
- Information from the supplier/manufacturer of the constituent steel parts on the type of traceability used to document the requirement.
- Documentation from the applicant that the requirement for share of purchased steel from certified steel producers is fulfilled – e.g., invoices or other documentation from suppliers.

² In case of several potential steel producers, the supplier of the metal components can verify the requirement by using a mass balance approach if there is an account documenting the annual volumes purchased from the individual steel producers. The volumes must correspond to volumes sold to the applicant (e.g., cannot sell a larger volume than the corresponding quantity purchased from the individual steel producers).

³ Overview of certified steel producers, <https://www.responsiblesteel.org/certification/issued-certificates/>

3. Steel production based on new technologies with reduced greenhouse gas emissions:

The steel origins from steel production sites that have implemented one of the following technologies:

- Direct electrolysis of iron ore.
- Blast furnace top gas recycling with carbon capture and storage.
- Direct smelting reduction processes.
- Hydrogen steelmaking in shaft furnaces using green H₂.

- ☒ State the name of the steel producer and production site where the steel comes from, as well as a brief description of which technology is used.
- ☒ Information on type of traceability used to document the requirement.

O12 Aluminium production

The requirement applies to the following newly installed construction materials/building parts:

- New façade panels in aluminium >20% of the total façade area (excluding window/door area)
- New profiles for windows and doors in aluminium (external cladding of outer wood components for the sole purpose of weather proofing is exempted). A Nordic Swan Ecolabel window, patio door or exterior door will fulfil the requirement and must only verify the requirement with the product name and licence number.
- New aluminium profiles in glass facade systems when the system covers more than 20% of the total façade area (excluding window/door area)

Mouldings around doors and windows are exempt from the requirement.

Skylights and roof domes regulated by product standard EN 1873 and windows and exterior doors that are resistant to fire pursuant to standard EN 16034 are not included in the requirement.

The requirement can be met by documenting alternative A or B.

A) High proportion recycled aluminium:

A minimum of 75% by weight of aluminium must be recycled*.

However, profiles for windows and doors must minimum contain 40% recycled aluminium.

* *Recycled is defined as both pre- and post-consumed, cf. definition in ISO 14021.*

The requirement can be verified either by:

- A signed agreement between the producer/supplier of aluminium and the applicant stating that the requirement is met. The declaration from the supplier of aluminium can be based on purchase records/average data from several aluminium suppliers, or

- eBVD or EPD based on product-specific data or data from the aluminium producer's own production that specifically states the content of recycled aluminium in the product, or Valid Hydro Circal certificate.
- Signed agreement as described above, or
 - eBVD or EPD as described above, or
 - Valid Hydro Circal certificate.

B) Primary aluminium production

The requirement can be met by one of the four alternatives (1-4) below.

The requirement can be verified using either direct traceability through the supply chain or mass balance approach⁴.

1. Aluminium production – active sustainability strategy:

Aluminium origins from a primary aluminium producer with an active sustainability strategy focusing on reducing energy consumption and greenhouse gas emissions. The strategy for reducing energy consumption and greenhouse gas emissions shall be quantitative and time-based and must be determined by the company management.

- Enclose latest sustainability strategy report or equivalent documentation from the producer of primary aluminium showing fulfilment of the requirement. The producer of primary aluminium can also present specific targets from annual business report with reference to specific numbers and assumptions. Average numbers from the producer of primary aluminium with several steel melting plants is accepted.
- Information on type of traceability used to document the requirement.

2. Aluminium production – low direct climate effecting emissions:

Aluminium origins from a primary aluminium producer whose direct climate-affecting emissions from primary aluminium production does not exceed 1,5 tonnes of CO₂e/ton of aluminium produced.

- Declaration that the requirement is met, as well as calculation and indication of direct emissions in tons of CO₂e/ton of aluminium produced.
- Information on type of traceability used to document the requirement.

3. Aluminium production – low electricity consumption for electrolysis

Aluminium origins from a primary aluminium producer whose electricity consumption for electrolysis does not exceed 15.3 MWh/ton produced aluminium.

⁴ In case of several potential aluminium producers, the supplier of the metal components can verify the requirement by using a mass balance approach if there is an account documenting the annual volumes purchased from the individual aluminium producers. The volumes must correspond to volumes sold to the applicant (e.g., cannot sell a larger volume than the corresponding quantity purchased from the individual aluminium producers).

- ☒ Declaration that the requirement is met, as well as calculation and indication of electricity consumption in MWh/ton produced aluminium.
- ☒ Information on type of traceability used to document the requirement.

4. Aluminium production – ASI certified site

A minimum of 50% by weight of aluminium origins from an ASI Performance standard⁵ certified production site.

- ☒ Enclose valid ASI Performance certificate from the primary aluminium producer.
- ☒ Information from the supplier/maker of the constituent aluminium part about which aluminium parts are from certified aluminium production (purchase records).
- ☒ Information from the supplier/maker of the constituent aluminium parts on type of traceability used to document the requirement.
- ☒ Documentation from the applicant that the requirement for share of purchased aluminium from certified aluminium producers is fulfilled – e.g., invoices or other documentation from suppliers.

7 Resource efficiency and circular economy

O13 Waste management

This requirement applies to waste generated during both the demolition / deconstruction process and the construction process. The requirement can be documented for the processes individually or as a joint waste management plan.

At least 70% by weight of the non-hazardous construction and demolition waste generated on the construction site*, must be prepared for reuse, recycling and other material recovery including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol.

Selective demolition must be used to facilitate reuse and high-quality recycling by selective removal of materials, using available sorting systems for construction and demolition waste.

The percentage excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC.

Untreated wood, wood treated with hazardous substances (wood classified as hazardous waste) and wood treated with non-hazardous substances, must always be sorted separately.

Unsorted/mixed construction waste cannot be counted as recycling/material recovery unless it is documented to be separated subsequently by the waste contractor.

⁵ <https://aluminium-stewardship.org/asi-standards/asi-performance-standard> (visited November 2022).

The waste management plan(s) for the project must be sent to Nordic Ecolabelling before the demolition or construction work begins. The plan must contain information about waste fractions, chosen waste management company and the receiver's** intended treatment form of the fractions. The plan must be made in accordance with the EU Construction and Demolition Waste Management Protocol.

After finished project, a report documenting the requirement threshold limit (70%) and the following information must be sent to Nordic Ecolabelling:

1. The total amount of construction waste produced at the construction site, including demolition.
2. The amounts of all waste fractions, the company name of the respective receiver(s)** and their intended treatment form.
3. Calculation of material recovery degree based on the bullets above.

** If parts of the building are constructed as a module/prefabricated element the waste generated in the factory must in addition comply with the requirement on a yearly basis or be accounted for as a part of the total waste calculation. As a minimum the following must be accounted for when relevant: modules, bathroom modules and roof/wall elements consisting of multiple building products.*

*** Receivers can be both treatment facilities that carry out material recovery or receivers of waste fractions that sort and distribute it to relevant treatment facilities. A company that only transports construction waste is not regarded as a receiver.*

- Before demolition work begins a plan must be delivered to Nordic Ecolabelling to account for how selective demolition will be used.
- The waste management plan for the project must be delivered before the demolition or construction work starts.
- Report from the waste management company in accordance with the bullets 1-3 in the requirement.

O14 Waste sorting inside the building

When the renovation project involves replacement or significant changes in the kitchen facilities, there must be facilities for waste sorting available in the Nordic Swan Ecolabelled renovated building. The number of sorting vessels is stated for each building type below.

Residential buildings

- Sorting vessels for minimum four fractions in all residential units*.
- Communal kitchens: Sorting vessels for minimum four fractions must be installed in or in the vicinity of the kitchen (e.g., in homes for the elderly and student housing).

** Kitchenettes without cooking facilities such as oven and stove (e.g., homes for the elderly) are exempted from the requirement.*

Educational buildings

- Sorting vessels for minimum four fractions must be installed in or in the vicinity of the main kitchen and in all other permanent kitchen facilities.
- Sorting vessels for minimum two fractions must be installed in all classrooms and common rooms.

Office buildings and Hotels

- Sorting vessels for minimum four fractions must be installed in canteen facilities.
- Sorting vessels for minimum two fractions must be installed in all kitchenettes.

- ☒ Description of sorting vessels for waste sorting. Documentation can be description, pictures, or datasheet.

O15 Hazardous substances in reused construction products and materials

When reused construction products, fittings and materials are used, a risk analysis documenting the presence of hazardous substances must be conducted by an expert*. Hazardous substances must be evaluated and documented according to all relevant national legislation and Appendix 1. This requirement is aimed at products, fittings and materials identified in the mapping of components and materials for reuse and from other projects.

The risk analysis must, as a minimum, be based on the age of the building/construction, the renovation history of the building, the durability / lifetime of the materials, the state and cleansing of the material and knowledge and experience with the materials used at the time the building of origin was first constructed and renovated. This includes content of problematic substances in the material itself and in surrounding materials if substances found have migratory properties.

If the expert identifies any risk of undesirable substances (according to Appendix 1 and relevant national legislation), analyses must be performed by an accredited laboratory to verify the content in relation to relevant threshold limits in Appendix 1 and national legislation. Nordic Ecolabelling always have the right to require laboratory analysis for reused products.

Reused materials must be documented in the logbook (O16).

** The expert conducting the risk analysis must be trained in documenting hazardous substances and have at least 3 years' experience in the field of environmental mapping/surveys of buildings. This can be either an internal or an external person.*

- ☒ Overview of the reused materials used.
- ☒ Risk analysis from expert that documents the presence of undesirable substances listed in Appendix 1 and relevant national legislation.
- ☒ Where relevant, an analysis report from an accredited laboratory on the substances listed in Appendix 1 and relevant national legislation.
- ☒ Documentation of the expert's competence, e.g., a CV.

8 Chemical products, construction products, construction goods and materials

This section defines the requirements for new materials. Other products and materials are handled by the environmental survey (O2) or the requirements for reused products (O15).

This chapter consists of three sections of requirements:

1. Product list and logbook.
2. Chemical products.
3. Construction products, goods, and materials.

Reference is made to the individual requirements, the section "Definitions" and the section "What is subject to the requirements?" for an explanation of what is included in the requirements.

Nordic Swan Ecolabel products automatically fulfil the requirements in this chapter.

8.1 Product information and logbook

O16 Logbook

The Nordic Swan Ecolabel building project must have a digital logbook (e.g., PDF, Word, or Excel) that includes all the construction products, goods, materials, and chemical products used in the construction of the project. Reused products must also be registered in the logbook.

The logbook may be created using a verified third-party logbook service after approval by Nordic Ecolabelling.

The logbook must as a minimum provide the following information:

- Product name
- Product type
- Name of producer
- The location of the product in the building(s)*

Before the construction begins the logbook must be initiated and account for materials and products used in the initial stages** of the building project. The logbook must always be updated with materials and products according to the current state of the construction. The final version of the logbook must be handed in when the building is handed over. There must be routines in place to ensure that the digital logbook is accessible to the owner of the building and to Nordic Ecolabelling.

Technical instruments and electrical installations should not be described in detail but must be represented on a system level. Products subject to general

exemptions, as described in the section "What is subject to the requirements", are not necessary to include in the logbook.

The GTIN number or the ID number in a national product registry should be included in the information if available.

** Minimum level of description: ceiling, walls and floor, building's roof, facade, cellar, stairwell, slab, building's frame, terrace, bathroom, kitchen, balconies, garage, sports halls, garden, entrance hall, technical installation rooms, waste sorting room, laundry room, lift shaft.*

*** The initial stages are normally considered to be 'construction of the foundation' and 'sealing of the building envelope'. Depending on the size of the project, the construction techniques and whether parts of the building is constructed in a module factory the specific phases included must be approved by Nordic Ecolabelling. As a minimum the materials for the construction of the foundation must always be accounted for.*

- ☒ The digital logbook before the construction begins covering the initial stages of the project.
- ☒ Procedure for updating the logbook during the construction period (reference can be made to O40).
- ☒ The final digital logbook when the building is handed over.
- ☒ Description of how the logbook is made available to the building owner.

8.2 Chemical products

A chemical product is a substance or a mixture of two or more substances, in liquid, gaseous or solid form, which are used on a construction site or by a manufacturer of prefabricated building components.

Chemical products for both indoor and outdoor use are covered by the requirements. The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the chemical product. Impurities are not regarded as ingoing substances and are exempt from the requirements. Ingoing substances and impurities are defined in the Definitions section.

For details on what is subject to the requirements, reference is made to the section "What is subject to the requirements?".

O17 Classification of chemical products

Chemical products must not be classified according to Table 3.

Table 3 Requirements for the classification of chemical products.

Classification of chemical products CLP Regulation 1272/2008		
Classification	Hazard class and category	Hazard code
Hazardous to the aquatic environment	Aquatic Acute 1	H400
	Aquatic Chronic 1	H410

	Aquatic Chronic 2	H411
Hazardous to the ozone layer	Ozone	H420
Acute toxicity	Acute Tox. 1 or 2	H300
	Acute Tox. 1 or 2	H310
	Acute Tox. 1 or 2	H330
	Acute Tox. 3	H301
	Acute Tox. 3	H311
	Acute Tox. 3	H331
Specific target organ toxicity: single or repeated exposure	STOT SE 1	H370
	STOT RE 1	H372
Carcinogenicity	Carc. 1A or 1B	H350
	Carc. 2	H351
Germ cell mutagenicity	Muta. 1A or 1B	H340
	Muta. 2	H341
Reproductive toxicity	Repr. 1A or 1B	H360
	Repr. 2	H361
	Lact.	H362

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

Exemptions:

- Chemical anchors classified H400, H410, and H411 due to dibenzoyl peroxide (CAS no. 94-36-0) are allowed.
- Hardener for acrylic floor coatings classified H400, H410, and H411 due to dibenzoyl peroxide (CAS no. 94-36-0) are allowed for use in professional kitchens. In Nordic countries with an authorisation system, the flooring contractor must be authorised.
- Biocide-containing wood primers classified H411 used for treatment of cut surfaces and end timbers are allowed.
- Naphtha-based primers and adhesives classified H411 for outdoor use.
- Naphtha-based adhesives classified H411 for cellular rubber insulation intended for cooling pipes and ventilation ducts indoors.
- Finland: Classifications H351 and H362 for spray polyurethane foams used in element factories and at construction sites for sealing of windows when temperature is below 5 °C.
- Finland: Two-component injection resin based on epoxy, classified H411, for repair of individual cracks in indoor concrete decks.

Declaration from the manufacturer of the chemical product, in accordance with Appendix 4

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

O18 CMR substances

Chemical products, used in the production of Nordic Swan Ecolabel buildings, must not contain any ingoing substances classified as carcinogenic, mutagenic or reprotoxic according to CLP Regulation 1272/2008, see Table 4 below.

Table 4 Non-approved classifications of ingoing substances in chemical products 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	H350
	Carc. 2	H351
Germ cell mutagenicity	Muta. 1A or 1B	H340
	Muta. 2	H341
Reproductive toxicity	Repr. 1A or 1B	H360
	Repr. 2	H361
	Lact.	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.
- TiO₂ (CAS no. 13463-67-7) classified H351 inhalation.
- 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.
- Zinc pyrithione (CAS no. 13463-41-7) classified as H360D, is exempted for a transition period until 2024-01-01 for tinting pastes/tinting systems.
- Biocide-containing wood primers containing substances classified H361d used for treatment of cut surfaces and end timbers are allowed.
- FI: 4,4'-methylenediphenyl diisocyanate, isomers and homologues (CAS no. 9016-87-9) classified as Carc. 2; H351 in spray polyurethane foams used in element factories and at construction site for sealing of windows when temperature is below 5 °C.
- FI: Two-component injection resin based on epoxy, for repair of individual cracks in indoor concrete decks.

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

O19 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 5 and Table 6.

If the specific concentrations limit (SCL) is changed in accordance with CLP Regulation 1272/2008 Annex VI the limits below will also change accordingly.

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 5 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 6 Concentration limits for specific compounds.

Preservatives	Concentration limit
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 4.

O20 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 7.

If the specific concentrations limit (SCL) is changed in accordance with CLP Regulation 1272/2008 Annex VI the limits below will also change accordingly.

Table 7 Concentration limits for preservatives in other chemical products for indoor use.

Preservatives	Concentration limit
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.

- Declaration from the manufacturer of the chemical product, in accordance with Appendix 4.

O21 Prohibited substances

The following substances must not be an ingoing substance in chemical products used in the production of Nordic Swan Ecolabel buildings:

- 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 derivatives (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:

- Naphtha-based primers and adhesives classified H411 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.
 - FI: Bisphenols in two-component injection resin based on epoxy, for repair of individual cracks in indoor concrete decks.
- ☒ Declaration from the manufacturer of the chemical product, in accordance with Appendix 4.
- ☒ Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

O22 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).

The following are exempted from the requirement:

- Pigments*
- Naturally occurring inorganic fillers**
- Synthetic amorphous silica***
- Ground Calcium Carbonate (GCC) and unmodified 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 O17 (Classification of chemical products) and requirement O21 (Prohibited substances).*

- ☒ Declaration from the manufacturer of the chemical product, in accordance with Appendix 4.

8.3 Construction products – restricted material

O23 Epoxy relining

Bisfenol-based epoxy must not be used for casting new plastic piping inside existing pipes, so called relining. This ban applies to relining of water pipes and wastewater pipes.

- Technical description of a relining method that verifies that the method is epoxy-free.

O24 Halogen free cables

All heavy current cables must be documented as halogen-free according to EN 60754-1 and EN 60754-2.

The requirement does not include data, telephone, and TV cables. Cables that arrive at the construction site together with electric appliances, such as lifts, white goods, pumps, and fans are not subject to this requirement.

Mandatory requirement O29 must also be met.

- Documentation from the manufacturer such as technical datasheet stating compliance with relevant standard.

O25 Surface layers on floors, ceilings, walls, doors, and windows.

Doors, windows and interior surface layers on floors, ceilings and walls may not contain chlorinated plastics (e.g., PVC). This includes watertight layers, wall film, acoustic dampening foams and other products used directly underneath the surface layer. Mouldings, skirtings, and surface wall films are included.

The following are exempted from the requirement:

- Mouldings, skirting boards and baseboards in bathrooms, professional kitchens, and stairwells.
- Floorings in professional kitchens with floor drain.
- Floorings in wet rooms with floor drain in educational buildings, homes for the elderly and homes for persons with disabilities.
- Plastic details ≤ 50 grams on windows and doors.

Products covered by the exemption must fulfil O29.

- Documentation to show how the requirement is fulfilled, for example floor plans, product data sheets, construction product declarations or similar.

O26 Durable wood for outdoor use

The requirements for durable wood for outdoor use is described in the sections below according to the type of wood treatment.

The use of preservative-treated, chemically modified or thermally modified wood must be documented in drawings showing that the relevant use classes are fulfilled according to EN 335.

Untreated wood with natural durability is not subject to any requirements.

Preservative-treated wood for outdoor use

The use of preservative-treated wood containing heavy metals and/or biocides is not permitted in the use classes below (use classes according to EN 335):

- Use class 1.
- Use class 2.
- Use class 3 (for example vertical structures in use class 3.2 such as cladding, fences, partition walls and acoustic barriers).

Exemptions:

- Windows and doors in Use class 3.1.
- Horizontal structures in Use class 3.2.
- Load bearing structures with specific demands on strength: Weather exposed structural timber which is strength classed in accordance with EN 338.
- Time limited exemption until 31-12-2025: Preservative treated wood, that would not be classified as hazardous waste and only contain organic PT8 biocides up to maximum 300 ppm and no heavy metals, is allowed on facades (including supplementary buildings). A chemical analysis performed by an accredited laboratory is required to document that the amount of organic PT8 biocides in the wood is below 300 ppm. The preservative treated wood must fulfil requirements for quality testing in accordance with UC 3.2.

For preservative-treated wood in allowed applications the wood must meet the requirement on prohibited substances in in construction products, construction goods and materials in O29 and meet the requirement of durability in Table 8 below.

Table 8 For preservative-treated wood the following documentation of durability applies.

Wood protection method	Use class as per EN 335	Required documentation of durability
Preservative-treated Wood in accordance with NTR	UC 3.1 (only allowed for windows and doors)	NTR B
	UC 3.2	NTR AB NTR GRAN
	UC 4	NTR A
Preservative-treated wood not classified in accordance with NTR	UC 3.2	Testing by accredited laboratory: - EN 113-2 excluding testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - CEN/TS 12037

	UC 4	Testing by accredited laboratory: - EN 113-2 including testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - ENV 807 - EN 252 for at least five years in three locations, two of which are in a Nordic country.
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Chemically modified or thermally modified wood for outdoor use

The use of chemically modified or thermally modified wood must meet the requirement of durability specified in Table 9, use classes in accordance with EN 335. Requirement O29 must be fulfilled.

Table 9 For chemically modified or thermally modified wood, the following documentation of durability applies.

Wood protection method	Use class as per EN 335	Required documentation of durability
Thermally and chemically modified wood classified in accordance with NTR	UC 3.1 (only allowed for windows and doors)	NTR Bmod
	UC 3.2	NTR ABmod
	UC 4	NTR Amod
Thermally and chemically modified wood not classified in accordance with NTR	UC 3.2	Testing by accredited laboratory: - EN 113-2 excluding testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - CEN/TS 12037
	UC 4	Testing by accredited laboratory: - EN 113-2 including testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - ENV 807 - EN 252 for at least five years in three locations, two of which are in a Nordic country.

- ☒ Description and drawings of the relevant constructions where preservative-treated, chemically modified or thermally modified wood is used, incl. use class according to EN 335.
- ☒ Documentation / certificate in accordance with table 8 or table 9.
- ☒ Preservative-treated wood in allowed applications must meet the requirement O29 Excluded substances in construction products, construction goods and materials.

O27 Copper

Newly installed copper is restricted in Nordic Swan Ecolabelled buildings in the following way:

- a) Tap water pipes must not contain >1% weight of copper.
- b) Roof and facade cladding materials and products for roofs and facades (roof drainage products, gutters, exhaust hoods, eaves nets, cover profiles and the like) must not contain more than 10% by weight of copper.

Exemptions:

- Visible pipelines in bathrooms.
- Water fittings connecting pipes, such as couplings or manifolds.
- Installation cabinets, such as manifold or water meter cabinets.
- Pipelines that due to national fire protection legislation must be made of copper and where alternatives are not available.
- Pipes through the wall for an outdoor tap

Closed pipe systems such as heating or cooling circuits are not covered by the requirement.

- Declaration from applicant, Appendix 5.
- If relevant, description of the use of copper in the project. Where relevant, supplementary documentation for roof and facade cladding, such as product data sheet, construction product declaration or information from producer.

O28 Plastic and rubber surfaces on playgrounds and outdoor areas

The use of impact attenuating ground cover materials with synthetic components is restricted on outdoor areas in connection with the Nordic Swan Ecolabelled building by a) and b) below.

Examples of these materials are artificial turf, mats, tiles or in situ cast surfaces made from plastic or rubber. Fibres, chips, or granules of renewable materials with a synthetic binding agent or cover are also subject to the requirement.

Materials in artificial turf, mats, tiles and granulate must be declared according to O29 and Appendix 6. Binding agents and glue used outdoors for installation are exempt from the chemical requirements.

- a) Synthetic ground cover materials must not contain material from recycled tyres (SBR).
- b) Surfaces must not consist of material with loose infill of plastic or rubber granules.

Exemption: Ground cover materials with synthetic/plastic components may be installed on areas subject to accessibility requirements*. In addition, it can only be installed in the fall zone according to EN 1176 and EN 1177 and in small enclosed** multisport pitches that are part of a school yard. Granule catchers or other systems for microplastic retention must be installed in drains adjacent to the materials.

** Due to legislation, municipal requirements, or requirements from the procurer.*

*** The enclosure must have openings accessible for persons with disabilities.*

- Situation plan showing the use of impact attenuating and accessible surfaces on playgrounds and outdoor areas.
- Drawings where the fall zone is defined according to EN 1176 and EN 1177.
- For football/multisport pitch in a school yard: Reference to accessibility requirements: legislation, requirements from municipality or procurer. Product sheet for the small enclosed/multisport pitch.

- ☒ Product sheets for microplastic retention systems installed.
- ☒ Product sheets or other documentation showing compliance with parts a) and b).

8.4 Construction products – ingoing substances and emissions

O29 Excluded substances in construction products, construction goods and materials

The requirement applies to the following product categories:

1. Sealing products, including membranes, tape and sealing collars on walls, foundation, and roofing, which are not classified as chemical products.
2. Thermal, acoustic, and technical insulation.
3. Interior and exterior building panels. Does not include panels of solid wood, laminated timber, veneer, OSB, plywood, MDF/HDF, chipboard, HPL, CPL and compact laminates, which are regulated in requirement O31.
4. Heavy current cables and electrical conduits*
5. Wood that is preservative-treated or chemically modified as protection from rot, blue stain, and mould (see O26 for restrictions on use)
6. Wood plastic composite (WPC)
7. Plastic coverings for floors, ceilings, and walls for interior use.
8. Textile coverings for floors, ceilings, and walls.
9. Artificial turf, mats, tiles and granulate used in impact attenuating outdoor surfaces as defined in O28.

In the construction products and materials mentioned above, the following substances must not be an ingoing substance in the product. Ingoing substance means all substances in the construction product that are present in concentrations higher than 100 ppm (0.010 w%, 100 mg/kg).

- Substances on the REACH Candidate list of SVHC
- 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.
- Substances classified as carcinogenic, mutagenic, or toxic for reproduction (CMR) Category 1A or 1B.
- 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 that 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 III. 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 derivatives (APD).
- Brominated flame retardants.
- Phthalates (Esters of phthalic acid (orthophthalic acid / phthalic acid / 1,2-benzene dicarboxylic acid).
- The heavy metals lead, cadmium, arsenic, chromium (VI), mercury and their compounds.
- Bisphenol A (CAS no. 80-05-7), bisphenol S (CAS no. 80-09-1) and bisphenol F (CAS no. 620-92-8).
- Boric acid, sodium perborate, perboric acid, sodium borate (borax) and any other boron compounds classed as carcinogenic, mutagenic or reprotoxic in category 1A/1B/2/Lact.
- Organotin compounds.

Exemption:

The material in (electrical) conduits may contain brominated flame retardants provided that the following limits are fulfilled:

Bromine content (Br) $\leq 0.15\%$

Chlorine content (Cl) $\leq 0.15\%$

Total content: bromine content (Br) + chlorine content (Cl) $\leq 0.2\%$

The content must be verified using ion chromatography (IC) according to the methods in EN 14582 or modified IC methods according to EN50642.

- Declaration from the manufacturer of the construction product, construction goods or construction material in accordance with Appendix 6.
- Construction product declaration or corresponding if available for the product.

O30 Antimicrobial surface treatments

The applicant must ensure that nanoparticles (see definitions) and biocide treatments are not used in production of the following goods and materials, with the purpose to create an antibacterial or antiviral surface or effect.

The requirement applies to the following construction products, construction goods or materials:

- Flooring and floor coverings.
- Wall coverings in ceramic material or stone.

- Kitchen and bathroom fittings such as worktops, splashbacks, cabinet fronts, kitchen sinks, mirrors, shower walls, sanitary appliances (WC, urinal, bath, shower, washbasin, sink, bidet etc.)
- White goods* (air filters and door gaskets are exempted).
- Ventilation filters and textile ducts/diffusers.
- Waste disposal units.

* *The white goods covered by this requirement are the same types that are subject to requirements in O9 Energy efficient white goods.*

- ☒ Declaration from the applicant confirming compliance with the requirement concerning antibacterial/antiviral surfaces. Appendix 7 must be used. Verification of this requirement is not done in the Supply Chain Declaration Portal (SCDP).

O31 Formaldehyde emissions

The requirement covers all wood-based or laminate panels and boards for indoor use, containing formaldehyde-based additives, such as building panels (raw or surface treated), panels in floors, panels in doors* or other fitments as well as mouldings, baseboards, and frames. Permanently installed fittings, furniture, and trimmings as well as loose fittings and furniture (e.g., wardrobes and lockers) that are included in the construction project are subject to this requirement.

The requirement does not apply to panels solely marketed as facade panels, solid wooden worktops or fixture details present in a very limited extent such as an individual hat or shoe shelf.

The average emission of formaldehyde must not exceed the limit values for the relevant test method according to Table 10.

* *For Finland, apartment doors that are fire-protected according to EN16034 instead of the emission limit value in the table above must comply with M1.*

Table 10 Threshold limits for formaldehyde emissions.

Test method	EN 717-1	EN 16516
MDF	0.09 mg/m ³	-
Other panels/boards/mouldings/beams/columns (including glulam, CLT, particle boards, chipboards, fibreboards OSB etc.)	0.07 mg/m ³	-
Other panels/mouldings/fitments than wood Including high pressure laminates (HPL), continuous pressure laminates (CPL) and compact laminates	NA	0.03 mg/m³

If the panel is covered by e.g., melamine or laminate, it is the complete product with covering that should be tested. If a fitment consists of more than one panel, the complete product can be tested, or the panels can be tested separately.

Analysis methods other than those stated in the above table can be used, provided that the correlation between the testing methods can be verified by an independent third party.

If legislation is introduced or tightened and becomes tighter than Nordic Ecolabelling's requirement levels for formaldehyde during the term of validity of these criteria, this requirement will be adjusted.

- ☒ Analysis report including measurement methods, measurement results and measurement frequency. It must be clearly stated which method has been used, who carried out the analyses and that the testing institution is an independent third party. Test methods other than those specified may be used if there is correlation between test methods and this can be confirmed by a competent third party.

8.5 Ecolabelled products

O32 Ecolabelled products

Nordic Swan Ecolabelled or EU Ecolabelled products must be used in the renovation project. The following applies:

1. It must be identified which of the product categories listed in table 11 that are used in the specific renovation project.
2. Half of the product categories identified in 1) must fulfil the following*: > 50% of the number of products (within the product category) must be covered by ecolabelled products**

Table 11 Product categories for ecolabelled products.

Product category
Construction and facade panels for outdoor use
Construction panels, wall covers, mouldings and panels for indoor use.
Flooring (visible layer, excluding tiles)
Tiles (floors and walls)
Bathroom fittings (front, frames and countertops)
Wardrobes (including coat racks/hat shelves and similar)
Kitchens (front, frames and countertops)
Windows
Exterior doors
Indoor doors
Outdoor furniture
Playground and park equipment
Stove/fireplace
Durable wood
Indoor paint
Indoor fillers
Outdoor paint
Sealants
Adhesives for glass felt and micro dispenser

Other chemical building products
Other products

* A maximum of 4 product categories must be accounted for regardless of the total number of product categories used.

** The products and amounts used can be documented by e.g., invoices and documentation/calculations of the amounts of products needed in the project.

- List of the product categories used in the specific renovation project (based on the list in table 11).
- Documentation that minimum half of the product need in the relevant product categories is covered by ecolabelled products.

9 Wood raw materials

033 Prohibited and restricted tree species

This requirement applies to all wood-based products used in the construction of the Nordic Swan Ecolabelled building, supplementary buildings and outdoor areas. The requirement also applies to wood-based products used in construction but not incorporated in the building, such as wood in casting moulds.

Nordic Ecolabelling's list of restricted tree species* consists of virgin tree species listed on:

- a) CITES (Appendices I, II and III)
- b) IUCN red list, categorised as CR, EN and VU
- c) Rainforest Foundation Norway's tree list
- d) Siberian larch (originated in forests outside the EU)

Tree species listed on a) CITES (Appendices I, II and III) **are not permitted**.

Tree species listed on either b), c) or d) **may be used** if they meet all the following requirements:

- The tree species do not originate from an area/region where it is IUCN red listed, categorised as CR, EN or VU.
- The tree species do not originate from an Intact Forest Landscape (IFL), defined in the World's IFL 2000 map in Google Earth <http://www.intactforests.org/world.map.html>.
- The tree species shall originate from an FSC or PEFC certified forest/plantation and shall be covered by a valid FSC/PEFC Chain of Custody certificate documented/controlled as FSC or PEFC 100% through the FSC transfer method or PEFC physical separation method.
- Tree species grown in plantations shall also originate from a FSC or PEFC certified forest/plantation established before 1994.

* The list of restricted tree species is located on the website: <https://www.nordic-ecolabel.org/declare-items/pulp-and-paper/forestry-requirements/forestry-requirements-2020/>

The applicant makes the declaration for the whole project.

The supplier makes the declaration if the wood-based products are subject to declaration in the Supply Chain Declaration Portal.

- ☒ A declaration that tree species listed in a–d are not used in the Nordic Swan Ecolabelled building. Appendix 8 must be used.

If species from the lists b, c, or d are used:
- ☒ If a tree species is listed in either b, c or d, the supplier is required to present a valid FSC/PEFC Chain of Custody certificate that covers the specific tree species and demonstrates that the tree is controlled as FSC or PEFC 100% through the FSC transfer method or PEFC physical separation method.
- ☒ If a tree species is listed in either b, c or d, the supplier is required to document full traceability back to the forest/certified forest unit, thereby demonstrating that:
 - The tree species do not originate from an area/region where it is IUCN red listed, categorised as CR, EN or VU.
 - The tree species do not originate from Intact Forest Landscape (IFL), defined in the World's IFL 2000 map in Google Earth <http://www.intactforests.org/world.webmap.html>.
 - For plantations, the applicant/manufacturer/supplier is required to document that the tree species does not originate from FSC or PEFC certified plantations established after 1994.

O34 Wood and bamboo, traceability, and certification

This requirement applies to the following construction elements of solid wood, glulam, LVL, bamboo, plywood, veneer, or particle/fibre board used in the construction of the Nordic Swan Ecolabelled building and supplementary buildings:

- Frames, trusses, studs, and joists used in the wooden structure of the building (roof, walls, and floors)
- Underlay on roofs, walls and floors such as plywood, particle boards, MDF, OSB, tongue-and-groove and rafters
- Interior panels
- Exterior cladding and facade panels
- Timber for balcony, terrace, decking, veranda and fences
- Wooden floors

If the applicant wants to include other building parts than the above listed in the calculation of certified wood raw materials, e.g., windows, this includes the total volume of wood used in that building part throughout the building. Nordic Swan Ecolabelled construction and façade panels comply with the certified wood raw material requirement.

Chain of Custody certification

All the above-mentioned construction elements of wood raw materials and bamboo used in the Nordic Swan Ecolabel building must be covered by chain of custody certificates issued by FSC or PEFC.

The supplier of wood raw materials/bamboo materials must have valid Chain of Custody (CoC) certification under the FSC/PEFC schemes.

Suppliers who only deliver non-certified recycled material in the Nordic Swan Ecolabelled buildings are exempted from the requirement for Chain of Custody certification. For a definition of recycled material, see below*.

As an exemption to the above, a supplier (e.g., a joinery workshop) of the applicant that does not have FSC/PEFC CoC certification may also be approved. This is subject to a guarantee from the supplier that the wood raw materials are purchased from a CoC certified supplier of wood that can prove that the wood raw materials comply with the requirements stated here. The supplier must guarantee that the certified wood is sold to the applicant of the Nordic Swan Ecolabelled building. The applicant must have an agreement with the supplier which describes how the supplier guarantees that the certified timber will be delivered to the applicant. The agreement shall state that the supplier is obliged to report to the applicant when changing wood supplier.

Certified wood raw materials and bamboo

A minimum of 70% by weight of above-mentioned construction elements from wood raw materials and bamboo used in the Nordic Swan Ecolabelled building must originate from forests managed according to sustainable forest management principles issued by FSC or PEFC and meet the requirements set out by the FSC or PEFC Chain of Custody schemes or be recycled material*.

The remaining uncertified proportion of wood raw material must be covered by the FSC/PEFC control schemes regarding FSC controlled wood/PEFC controlled or be recycled material*.

Nordic Ecolabelling considers products from primary wood processing industries (sawdust, wood chips, bark, etc.) or residues from forestry (bark, branches, roots, etc.) as recycled material*.

** Recycled material is defined according to ISO 14021 in the categories of pre-consumer and post-consumer.*

- The names (species names) of the wood raw materials and bamboo that are used.
- Valid FSC/PEFC Chain of Custody certificate from all suppliers of wood-based products, covering all wood materials and bamboo used in the Nordic Swan Ecolabelled building. Alternatively, a link to the certificate holder's valid certificate information in the FSC/PEFC certificate database.
- Documentation alternative 1: A summary showing i) the total quantity of wood raw materials and ii) the total percentage of certified wood raw material or recycled material used in the project. Copy of invoice(s) which confirms the FSC/PEFC status of the products and the FSC/PEFC certificate number of the immediate supplier to confirm the proportion of certified wood raw materials or recycled materials purchased for the project.
- Documentation alternative 2: An aggregated signed list from each supplier (compilation of all wood raw material deliveries to the project containing information on: CoC code, name of tree species, type of product items, FSC/PEFC claims for each product item, quantities of wood raw materials and percentage of certified/recycled wood and the invoice number (reference)) can be used as a basis for the summary. Nordic Ecolabelling may ask for copies of invoices to confirm the proportion of certified timber purchased for the Nordic Swan Ecolabelled building.
- If the applicant does not use a CoC certified supplier, the supplier shall present i) invoices for the wood raw materials in question from the CoC certified supplier

and ii) a valid certificate which must be in accordance with the invoice(s). The invoice must state the volume of certified wood raw material and certification number. The applicant must have a documented agreement with the supplier which describes how the supplier guarantees that the specified, certified wood raw material on the invoice is delivered to the project. The agreement shall also state that the supplier is obliged to report any change in the source of the wood raw material. Nordic Ecolabelling may ask for further information.

10 Indoor environment

O35 Plan for the indoor air quality

A plan for the indoor air quality must be produced by an indoor environment expert*. The plan for indoor air quality must as a minimum, describe procedures, responsibilities, and necessary measures for:

- a) Identification and risk assessment of pollution sources, including particulate matter.
- b) Description of necessary measures to handle the pollution sources found in a), e.g., dilution, filtration, ventilation system design or other relevant strategies. This includes the protection of heating, ventilation, and air conditioning systems during renovation and remediation.
- c) Cleaning of the ventilation system before the building is taken into use.
- d) A self-monitoring checklist accounting for a) to c) must be created. Follow up on the checklist must be available for Nordic Ecolabelling upon request.

An already established IAQ plan in accordance with Greenguard, LEED or BREEAM can be used as documentation.

** The indoor environment expert must have proven expertise and experience of construction technology, as well as knowledge of indoor environment-related problems and effects of pollutants in the indoor environment. The person must have at least two 'years' experience of indoor environment work or indoor environment assessments.*

- The plan for indoor air quality with procedures and measures that show how a) to c) are met.
- Description of the indoor environment expert's expertise and experience, e.g., a CV.

O36 Radon

The risk of high radon concentrations in the indoor air of occupiable rooms must be evaluated through measurements or a risk analysis. The annual average concentration must not exceed each country's legislation on highest permitted concentrations of radon for new buildings. The requirement can be met by alternative a), b) or c) below. However, option b is not applicable for Finland.

- a) **Risk analysis with long term radon measurements conducted before renovation**
The risk of radon concentrations above the highest permitted concentrations in the renovated building must be evaluated before the renovation works start. Long-term measurements of the radon

concentration in the indoor air must be combined with an assessment of the risk of increasing radon exposure levels due to the renovation work.

Ground/infill sampling, building material inventory and assessment of the air tightness of relevant structures can be part of the risk analysis. Based on the findings of the risk analysis, relevant measures for prevention of radon intrusion must be taken.

b) Risk analysis with no radon measurements available (not applicable for Finland)

A risk analysis in line with a), but not supported by long term measurements can be accepted for buildings in areas where the ground conditions indicate a low radon risk, the building material inventory does not show elevated radon risks from materials, and where the building's structures are in a condition which effectively protects the building from radon intrusion. Ground and infill sampling or radon maps issued by authorities or geotechnical institutes are accepted as proof of low radon risk areas.

c) Measurements conducted after renovation

Long term radon concentration measurements during the heating season after finished renovation must show compliance with legislative limit values for new buildings, see table 12 below. If compliance is not reached, corrective measures must be taken.

Table 12 Limit values for radon in the indoor air.

Country	Limit value of annual average radon concentration in the indoor air
Denmark	100 Bq/m ³
Finland	200 Bq/m ³
Norway	200 Bq/m ³ , action limit 100 Bq/m ³ *
Sweden	200 Bq/m ³

National regulations and methodologies with specified standards in the field must be complied with.

* Any measures taken due to the action limit must be accounted for.

Projects in Iceland are exempt from the requirement.

- a) Long-term measurement(s) and calculated annual average radon exposure. Risk analysis according to specifications in the requirement.
- b) Risk analysis according to specifications in the requirement. Proof of the location's low radon risk, e.g., radon maps or ground and infill sampling. Review of the material inventory showing no elevated radon risks from the materials.
- c) Long-term measurement(s) and calculated annual average radon exposure. The measurements must be made in the heating season after finished renovation.
- Description of (any) radon prevention measures undertaken in the building.

O37 Measurement of PCB levels in indoor air

In cases where PCBs have been identified and remediated in the building, including bomb shelters, during the environmental analysis/survey (requirement O2) or in another stage before or during the Nordic Swan Ecolabelled renovation process, PCBs should be measured in the indoor air after remediation.

The air in the buildings where PCBs have previously (not in conjunction with Nordic Swan Ecolabelling) been decontaminated must also be measured to verify that the requirement has been met.

The PCB content must be below 300 ng PCB/m³ in the indoor air.

If the level of PCBs exceeds the threshold limit value stated in the requirement, further action must be taken to trace the source of the PCB and then remove/remediate it. The indoor air must then be tested once again to analyse PCB levels.

The measurement must be conducted in compliance with “Instructions for measuring PCBs in the indoor climate”. See https://pcb-guiden.dk/Media/637968423794975979/pcb_maalemetode.pdf. If other test methods are used the methods must be verified by the Nordic Ecoabelling in advance.

The building envelope must be intact or rebuilt tightly insulated before testing.

The requirement shall also be verified by any bombshelter in the building.

- ☒ Analysis report showing measured PCB contents in the indoor air expressed as ng PCB/m³ air.

O38 Noise environment in office buildings, hotels, pre-schools, and schools

Measured or calculated sound levels and design sound classes in the building project must comply with the limit values for reverberation time according to the national standards below. Compliance is verified through measurements or an acoustic plan showing calculated sound levels and designed sound classes for reverberation time.

The acoustic plan must be performed by an acoustic technician with minimum 2 years' experience within designing building acoustics.

Educational buildings

Denmark: Reverberation time must fulfil the levels defined in BR18.

Finland: Noise class for reverberation time shall be class B according to SFS 5907:2004 or corresponding later standard.

Iceland (according to IST 45):

- Schools: Sound class C for reverberation time.
- Preschools: Sound class B for reverberation time.

Norway (according to NS 8175):

- Schools: according to national legislation.
- Preschools: Sound class B for reverberation time.

Sweden: Educational buildings must fulfil the essential sound class requirements for reverberation time according to the valid national sound class standard SS 25268.

Rooms that are occupied temporarily (such as hallways, corridors, bathrooms, changing rooms) are exempt from the requirement.

Hotels (with associated conference facilities)

Dining areas and associated conference facilities must fulfil the following:

Denmark: Reverberation time must fulfil the guideline levels given in BR18.

Finland: Noise class for reverberation time shall be class B according to SFS 5907:2004 or corresponding later standard.

Iceland: Sound class B for reverberation time according to IST 45.

Norway: According to national legislation.

Sweden: Reverberation time according to the essential sound class requirements in national sound class standard SS 25268.

Office buildings

Denmark: Reverberation time must fulfil the guideline levels given in “Bygningsreglementets vejledning om lydforhold, vejledning for kontorbyggeri”, BR18.

Finland: Noise class for reverberation time shall be class B according to SFS 5907:2004 or corresponding later standard.

Iceland: Sound class B for reverberation time.

Norway: According to national legislation.

Sweden: Working spaces such as cellular offices, open floor plan offices, telephone booths and conference rooms must fulfil additional requirements regarding reverberation time, according to the valid national sound class standard SS 25268.

Rooms that are occupied temporarily (such as hallways, corridors, bathrooms, changing rooms) are exempt from the requirement.

National noise standards: Sweden SS 25268, Norway NS 8175, Finland SFS 5907. For Denmark, see “Vejledning om lydbestemmelser i Bygningsreglementet 2015 (akustisk Indeklima)” av Trafik- og Byggestyrelsen (Guideline on acoustic criteria in Building Regulations 2015 (acoustic indoor climate) by the Danish Transport, Construction and Housing Authority).

- ☒ Planned noise level stating the noise class achieved for all parameters in the rooms included in the assessment. Calculation of noise level must be performed by an acoustic technician or other professional with equivalent qualifications.

- ☒ Noise environment report to verify the results of planned noise class.

11 Quality management of the demolition and construction process

O39 Moisture prevention

Moisture prevention in the building must be documented in line with sections A to C.

Proof of adherence to relevant national industry standards can be used as part of the documentation.

A. Plan for moisture prevention

A plan for moisture prevention must be submitted to Nordic Ecolabelling before construction work begins. The project-specific plan for moisture prevention must include the following, when relevant for the project:

- List of relevant moisture-sensitive materials and constructions.
- Weather protection of materials/elements during transport and storage.
- Plan for closure of the building and weather protection of relevant constructions.
- Description of procedures and methods for drying out the building.
- Description of how it is ensured that subcontractors adhere to applicant's moisture prevention plan.
- Description of the requirements set for manufacturers of prefabricated elements/modules in relation to moisture prevention during manufacturing, transport, and installation.
- Description of design and quality measures in water and sewage installations, reducing the risk of damage by drip leakage during the building's use phase.

B. Plan for moisture measurements

A plan for moisture measurements must be made according to the following:

- Moisture measurements must be performed for all relevant materials and constructions in the building, according to the national legislation or official guidelines. The relevant structures and materials must be listed in the plan.
- In concrete-based materials that are covered by moisture-sensitive materials (e.g., parquet) the relative humidity must be verified by borehole/specimen measurements.

- Measured values must be below requirements from the manufacturer of surface materials (e.g., linoleum, parquet, etc.) or official national industry guidelines. Relevant target values must be stated.
- Measurement results must be documented and be available to Nordic Ecolabelling upon request.

C. Coordinator for moisture management

A moisture coordinator must monitor adherence to the moisture prevention plan. The coordinator must be educated in moisture prevention in buildings and have at least 2 years' experience in construction site moisture management/control or moisture damage investigations.

- A. Plan for moisture prevention.
- B. Plan for moisture measurements.
- B. Monitoring reports and measurement results must be available to Nordic Ecolabelling upon request.
- C. Competence description of the moisture coordinator such as CV.

O40 Compliance with material and chemical requirements

The licensee must ensure fulfilment of all material and chemical requirements. A routine must be established for the whole construction process, including:

- Division of responsibilities for the material requirements (O10-O12 and O17-O31) in the design phase, construction phase(s) and procurement.
- Instructions for subcontractors, e.g., via agreements and control plans.
- Procedure for construction site inspections that covers:
 - Frequency of internal inspections/rounds during the construction period.
 - Extent of the internal inspections (minimum: material storage, active construction site and area for construction waste).
 - Documentation for internal inspections: inspected materials and their compliance with material requirements in the criteria must be documented, e.g., in the self-inspection system or inspection reports.

- Routines that as a minimum document the bullets above.
- Inspection reports must be documented and be available to Nordic Ecolabelling upon request.

O41 Information for those involved in the construction process

Employees involved in the construction process, including supervisors, site managers, project leaders, procurement manager, subcontractors etc., must

have the relevant knowledge to be able to ensure fulfilment of the requirements in conjunction with the project design and construction of a Nordic Swan Ecolabelled renovated building.

The routines for the training and information programme must include at least the following:

- Content and scope of the training/information, depending on the participant's role.
- Frequency of the training/information.
- Division of responsibilities.

The applicant must ensure that training and information are available in relevant languages.

- Routine in the quality management system and training programme.
- List of participants that have completed the training programme must be available.

O42 The contractor's self-monitoring system (construction phase)

To ensure compliance with the building legislation the contractor must have a documented robust quality self-monitoring system during the entire construction period. As a minimum, the self-monitoring system must include routines for:

- Overview of chain of responsibility for the control measures.
- System for management of documents, including archiving and revised versions of drawings.
- System for checks on material deliveries at time of receipt.
- System for process control, defining control levels and frequency of control for subcontractors, consultants, and the construction site management.
- The license holders' procedures for control of the quality of the prefabricated elements and compliance with the requirements of the Nordic Swan Ecolabel.
- Procedure for the final inspection (municipality and internal inspection) and handover of the building.

Nordic Ecolabelling must have access to the quality self-monitoring system through the entire construction process. This can be handled in the contractor's digital quality assurance system or manually at audits.

- Routines describing the self-inspection system according to the requirement.

12 Definitions

Definition	Description
Chemical products	A chemical product is a substance or a mixture of two or more substances, in liquid, gaseous or solid form, which are used on a construction site or by a manufacturer of prefabricated building components. Chemical products both for indoor and outdoor use are covered by the requirements. Nordic Ecolabelling does not set chemical requirements for cement or concrete, nor for metal alloys such as steel or brass.
Construction products	Products used in the construction of buildings, for example wall elements, flooring, power cables, doors, thermal insulation etc. In EU regulation No 305/2011, a construction product is defined as "any product or kit which is produced and placed on the market for incorporation in a permanent manner in construction works or parts thereof and the performance of which has an effect on the performance of the construction works with respect to the basic requirements for construction works".
EPD	A product specific EPD according to the standard ISO 14025 and EN 15804 is a third-party verified document based on product category rules (PCR) and life cycle assessment (LCA). A daughter EPD is based on a third-party verified EPD but can be adapted to small variations in the composition of the product.
EU Taxonomy	In these criteria, references to the "EU Taxonomy" means the Delegated Act on the objective climate change mitigation (Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021). Specifically, reference is made to the activity 7.2 "Renovation of existing buildings".
Facade	The principal front of a building, that faces on to a street or open space.
Heavy current cables	Heavy current cables/Electricity cables for nominal voltage equivalent to or more than 50 V AC voltage or 120 V DC voltage. This means that the requirement includes electricity wires/cables for plugs and for apparatus such as fittings with 230 V, white goods, heat pumps, etc.
Homes for persons with disabilities	In order to be covered by the criteria for Renovation of buildings, the building must be classified as a residential building in the national building legislation. Shared areas for the home's residents and staff areas are also covered by the Nordic Swan Ecolabel and must fulfil the requirements.
Homes for the elderly	In order to be covered by the criteria for Renovation of buildings, the building must be classified as a residential building in the national building legislation. Shared areas for the home's residents and staff areas are also covered by the Nordic Swan Ecolabel and must fulfil the requirements.
Impurities in chemical 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	Chemical products: All substances in the chemical product, including additives (e.g., preservatives and stabilisers) 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. Construction products: All substances in the construction product that are present in concentrations higher than 100 ppm (0.010 w-%, 100 mg/kg).
Nanomaterial	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.
PED (Primary Energy Demand)	Defined according to the national implementation of the EU Directive 2010/31/EU.

Post-consumer/commercial recycled material	“Post-consumer” is defined as material generated by households or commercial, industrial or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose. This includes materials from the distribution chain.
Pre-consumer/commercial recycled material	Material that is reclaimed from the waste stream during a manufacturing process. Production waste (scrap, rework, regrind) that can be returned directly to the same process in which it was generated is not counted as recycled pre-consumer material. Nordic Ecolabelling defines rework, regrind or scrap, that cannot be reused directly in the same process, but requires reprocessing (e.g., sorting, reclamation and granulation) before it can be reused, to be pre-consumer material. This is regardless of whether it is produced in-house or externally.
Recycled material	Recycled material is defined according to ISO14021 in the categories of pre-consumer and post-consumer and includes both mechanical and chemical recycling.
Reused materials	Reuse of a material means using it again for the same purpose for which it was originally made. The original product is usually not altered in any significant way before being used again. These criteria also include use of a certain material again, but in a manner different to what it was originally intended for. The original product is left mostly intact, utilising its shape, form and material for a different purpose.
Supplementary buildings	Supplementary buildings are refuse depots, bicycle sheds, garages (both as a separate structure or connected to the building) and similar constructions.
Take back systems	An initiative organized by the manufacturer or retailer, to collect used products or materials from the construction sites and module manufacturers and reintroduce them to the original processing and manufacturing cycle. A company may implement this program in collaboration with end-of-life logistics and material processing firms.
Technical service areas	Technical service areas are fan rooms, substations, lift shafts, machine rooms, electrical rooms, and other areas to which unauthorised persons do not have access. The following are not service areas: all living areas and communal areas such as dressing rooms, shower rooms, stairways, entrance areas, storerooms, corridors in basements/galleries, pram rooms and bicycle rooms. Installation shafts.

Regulations for the Nordic Ecolabelling of buildings

When the Nordic Swan Ecolabel is used on 102 Renovation of buildings use the licence number and a descriptive subtext shall be included as follows:

- **Renovation of buildings 20XY**

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

Follow-up inspections

Nordic Ecolabelling may decide to check whether the renovated building 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 licensee does not meet the requirements.

Criteria version history

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

Next criteria revision (generation 3)

The following are themes that will be considered in further detail in generation 3 of the criteria:

- Improving the alignment with the EU Taxonomy.
- Review of the metal requirements.
- Evaluate the possibility to strengthen the design for disassembly requirements.
- Evaluate the potential for further implementation of reused materials and products.
- Inclusion of other building types
- Review of the threshold limit for construction waste management, and review of the alignment with the waste hierarchy.

Appendix 1 Hazardous substances in reused construction products

- Content of the following substances must not exceed the given threshold limits below.
- The level of substances must, in addition, always comply with the national threshold limits given in the national legislation and guidelines.
- Substances not specified in the following list but regulated in national legislation must also be documented if relevant to the material.

Substance	Limit	Example of materials/products
Asbestos	0 mg/kg	Facade and roof panels, electrical conduits, insulation materials
CFC, chlorofluorocarbons	100 mg/kg	Insulation materials and foams
Substances classified as hazardous waste according to national legislation and guidelines.	According to national legislation and guidelines	
Cadmium, arsenic, copper, chromium, lead, mercury and their compounds	100 mg/kg	PVC/plastic, products with paint layer
phthalates DEHP, BBP, DBP and DIBP	1.000 mg/kg	PVC/plastic/rubber
Halogenated flame retardants	100 mg/kg	Rubber/plastic
Chlorinated paraffins Short-chained chlorinated paraffins (SCCPs, C10-C13) and medium-chained chlorinated paraffins (MCCPs, C14-C17)	100 mg/kg	Rubber/plastic/products with paint layer
Nonyl- and octylphenols	1.000 mg/kg	Flooring and products with paint layers
PCBs (polychlorinated biphenyls)	0.1 mg/kg internal and 1 mg/kg external*	Flooring, products with paint layers, concrete

* Measured inside the material or in a finish, depending on where the concentration was deemed to be the highest. The limit is the one used in the Danish regulation "Restproduktbekendtgørelsen" from December 2016.

Appendix 2 Energy calculation

Information about the energy calculation for verification of requirement O7.

Denmark: BE18 or equivalent.

Norway: NS 3031.

Finland: Ministry of the Environment's regulation for buildings' energy performance or equivalent.

Iceland: Calculations shall be made in accordance with BRG # 112 and prepared using a dynamic energy calculation tool for energy calculations of buildings.

Sweden: The version of BBR stated in the building permit must be followed. Valid regulation BEN and national practice SVEBY must be adhered to. Nordic Ecolabelling does not set requirements for specific simulation software, but to achieve energy calculations of good quality the following applies:

- The calculation must be made using dynamic energy calculation software, i.e., software that takes account of variations in e.g., temperature over time. Examples of dynamic energy calculation software are IDA ICE, VIP+ and BV2. Other software that uses a dynamic simulation can be accepted after consultation with Nordic Ecolabelling.
- For small houses (småhus) with a wooden carcass, using the calculation tool TMF Energi is acceptable.
- The energy calculation tool must be adapted to the type of building.
- Standard values may not be used for thermal bridges. Thermal bridges at connection points such as outer wall-window; outer wall-eaves; outer wall, between joists and external walls-ground slabs must instead be calculated according to the Swedish standard SS EN ISO 10211:2017 Thermal bridges in building construction – Heat flows and surface temperatures – Detailed calculations.
- Data concerning U values and g values for the chosen windows and window frames must be used.
- Air gaps with facade trim are not included in the calculation of the outer wall's U value.
- Cold roof space resistance must follow Table 3 of SS-EN ISO 6946 Building components and building elements – Thermal resistance and thermal transmittance – Calculation method.
- User input data must be taken from the current edition of BEN, alternatively Sveby User Related Input Data for homes, or relevant parts of Sveby User Related Input Data for offices.

- No deductions may be made for domestic hot water consumption with individual measurement.
- If a room is optional, it must not be included to raise the number of occupants and the corresponding heat contribution.
- COP for heat pump and effectiveness of heat exchangers should be based on the annual value with relative humidity taken into account.
- When calculating the building's energy use for verification of the building's primary energy number according to BBR, appropriate margins must be applied so that requirement O3 is met even when the energy use is measured and normalised. 10% or the methodology used in the report SBUF 13106 can be used as a guideline, but the person performing the energy calculation may use other values when relevant. The choice of margins should be clearly stated and motivated in the report.

Appendix 3 BAT-EAL for energy efficiency (steel)

Measures for efficient energy consumption in steel production

Blast furnaces	<p>BAT is to maintain a smooth, continuous operation of the blast furnace at a steady state to minimise releases and to reduce the likelihood of burden slips.</p> <p>BAT is to use the extracted blast furnace gas as a fuel.</p> <p>BAT is to recover the energy of top blast furnace gas pressure where sufficient top gas pressure and low alkali concentrations are present.</p>
BOF	<p>BAT is to collect, clean and buffer BOF gas for subsequent use as a fuel.</p> <p>BAT is to reduce energy consumption by using ladle-lid systems.</p> <p>BAT is to optimise the process and reduce energy consumption by using a direct tapping process after blowing.</p> <p>BAT is to reduce energy consumption by using continuous near net shape strip casting, if the quality and the product mix of the produced steel grades justify it.</p>

https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/IS_Adopted_03_2012.pdf

Appendix 4 Declaration from the manufacturer of the chemical product

This appendix applies to all chemical products* used in construction work at the construction site or by manufacturers of prefabricated construction elements. Chemical products used to construct any supplementary buildings or to construct fences, decking, outdoor furniture, playground equipment and similar are also included.

** Industrial surface treatments are exempt from the requirements on chemical products. Examples of industrial surface treatments are pre-painted doors, windows interiors (mouldings, kitchen and bathroom fittings, indoor stairs), primed and final-coated indoor wooden panels, boards and ceilings, fire retardant-treated wood where the only purpose is to achieve a certain fire protection class, surface treated steel.*

This appendix is completed and signed by the chemical supplier based on the best of his/her knowledge at the time of the application, also based on tests and/or declarations from raw material manufacturers, with reservations for new advances and new knowledge. Should such knowledge arise, the undersigned is obliged to submit an updated declaration to Nordic Ecolabelling.

Chemical product name, Denmark
Chemical product name, Finland
Chemical product name, Iceland
Chemical product name, Norway
Chemical product name, Sweden
Manufacturer
Type of chemical product (e.g., adhesive, paint) and its area of use

1. Classification of chemical products

Is the chemical product classified according to the table below? Yes No

If yes, which classification?

Classification of chemical products CLP Regulation 1272/2008:		
Classification	Hazard class and category	Hazard code
Hazardous to the aquatic environment	Aquatic Acute 1	H400
	Aquatic Chronic 1	H410
	Aquatic Chronic 2	H411
Hazardous to the ozone layer	Ozone	H420
Acute toxicity	Acute Tox. 1 or 2	H300
	Acute Tox. 1 or 2	H310
	Acute Tox. 1 or 2	H330
	Acute Tox. 3	H301
	Acute Tox. 3	H311
	Acute Tox. 3	H331
Specific target organ toxicity: single or repeated exposure	STOT SE 1	H370
	STOT RE 1	H372
Carcinogenicity	Carc. 1A or 1B	H350
	Carc. 2	H351
Germ cell mutagenicity	Muta. 1A or 1B	H340
	Muta. 2	H341
Reproductive toxicity	Repr. 1A or 1B	H360
	Repr. 2	H361
	Lact.	H362

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

Exemptions:

Chemical anchors classified H400, H410, and H411 due to dibenzoyl peroxide (CAS no. 94-36-0) are allowed.

Hardener for acrylic floor coatings classified H400, H410, and H411 due to dibenzoyl peroxide (CAS no. 94-36-0) are allowed for use in professional kitchens. In Nordic countries with an authorisation system, the flooring contractor must be authorised.

Biocide-containing wood primers classified H411 used for treatment of cut surfaces and end timbers are allowed.

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

Naphtha-based adhesives classified H411 for cellular rubber insulation intended for cooling pipes and ventilation ducts indoors.

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

Finland: Two-component injection resin based on epoxy, classified H411, for repair of individual cracks in indoor concrete decks.

2. Ingoing substances

Ingoing substances are all substances in the chemical product, including additives (e.g., preservatives and stabilisers) in the raw materials, but not including impurities. Substances known to be released from ingoing substances (e.g., formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.

Impurities are residuals, pollutants, contaminants etc. from production, including 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.

3. CMR substances

a) Does the chemical product contain any ingoing substances classified according to the table below? Yes No

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

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

Exemptions are made for:

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.

TiO₂ (CAS no 13463-67-7) classified H351 inhalation.

Trimethylolpropane (CAS no. 77-99-6) self-classified H361 ≤ 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.

Zinc pyrithione (CAS no. 13463-41-7) classified as H360D, is exempted for a transition period until 2024-01-01 for tinting pastes/tinting systems.

Biocide-containing wood primers containing substances classified H361d used for treatment of cut surfaces and end timbers are allowed.

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

Finland: Two-component injection resin based on epoxy, classified H411, for repair of individual cracks in indoor concrete decks.

b) If yes, specify classification and the quantity as a percentage by weight of each substance:

4. Preservatives in indoor paints and varnishes

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.

Are any of the following preservatives/combinations of preservatives and ingoing substances in the indoor paint and varnish?

Preservatives exceeding, in total:

900 ppm for paints, varnishes, base paints with tinting paints etc. for indoor use.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
1600 ppm for wet room paint specifically	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Isothiazolinone compounds* exceeding 600 ppm in total	Yes <input type="checkbox"/>	No <input type="checkbox"/>
BIT (Cas no. 2634-33-5) exceeding 500 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>
CIT/MIT (Cas no. 55965-84-9) exceeding 15 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>
MIT (Cas no. 2682-20-4) exceeding 15 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>
OIT (Cas no. 26530-20-1) exceeding 15 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>

The term preservative refers to both PT 6 (in-can) and PT 7 (dry-film protection).

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

5. Preservatives in other chemical products for indoor use

Are any of the following preservatives/combinations of preservatives ingoing substances in any other chemical product for indoor use?

Isothiazolinone compounds exceeding 600 ppm in total*	Yes <input type="checkbox"/>	No <input type="checkbox"/>
BIT (Cas no. 2634-33-5) exceeding 500 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>

CIT/MIT (Cas no. 55965-84-9) exceeding 15 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>
MIT (Cas no. 2682-20-4) exceeding 15 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>
OIT (Cas no. 26530-20-1) exceeding 15 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>
IPBC (Cas no. 55406-53-6) exceeding 2000 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Bronopol (CAS no. 52-51-7) exceeding 500 ppm	Yes <input type="checkbox"/>	No <input type="checkbox"/>

The term preservative refers to both PT 6 (in-can) and PT 7 (dry-film protection).

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

6. Prohibited substances

Are any of the following ingoing substances in the chemical product?

Substances categorised as Substances of Very High Concern (SVHC) and included on the EU Candidate List	Yes <input type="checkbox"/>	No <input type="checkbox"/>
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 to REACH.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Endocrine disruptors: Substances on the EU member state initiative "Endocrine Disruptor Lists", List I, II and III.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Short-chain chlorinated paraffins (C10-C13) and medium-chain chlorinated paraffins (C14-C17)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Perfluorinated and polyfluorinated alkylated substances (PFASs)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Alkylphenols, alkylphenol ethoxylates (APEO) and other alkylphenol derivatives (APD)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Brominated flame retardants	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Phthalates (Esters of phthalic acid (orthophthalic acid / phthalic acid /1,2- benzene dicarboxylic acid)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Bisphenol A (CAS no. 80-05-7), bisphenol S (CAS no. 80-09-1) and bisphenol F (CAS no. 620-92-8)*	Yes <input type="checkbox"/>	No <input type="checkbox"/>
The heavy metals lead, cadmium, arsenic, chromium (VI), mercury and their compounds	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Volatile aromatic compounds (VAH) >1%** by weight	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Please state type, Cas no. and content of VAH:

_____ %

Organotin compounds	Yes <input type="checkbox"/>	No <input type="checkbox"/>
There is an exemption for dibutyltin (DBT) and dioctyltin (DOT) in sealing products used (≤ 5000 ppm (0.5% by weight) in the final product)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Please state type of polymer and/or product:

Please state type, Cas no. and content of organotin compound:

_____ %

Volatile aromatic compounds are any aromatic compound having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101.3 kPa. For paints and varnishes, volatile aromatic compounds are instead defined as aromatic compounds having a boiling pressure of at least 0.01 kPa at 293.15°K.

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

** Exemption for Finland: Bisphenols in two-component injection resin based on epoxy, for repair of individual cracks in indoor concrete decks.*

*** Naphtha-based primers and adhesives classified H411 for outdoor use may contain up to 20% by weight of VAH.*

7. Nanoparticles in chemical products

Are nanoparticles* according to European Commission definition (2022/C 229/01) added or present in the chemical product? Yes No

Exemptions are made for:

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

** The definition of nanomaterial follows the European Commission's definition of nanomaterial of 10 June 2022 (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."

*** 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 exemption applies to non-modified synthetic amorphous silica. Chemically modified colloidal silica can be included in the products as long as the silica particles form aggregates in the final product. Surface-treated nanoparticles must fulfil*

requirement O17 (classification of ingoing chemical) and requirement O21 (Prohibited substances).

We accept the Nordic Ecolabelling terms and conditions for declarations found on www.nordic-ecolabel.org/declare-items/supply-chain/.

Signature of chemical product manufacturer

City and Date	Company
Name of contact person	Signature by contact person
Phone	E-mail

A correct signed declaration can result in the acceptance of use of the construction product in Nordic Swan Ecolabelled buildings. This shall not be mixed up with the Nordic Swan Ecolabelling of the construction product.

Appendix 5 Declaration of copper in water pipes and as facade and roofing material in Nordic Swan Ecolabelled renovated buildings

Name of the Nordic Swan Ecolabel applicant	Project
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It is hereby declared that copper has not been used in water pipes and as facade and roofing material in the Nordic Swan Ecolabelled building.

Do any of the exemptions for copper stated below need to be used:

- Visible pipelines in bathrooms.
- Water fittings connecting pipes, such as couplings or manifolds.
- Installation cabinets, such as manifold or water meter cabinets.
- Pipelines that due to national fire protection legislation must be made of copper and where alternatives are not available.
- Pipes through the wall for an outdoor tap.
- Closed pipe systems such as heating or cooling circuits are not covered by the requirement.

Please state type of exemption(s):

Does the following contain more than 10% copper?

Roof Yes No

Facade cladding Yes No

Signature of applicant

City and Date	Company
Name of contact person	Signature by contact person
Phone	E-mail

Appendix 6 Declaration on substances excluded from construction products, construction goods and materials

The declaration applies to manufacturers of any of the following building products, goods and building materials:

<input type="checkbox"/> Sealing products, including membranes, tape and sealing collars on walls, foundation and roofing, which are not classified as chemical products.	<input type="checkbox"/> Thermal, acoustic, and technical insulation.
<input type="checkbox"/> Interior and exterior building panels. Does not include panels of solid wood, laminated timber, veneer, OSB, plywood, MDF/HDF, chipboard, HPL, CPL and compact laminates, which are regulated in requirement O31.	<input type="checkbox"/> Plastic coverings for floors, ceilings, and walls for interior use.
<input type="checkbox"/> Wood plastic composites (WPC).	<input type="checkbox"/> Wood that is preservative-treated or chemically modified as protection from rot, blue stain and mould (see O26 for restrictions on use)
<input type="checkbox"/> Heavy current cables.	<input type="checkbox"/> (Electrical) conduits/traction pipes
<input type="checkbox"/> Textile coverings for floors, ceilings, and walls.	<input type="checkbox"/> Artificial turf, mats, tiles and granulate used in impact attenuating outdoor surfaces as defined in O28.
<input type="checkbox"/> Other. Please specify:	

Name of the product, Denmark
Name of the product, Finland
Name of the product, Iceland
Name of the product, Norway
Name of the product, Sweden
Manufacturer

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

Does the product contain chlorinated plastics (PVC, PVDC)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Cables: is the product halogen-free according to EN 60754-1 and EN 60754-2?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Are any of the following substances present in the building product/material in concentrations higher than 100 ppm?

Substances categorised as Substances of Very High Concern (SVHC) and included on the EU Candidate List	Yes <input type="checkbox"/>	No <input type="checkbox"/>
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	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Substances classified as carcinogenic, mutagenic, or toxic for reproduction (CMR) Category 1A and 1B	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Endocrine disruptors: Substances on the EU member state initiative "Endocrine Disruptor Lists", List I, II and III.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Short-chain chlorinated paraffins (C10-C13) and medium-chain chlorinated paraffins (C14-C17)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Perfluoroalkyl and polyfluoroalkyl substances (PFASs)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Alkylphenols, alkylphenol ethoxylates (APEO) and other alkylphenol derivatives (APD).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Brominated flame retardants**	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Phthalates (Esters of phthalic acid (orthophthalic acid / phthalic acid /1,2-benzene dicarboxylic acid).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
The heavy metals lead, cadmium, arsenic, chromium (VI), mercury and their compounds	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Bisphenol A (CAS no. 80-05-7), bisphenol S (CAS no. 80-09-1) and bisphenol F (CAS no. 620-92-8).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Boric acid, sodium perborate, perboric acid, sodium borate (borax) and any other boron compounds classed as carcinogenic, mutagenic or reprotoxic in category 1A/1B/2/Lact.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Organotin compounds	Yes <input type="checkbox"/>	No <input type="checkbox"/>

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

** *The material in (electrical) conduits / traction pipes may contain brominated flame retardants provided that the following limits are fulfilled:*

- Bromine content (Br) $\leq 0.15\%$
- Chlorine content (Cl) $\leq 0.15\%$
- Total content: bromine content (Br) + chlorine content (Cl) $\leq 0.2\%$
- The content must be verified using ion chromatography (IC) according to the methods in EN 14582 or modified IC methods according to EN50642.

We accept the Nordic Ecolabelling terms and conditions for declarations found on www.nordic-ecolabel.org/declare-items/supply-chain/.

Signature of applicant

City and Date	Company
Name of contact person	Signature by contact person
Phone	E-mail

A correctly signed declaration can result in the acceptance of use of the construction product in Nordic Swan Ecolabelled buildings. This shall not be mixed up with the Nordic Swan Ecolabelling of the construction product.

Appendix 7 Declaration of antimicrobial surface treatments in construction products

Name of the Nordic Swan Ecolabel applicant	Project
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It is hereby declared that nanoparticles and biocide treatments with the purpose to create an antibacterial or antiviral surface or effect, are not used in the Nordic Swan Ecolabelled building, in supplementary buildings (for example refuse depots, bicycle sheds) or in decking, fences, outdoor furniture, playground equipment and similar that is included in the Nordic Swan Ecolabelled project/assignment and is constructed and marketed together with the Nordic Swan Ecolabelled building.

The requirement applies to the following construction products, construction goods or materials:

- Floorings and floor coverings.
- Wall coverings in ceramic material or stone.
- Kitchen and bathroom fittings such as worktops, splashbacks, cabinet fronts, kitchen sinks, mirrors, shower walls, sanitary appliances.
- White goods (exempt air filters and door gaskets).
- Ventilation filters and textile ducts/diffusers.
- Waste disposal units.
- Nordic Ecolabelling may request further information if in doubt about specific products.

We accept the Nordic Ecolabelling terms and conditions for declarations found on www.nordic-ecolabel.org/declare-items/supply-chain/.

Signature of applicant

City and Date	Company
Name of contact person	Signature by contact person
Phone	E-mail

A correctly signed declaration can result in the acceptance of use of the construction product in Nordic Swan Ecolabelled buildings. This shall not be mixed up with the Nordic Swan Ecolabelling of the construction product.

Appendix 8 Declaration – tree species with restricted use

Name of the applicant/supplier:
Name of Nordic Swan Ecolabelled project (filled by applicant):
Version and date of the list of restricted tree species used

The declaration is completed by the applicant for the whole project and for the wood containing products that are not subjected to declaration in the supply chain declaration portal:

It is hereby confirmed that no tree species on the list of restricted tree species are used in the construction of the Nordic Swan Ecolabelled building – including wood-based products used in construction but not incorporated in the building, such as wood in casting moulds.

The declaration is completed by the supplier of the wood containing products in the case of wood containing products that are subject to declaration in the supply chain declaration portal:

It is hereby confirmed that no tree species on the list of restricted tree species are used in the wood-based products.

If tree species listed in either b, c, or d (see requirement O33) are intended to be used in the project, this must be documented by the supplier of the specific tree species. Tree species listed in either b, c, or d cannot be used in the project without prior approval by Nordic Ecolabelling.

The list of restricted tree species is located on the website: <https://www.nordic-ecolabel.org/declare-items/pulp-and-paper/forestry-requirements/forestry-requirements-2020/>.

We accept the Nordic Ecolabelling terms and conditions for declarations found on www.nordic-ecolabel.org/declare-items/supply-chain/.

Signature of applicant

Date	Company
Name of contact person	Signature by contact person
Phone	E-mail

A correctly signed declaration can result in the acceptance of use of the construction product in Nordic Swan Ecolabelled buildings. This shall not be mixed up with the Nordic Swan Ecolabelling of the construction product.