

Nordic Ecolabelling for
Durable/resistant wood for outdoor use



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

Addresses

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

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It may be quoted from provided that Nordic Ecolabelling is stated as the source.

What is Nordic Swan Ecolabelled durable wood?

Nordic Swan Ecolabelled durable wood is an alternative to conventionally impregnated wood and is characterised by:

- having no added heavy metals or biocides
- not causing problems or requiring special processing in the waste phase
- being produced from sustainable forestry
- having sufficient biological durability

Why choose the Nordic Swan Ecolabel?

- The manufacturer of durable wood 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 cost-effective and simple way of communicating environmental work and commitment to customers and suppliers.
- Reducing environmental impact often creates scope for lowering costs, such as by cutting the consumption of energy and chemicals.
- Environmentally suitable operations prepare the manufacturer for future environmental legislation.
- Environmental issues are complex. It can take a long time and extensive resources to gain an understanding of a specific area. Nordic Ecolabelling can be seen as aid in this work.
- The Nordic Swan Ecolabel not only covers environmental issues but also quality requirements, since the environment and quality often go hand in hand. This means that a Nordic Swan Ecolabel licence can also be seen as a mark of quality.

What can carry the Nordic Swan Ecolabel?

Heartwood with naturally long durability and chemically or thermally modified wood may be Nordic Swan Ecolabelled. The wood must, as a minimum, meet the durability requirements concerning wooden structures above ground that are exposed to moisture and/or weather.

The following may not carry the Nordic Swan Ecolabel:

- wood which is impregnated with heavy metals or biocides.
- wood that is surface treated (for example stained or painted)
- wood plastic composites (WPC)

How to apply

Application and costs

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

What is required?

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

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

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

☒ Enclose

🔍 The requirement checked on site.

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

License validity

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

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

On-site inspection

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

Queries

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

1 Description of the product

01 Description of the product

Applicants must provide the following information about the product:

- Trade name/brand,
 - A description of the product/products and all the materials involved,
 - A description of production methods/treatment techniques. Suppliers must be described with the name of their business, production site, contact person and the production steps carried out
- Detailed description of the points above. Product data sheets can be sent in as part of the documentation. Use a flowchart to describe the production process.

2 Environmental requirements

2.1 Chemical requirements

What do the chemical requirements cover?

The chemical requirements cover all chemical products used for impregnation, modification or other treatment of the wood. The requirements apply to the chemicals used by the manufacturer and those used by any supplier.

What is considered to be a constituent substance?

This definition applies for all the chemical requirements:

The term constituent substance refers to all substances in the chemical product, including additives in the ingredients (such as preservatives and stabilisers) but does not include impurities from primary production. Impurities are defined as residual products from the ingredient production that can be found in the final product in concentrations below 100 ppm (0.01% by weight, 100 mg/kg), but not substances added to an ingredient or product deliberately and with a purpose, regardless of amount. Impurities of over 1% concentration in the primary product are, however, regarded as constituent substances. Substances known to be degradation products of the constituent substances are also themselves considered to be constituent substances.

02 Chemicals used

All chemicals used for impregnation/modification/treatment of the wood are to be stated.

- Safety data sheets and formulations for the chemicals used to impregnate, modify or treat the wood.

03 Biocides

Biocides are not to be used in the impregnation, modification or treatment of wood. In this context, biocides are defined as chemical substances used in the wood to combat vermins, insects, bacteria, fungi and so on, as governed by the Biocidal Products Regulation (EU) No 528/2012.

- Declaration that biocides are not used. If no chemicals are used, this must be stated in the process description (see O1).

O4 Classification of chemical products

Chemical products used in the impregnation, modification or treatment of wood must not be classified according to the table below.

Classification under CLP Regulation (EC) No 1272/2008	
Hazard class and category	Hazard phrases
Toxic to aquatic organisms Category acute 1 Category chronic 1-2	H400, H410, H411, H412
Acute toxicity Category 1-3	H300, H310, H330, H301, H311, H331
Specific target organ toxicity (STOT) with single and repeated exposure STOT SE category 1-2 STOT RE category 1-2	H370, H371, H372, H373
Carcinogenic Carc 1A/1B/2	H350, H350i or H351
Mutagenic Mut 1A/B/2	H340, H341
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362

Exempted are products with the classifications:

- H301, H330, H311, H351 and H373 due to the presence of furfuryl alcohol (CAS 98-00-0)
- H372 and H373 due to the presence of maleic acid anhydride (CAS 108-31-6)
- H330 due to the presence of acetic acid anhydride (CAS 108-24-7).

Such products may be used on condition that the requirements in O9 and O10 are fulfilled.

- Declaration from the manufacturer/supplier of the chemical product, see Appendix 2.
- Safety data sheet in line with prevailing legislation in the country of application, e.g. Annex II to REACH (Regulation 1907/2006/EC) for all chemical products.

O5 CMR substances

The chemical products used in the impregnation, modification or treatment of wood must not contain chemical substances that are classified as carcinogenic (Carc), mutagenic (Mut) or toxic for reproduction (Rep), according to CLP Regulation (No) 1272/2008 as amended, see table below.

Classification under CLP Regulation (EC) No 1272/2008	
Hazard class and category	Hazard phrases
Carcinogenic* Category Carc 1A/1B/2	H350, H350i or H351
Mutagenic Mut 1A/B/2	H340, H341
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362

* There is an exemption for products where the classification Carc 2 H351 is due to the presence of furfuryl alcohol (CAS 98-00-0). The substance may be used on condition that the requirements in O9 and O10 are fulfilled.

- Declaration from the manufacturer/supplier of the chemical product, see Appendix 3. In addition, safety data sheet in line with prevailing legislation in the country of application, e.g. Annex II to REACH (Regulation 1907/2006/EC) for all chemical products.

06 Other substances excluded from use

The following substances must not be present in the chemicals and chemical products used in the production of durable wood.

- Substances on the Candidate List*
- Substances that the EU judges to be PBT (persistent, bioaccumulative and toxic substances) and vPvB substances (very persistent and very bioaccumulative) in accordance with the criteria in Annex XIII of REACH**
- Substances considered to be potential endocrine disruptors in category 1 or 2 on the EU's priority list of substances that are to be investigated further for endocrine disruptive effects. See following link:
http://ec.europa.eu/environment/chemicals/endocrine/strategy/being_en.htm
- APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation)
- Halogenated organic compounds***
- The following heavy metals or heavy metal compounds must not be present in the products: lead, cadmium, chromium VI, mercury and arsenic

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

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

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

- Declaration from the manufacturer/supplier of the chemical product, see Appendix 3. In addition, safety data sheet in line with prevailing legislation in the country of application, e.g. Annex II to REACH (Regulation 1907/2006/EC) for all chemical products.

07 Nanoparticles

Nanoparticles (from nanomaterial*) must not occur in chemical products or in the finished product. The following are exempt from the requirement:

- Pigments**
- Naturally occurring inorganic fillers***
- Polymer dispersions

* The definition of nanomaterials follows the European Commission's definition from 18 October 2011 (2011/696/EU): “A nanomaterial is a natural, incidental or purposely manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for at least 50% of the particles in the number size distribution, one or more external dimensions is in the size range 1–100 nm.”

** nano-titanium dioxide is not considered a pigment, and is thus not covered by the requirement.

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

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

- Declaration in line with Appendix 3 from the manufacturer of the durable wood and the manufacturer of each raw material.

08 Volatile organic compounds (VOC)

The chemicals used for the impregnation, modification or other treatment of wood must contain no more than 5% by weight volatile organic compounds (VOC).

The aromatic content of the solvent must be no more than 5% by weight.

Volatile organic compounds (VOC) are defined as any organic compound with a boiling point < 250°C at 101.3 kPa (1 atm).

Any solvents that polymerise in the wood may be used if the degree of polymerisation is at least 95%.

- Overview of the organic solvents included in the chemicals, stating the boiling point and aromatic content.

If there is any polymerisation of solvent in the wood, submit a report documenting that the degree of polymerisation is at least 95%.

09 Occupational exposure limit

During the production of Nordic Swan Ecolabelled durable wood, air pollution in the production premises must not exceed a limit value of 1 ppm for furfuryl alcohol (CAS 98-00-0) or 0,6 ppm for acetic acid anhydride (CAS 108-24-7).

The limit value of 1 ppm (furfuryl alcohol) or 0,6 ppm (acetic acid anhydride) states the highest acceptable limit value over an eight hour shift, and may be exceeded by a maximum of 200% for periods of 15 minutes.

The classification shall be according to the CLP Regulation (No) 1272/2008 with subsequent amendments and adaptations.

Sampling and analysis methods must comply with the instructions given for national measurements in the administrative standards issued by the authorities. The analysis laboratory/ test institute must fulfil the general requirements for analysis laboratories, see Appendix 1.

- Test results from measurements showing compliance with the limit value.

010 Chemical residues in the product

The product can contain a maximum of 0.2% by weight of furfuryl alcohol (CAS 98-00-0) or maximum 0.1% by weight of acetic acid anhydride (CAS 108-24-7). The amount is to be calculated in relation to wood is pre-dried.

The analysis laboratory/ test institute must fulfil the general requirements for analysis laboratories, see Appendix 1.

- Test report showing that the average values fulfil the requirement.

2.2 Sustainable forestry

In this chapter requirements O11 and O13 consist of two sets of requirements in the following way:

- Requirements marked A) are the forestry requirements that were introduced in the criteria for Durable/resistant wood for outdoor use in conjunction with the establishment of criteria document version 2.0 on 25 February 2015.
- Requirements marked B) are the (new) forestry requirements that were established by the Nordic Ecolabelling Board in 14 June 2016.

Licence applicants can choose to fulfill and verify either requirements marked A or requirements marked B. It is not possible to mix between the two sets of requirements.

The chapter also comprise of requirement O12 which is valid regardless of which set of requirements (A or B) that has been fulfilled.

O11 Origin

A) Origin and traceability of the wood

The requirement applies to both certified and uncertified wood. The licensee must:

1. Demonstrate traceability for all wood raw material. State the name (in Latin and in a Nordic language) and geographic origin (country/state and region/province) of the types of wood used.
2. Have a written procedure for sustainable wood raw material supply. The wood raw material may not be sourced from:
 - o Protected areas or areas in the process of being awarded protected status
 - o Areas where ownership or usage rights are unclear
 - o Genetically modified trees or plants

Furthermore, forestry operations must not damage:

- o Natural wood land, biodiversity, special ecosystems or important ecological functions
- o Social and/or cultural preservation values

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

- Name (in Latin and in English) and geographic origin (country/state and region/province) of the kinds of wood used. Appendix 4a can be used.
- The manufacturer of the durable wood must have a written procedure for sustainable wood raw material supply. The procedure shall include up-to-date lists of all suppliers of wood raw material.

B) Tree species not permitted to be used in Nordic Swan Ecolabelled Durable/resistant wood for outdoor use.

Tree species listed on Nordic Ecolabelling's list of prohibited tree species* are not permitted to be used in Nordic Swan Ecolabelled durable/resistant wood for outdoor use.

*The list of prohibited tree species is located on the website: www.nordic-ecolabel.org/wood/

- Declaration from the applicant/manufacturer/supplier that the requirement to tree species not permitted to be used in Nordic Swan Ecolabelled durable/resistant wood for outdoor use are met. Annex 4d may be used.

O12 Biocides

After harvesting, the wood must not be treated with biocides classified by WHO as type 1A and type 1B.

This requirement applies to the treatment of logs after felling.

WHO classification: An overview is available at:

http://www.who.int/ipcs/publications/pesticides_hazard/en/, "The WHO recommended classification of pesticides by hazard and guidelines to classification 2009" or by contacting one of the secretariats.

- Report from the suppliers of the wood stating which biocides were used and a declaration in line with Appendix 4a for each individual product.

O13 Certified forestry

A) Wood from certified forestry

On an annual basis, at least 70% of the wood raw material content shall be derived from areas where forestry operations are certified according to a forestry standard and certification system that meet the criteria stated in Appendix 4c.

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

- A statement showing the quantity of all constituent wood and the percentage of certified wood used in the applicant's Nordic Swan Ecolabelled production on an annual basis. Appendix 4b can be used.

The following can be used as documentation: valid Chain-of-custody certificate from nearest supplier of certified wood raw material and verification (for instance an invoice/delivery note) from the supplier showing that certified credits have been withdrawn from the suppliers account for certified wood raw material.

B) Wood raw material

The applicant must state the name (species name) of the wood raw material used in the Nordic Swan Ecolabelled durable/resistant wood for outdoor use.

Chain of Custody certification

The applicant/manufacturer must be Chain of Custody certified by the FSC/PEFC schemes.

Applicant/manufacturer using only recycled material in the Nordic Swan Ecolabelled durable/resistant wood for outdoor use are exempted from the requirement to Chain of Custody certification. Definition of recycled material, see glossary/below.*

Certified wood raw material

A minimum of 70% by weight of all wood raw material (virgin/recycled material) used in the Nordic Swan Ecolabelled durable/resistant wood for outdoor use, must origin from forestry certified under the FSC or PEFC schemes or be recycled material.

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

Certified wood raw material (FSC and PEFC credits) must be accounted/recorded from the manufacturer's Chain of Custody account to the Nordic Swan Ecolabelled product/production line.

**Recycled material defined according to ISO 14021 in the following two categories:*

Pre-consumer material: Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Post-consumer material: Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

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.

- Name (species name) on the wood raw material used in the Nordic Swan Ecolabelled durable/resistant wood for outdoor use.
- Applicant/manufacturer must present a valid FSC/PEFC Chain of Custody certificate covering all wood raw material used in the Nordic Swan Ecolabelled durable/resistant wood for outdoor use. (Exempted from this requirement is applicant/manufacturer using only recycled material.
- Documentation showing that the quantity of certified wood raw material or recycled material is met by the applicant's/manufacturer's Chain of Custody account.

2.3 Biological durability and use classes

014 Biological durability

The wood must as a minimum fulfil the test methods for one of the areas of use given in the table below.

Wood with natural durability* that fulfill class 1 or 2 for Natural durability to wood-destroying fungi according to the standard EN 350-2, is also in compliance with the requirement.

Area of use	Test methods
Wood used in marine environment**	<ul style="list-style-type: none"> - Fungi test EN 113. The wood must be aged with relevant method, i.e. EN 73 or EN 84. - Soft rot test in accordance with ENV 807, part 2. - Marine test EN 275 over at least 5 years in a Nordic test field
Wood used in contact with soil**	<ul style="list-style-type: none"> - Fungi test in accordance with EN113. The wood must be aged with relevant method, i.e. EN 73 or EN 84. - Soft rot test in accordance with ENV 807. - Field test in accordance with EN 252, over at least 5 years in 2 fields, one of them in a Nordic country.
Wood used above soil**	<ul style="list-style-type: none"> - Fungi test in accordance with EN113. The wood must be aged with relevant method, i.e. EN 73 or EN 84. - Field test in accordance with CEN/TS 12037 (ENV 12037) or EN 330. The tests must be carried out in accordance with EN 599.

* Certain species are already excluded by requirement O11B).

** Wood classified in class M, A or AB in accordance with the Nordic Wood Preservation Council (NTR) system fulfils the respective durability requirement with regard to use in marine environment, soil contact or above soil (exposed to the elements).

Alternative test methods may be used if an independent and competent test institution judges the methods to be equivalent in terms of quality.



Analysis report showing test results or certificate showing approved usage class. There must be a clear declaration of which methods were used, who conducted the analyses and the independence of the test institution, see Appendix 1. For wood with natural durability, name of tree species and durability class according to EN 350-2 shall be described.

2.4 Energy and climate

015 Monitoring energy consumption

The following information is to be documented by the licensee. If the data is not available at the time, it must be submitted no later than one year after the Nordic Swan Ecolabel licence is issued.

Raw material phase:

- a) Drying of the wood: The drying method must be described. Total energy consumption and energy consumption per energy source* is to reported on an annual basis. Energy consumption is to be expressed as MJ/m³ dried wood.

If the drying takes place somewhere other than at the premises of the durable wood manufacturer, the information should as far as possible be sourced from the supplier/sawmill. As a minimum, drying method and energy source for drying must be reported.

Production phase:

- a) The manufacturer of the durable wood must report, on an annual basis, which energy sources* that have been used and the amount of energy used in the manufacturer's production. Energy consumption is to be expressed as MJ/m³ wood.

Moisture content of incoming wood raw material and final product should also be reported.

- b) The manufacturer must have an energy efficiency plan that is not less than three years old. The energy efficiency plan must identify potential improvements at the facility and identify cost-effective measures that are realistic to implement.

Annual follow-up:

The manufacturer of durable wood must have an environmental management system that ensures the annual collection of energy data as described above.

** In this context, energy source means electricity, district heating (supplier is to be stated) and fuels (e.g. wood waste, wood chips, biogas, straw, peat, pellets, natural gas, heating oil).*

If the manufacturer has a surplus of energy and sells this in the form of electricity, steam or heat, the corresponding energy quantity is withdrawn from the fuel consumption. Only fuel that actually is consumed for production should be taken into account.

- Documentation regarding the points in the raw material phase and production phase above. Appendix 5 can be used. The calculations must be per cubic metre of wood, and may be stated for the Nordic Swan Ecolabelled production or the total production.
- Energy efficiency plan according to the energy management standard ISO 50001 or equivalent.
- Procedures in environmental management system that ensure annual collection of energy data.

2.5 Wood during use and disposal

016 Product specification/instructions for use

The product specification/instructions for use shall, as a minimum, contain information and recommendations related to the following topics:

- Biological durability
- Areas of use
- Instructions for optimum installation
- Recommended maintenance and possible surface treatment* during the use phase.
- Waste management. It must be specifically stated that the durable wood does not need to be treated as hazardous waste.

**If surface treatment is recommended in order to extend the products service life, Nordic Swan Ecolabelled products shall be recommended to be used as much as possible.*

- Product specification/instructions for use containing the points above.

017 Waste management

Durable wood should not need to be treated as hazardous waste in any of the Nordic countries.

- Declaration from the country's authorities about appropriate waste management.

3 Quality and regulatory requirements

To ensure that Nordic Ecolabelling's requirements are fulfilled, the following procedures must be implemented.

If the manufacturer's environmental management system is certified to ISO 14 001 or EMAS, and the following procedures implemented, it is sufficient for the accredited auditor to certify that the requirements are observed.

O18 Nordic Swan Ecolabel licence person

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

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

O19 Documentation

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

-  Checked on site

O20 Quality of durable wood

The licensee must guarantee that the quality of the production of the Nordic Swan Ecolabelled durable wood is maintained throughout the validity period of the licence.

- Procedures for collating and, where necessary, dealing with claims and complaints regarding the quality of the Nordic Swan Ecolabelled durable wood.

O21 Planned changes

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

- Procedures detailing how planned changes in products and markets are handled

O22 Unforeseen non-conformities

Unforeseen non-conformities that affect Nordic Ecolabelling's requirements must be reported to Nordic Ecolabelling in writing and logged.

- Procedures detailing how unforeseen non-conformities are handled.

O23 Traceability

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

- Description of/procedures for fulfilment of the requirement.

O24 Take-back system

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

O25 Laws and regulations

The licensee must ensure compliance with the applicable legislation on health and safety, environmental legislation and installation-specific terms/permits at all the production sites for the Nordic Swan Ecolabelled product.

Documentation is not required. However, Nordic Ecolabelling may revoke the licence if the requirement is not fulfilled.

Regulations for the Nordic Ecolabelling of products

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

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

Follow-up inspections

Nordic Ecolabelling may decide to check whether the manufacturer of durable wood fulfils Nordic Ecolabelling's requirements during the licence period. This may involve a site visit, random sampling or similar test.

The licence may be revoked if it is evident that the product does not meet the requirements.

History of the criteria

Nordic Ecolabelling adopted version 2.0 of the criteria for durable/resistant wood for outdoor use on the 25th of February 2015. The criteria are valid until the 31st of December 2019.

On the 4th of May 2016, the Nordic Ecolabelling's Criteria Group decided per capsulam on two adjustments in the criteria document, see bullet 1 and 2 below. At the same time, the new requirements on forestry were introduced as an alternative way to fulfill the wood requirements. The new forestry requirements implicate that the license holder must be Chain of Custody-certified.

1. Wood with natural durability is a part of the product group and requirement O14 is clarified with how wood with natural durability shall verify the requirements on durability.
2. Due to new classifications for two chemicals used in the process to chemically modify wood, the requirement O4 are completed with more exemptions (the classification Acute toxicity and Specific target organ toxicity for furfuryl alcohol and the classification Specific target organ toxicity for maleic acid anhydride).

The new version is 2.1.

On the 2 November 2016, the Nordic Ecolabelling's Criteria Group decided per capsulam on an adjustment in requirement O15. The adjustment implies that data on energy use (MJ/m³ dried wood) as far as possible shall be given by suppliers/sawmill. The adjustment also implies that moisture content in raw wood material and final product shall be given. At the same time, references to the classification of health and environmental hazards in accordance with the Dangerous Preparations Directive 1999/45/EC has been removed, due to the replacement by the CLP Regulation. The new version is 2.2.

On the 9 October 2017 Nordic Ecolabelling's Criteria Group decided to remove requirement O24 Take-back system. Furthermore the Nordic Ecolabelling's Criteria Group decided on 14 December 2017 to prolong the criteria with 24 months to the 31 December 2021. The new version is called 2.3.

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

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

New criteria

- Develop criteria for energy and greenhouse gas emissions from transport
- Evaluate the possibility of setting criteria for the best product alternatives within wood plastic composites
- Consider ethical and environmental criteria for raw material production, including sugar cane plantations
- Evaluate the possibility of setting level criteria for maximum allowed energy consumption for drying and for production of wood and chemicals used for modification

Appendix 1 Analysis and test laboratories

Sampling and testing shall be performed in a competent manner. Analysis laboratories/testing institutions shall be impartial and competent.

Wood's durability shall be verified by an independent and competent test institution. All test results must be available for inspection by the ecolabelling body.

If accreditation is not specifically required, testing or/and analytical laboratory shall fulfil the general requirements of standard EN ISO 17025 or have official GLP status.

The applicant's analysis laboratory/test procedure may be approved for analysis and testing if:

- sampling and analysis is monitored by the authorities, or
- the manufacturer's quality assurance system covers analyses and sampling and is certified according to ISO 9001 or ISO 9002, or
- the manufacturer can demonstrate agreement between a first-time test conducted at the manufacturer's own laboratory and testing carried out in parallel at an independent test institute, and the manufacturer takes samples in accordance with a fixed sampling schedule

Appendix 2 Classification of chemical products

The chemical requirements cover all chemicals and chemical products used from the wood is impregnated or modified until the product is ready for sale to the consumer. The requirements apply to the chemicals used by the manufacturer and those used by any supplier.

This appendix is completed and signed by the manufacturer of the chemical product, based to 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.

Name of the chemical product:
Manufacturer of the chemical product:
Product's function/intended use:

Req. O4 Classification of chemical products

Is the chemical product classified according to the table below? yes no

If yes, which classification?: _____

Classification under CLP Regulation (EC) No 1272/2008	
Hazard class and category	Hazard phrases
Toxic to aquatic organisms Category acute 1 Category chronic 1-2	H400, H410, H411, H412
Acute toxicity Category 1-3	H300, H310, H330, H301, H311, H331
Specific target organ toxicity (STOT) with single and repeated exposure STOT SE category 1-2 STOT RE category 1-2	H370, H371, H372, H373
Carcinogenic Carc 1A/1B/2	H350, H350i or H351
Mutagenic Mut 1A/B/2	H340, H341
Toxic for reproduction Repr 1A/1B/2	H360, H361, H362

Exempted are products with the classifications:

- H301, H330, H311, H351 and H373 due to the presence of furfuryl alcohol (CAS 98-00-0)
- H372 and H373 due to the presence of maleic acid anhydride (CAS 108-31-6)
- H330 due to the presence of acetic acid anhydride (CAS 108-24-7).

Such products may be used on condition that the requirements in O9 and O10 are fulfilled.

Signature of chemical product manufacturer:

Date	Company
Name of contact person (Capital letters)	Phone
Signature of contact person	Email

Appendix 3 Declaration of constituent substances in chemical products

The chemical requirements cover all chemicals and chemical products used from the wood is impregnated or modified until the product is ready for sale to the consumer. The requirements apply to the chemicals used by the manufacturer and those used by any supplier.

This appendix is completed and signed by the manufacturer of the chemical product, based to 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.

Name of the chemical product:
Manufacturer of the chemical product:
Product's function/intended use:

The term constituent substance refers to all substances in the chemical product, including additives in the ingredients (such as preservatives and stabilisers) but does not include impurities from primary production. Impurities are defined as residual products from the ingredient production that can be found in the final product in concentrations below 100 ppm (0.01% by weight, 100 mg/kg), but not substances added to an ingredient or product deliberately and with a purpose, regardless of amount. Impurities of over 1% concentration in the primary product are, however, regarded as constituent substances. Substances known to be degradation products of the constituent substances are also themselves considered to be constituent substances.

Req. O5 CMR-substances

** There is an exemption for products where the classification Carc 2 H351 is due to the presence of furfuryl alcohol (CAS 98-00-0). The substance may be used on condition that the requirements in O9 and O10 are fulfilled.*

Does the chemical product contain any of the following CMR-substances? yes no

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

Does the chemical product contain any of the following CMR-substances? yes no

- Carcinogenic category 2 (Carc with H351)
- Mutagenic category 2 (Mut with H341)
- Toxic for reproduction category 2 (Rep with H361)

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

% by weight: _____

Req. 06 Substances that must not be present in the products

Does the chemical product contain any of the following?

- Substances on the Candidate List* yes no
- Substances that the EU judges to be PBT (persistent, bioaccumulative and toxic substances) and vPvB substances (very persistent and very bioaccumulative) in accordance with the criteria in Annex XIII of REACH yes no
- Substances considered to be potential endocrine disruptors in category 1 or 2 on the EU's priority list of substances that are to be investigated further for endocrine disruptive effects** yes no
- APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation) yes no
- Halogenated organic compounds*** yes no
- The following heavy metals or heavy metal compounds must not be present in the products: lead, cadmium, chromium VI, mercury and arsenic yes no

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

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

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

Req. 07 Nanoparticles

Does the chemical product contain nanoparticles (from nanomaterial*)? yes no

The following are exempt from the requirement: pigments**, naturally occurring inorganic fillers***, and polymer dispersions

If yes, give a description of the nanoparticles below:

* The definition of nanomaterials follows the European Commission's definition from 18 October 2011 (2011/696/EU): “A nanomaterial is a natural, incidental or purposely manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for at least 50% of the particles in the number size distribution, one or more external dimensions is in the size range 1–100 nm.”

** nano-titanium dioxide is not considered a pigment, and is thus not covered by the requirement.

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

Req. O8 Volatile organic compounds (VOC)

Does the chemical product contain volatile organic compounds (VOC)? yes no

If yes, state name, CAS-number, boiling point at 1 atm, % VOC by weight and % by weight of volatile aromatic compounds:

Signature of chemical product manufacturer:

Date	Company
Name of contact person (Capital letters)	Phone
Signature of contact person	Email

Appendix 4 a Specification of wood raw materials

(To be filled out by the supplier of wood or the manufacturer of durable wood)

Manufacturer of durable wood:
Product (trade name):
Manufacturer/supplier of wood raw material:

Req. O11 Origin and traceability of the wood

For the documentation of wood raw material:

- Type of wood and geographical origin (country/state and region/province).
- Copy of certificates for forest management

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

Supplier of wood	Type of wood*	Geographical origin (country/state and region/province)

* State the common and the Latin name of the wood type.

Req. O12 Biocides

Is the wood raw material treated with pesticides classified by WHO as type 1A and/or type 1B after felling? yes no

Signature of supplier:

Date	Company
Name of contact person (Capital letters)	Phone
Signature of contact person	Email

Appendix 4 b Basis for calculation of certified amount of wood raw material (O13)

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

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

Financial figures are not relevant and are not necessary to include.

Supplier	Type of wood**	Geographical origin	Forest standard. Type of certification management system (eg. FSC/ PEFC)	Amount (volume or weight per year)*	Quantity of timber for certified forests used in the product (%)
Total:					

* Volume or weight can be used as long as the same units are used all through the table.

** State the common and the Latin name of the wood type.

The amount of timber derived from certified forests = timber derived from certified forests/total amount timber in the durable wood product(s).

Signature of supplier:

Date	Company
Name of contact person (Capital letters)	Phone
Signature of contact person	Email

Appendix 4 c Directions for forestry certification

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

Requirements on forestry standards

The standard must balance economic, ecological and social interests and comply with the Rio Declaration's forestry principles, genda 21 and the Forest Principles, and respect relevant international conventions and agreements.

The standard must contain absolute requirements and promote and contribute towards sustainable forestry. Nordic Ecolabelling places special emphasis on the standard including effective requirements to protect the forest from illegal felling and that the requirements protect the biodiversity of the forest.

The standard must be available to the general public. The standard must have been developed in an open process in which stakeholders with ecological, economic and social interests have been invited to participate. The requirements related to forestry standards are formulated as process requirements. The basis is that if stakeholders agree on the economic, social and environmental aspects of the forestry standard, this safeguards an acceptable requirement level. If a forestry standard is developed or approved by stakeholders with ecological, economic and social interests, the standard may maintain an acceptable standard. Accordingly, Nordic Ecolabelling requires that the standard balances these three interests and that representatives from all three areas are invited to participate in development of the forestry standard.

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

Requirements on certification system

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

Requirements on certification body

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

The purpose of certification is to ensure that the requirements regarding forestry standards are fulfilled. The certification system must be designed to verify that the requirements of the forest standard are fulfilled. The method used for certification must be repeatable and applicable to forestry. Certification must be in respect to a specific forestry standard. The forest must be inspected prior to certification.

Requirements on Chain of Custody (CoC) certification

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

Documentation

- Copy of forestry/ fiber raw material standard, name, address and telephone number to the organization who has worked out the standard and audit rapports.
- References to persons who represents stakeholders with ecological, economic and social interests who have been invited to participate.

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

Appendix 4 d Declaration of tree species not permitted to be used in Nordic Ecolabelled products

Name of the Nordic Swan Ecolabel applicant:
Product group/-type:
Version and date of the list of prohibited tree species used:

It is hereby declared that tree species listed in the list of prohibited tree species (Nordic Ecolabelling - Prohibited Wood) is not used in the Swan-labelled product.

The list of prohibited tree species is located on the website: www.nordic-ecolabel.org/wood/

Nordic Ecolabelling may request further information if in doubt about specific tree species.

Applicant / manufacturer / supplier's signature:

Date	Company
Name of contact person (Capital letters)	Phone
Signature of contact person	Email

Appendix 5 Monitoring of energy consumption (O15)

The appendix is filled out by the manufacturer of durable wood, or supplier for drying of the wood. Worksheets that provide an overview of the annual energy consumption and invoices on purchased energy can also be used as documentation.

Manufacturer of durable wood/supplier (drying of wood):
Product:

Raw material fase

a) Energy consumption for drying of the wood

Flowchart/description of the drying method:

Annual amount dried wood (m³): _____ Year: _____

Average moisture content incoming wood raw material (%): _____

Average moisture content final product (%): _____

Energy source* used for drying	Annual energy consumption (MJ)	Annual energy consumption per m ³ (MJ/m ³)
SUM		

** In this context, energy source means electricity, district heating (supplier is to be stated) and fuels (e.g. wood waste, wood chips, biogas, straw, peat, pellets, natural gas, heating oil).*

Production phase

a) Energy consumption for production

Modification method: _____

Annual amount dried wood (m³): _____ Year: _____

Energy source* used for modification	Annual energy consumption (MJ)	Annual energy consumption per m ³ (MJ/m ³)
SUM		

** In this context, energy source means electricity, district heating (supplier is to be stated) and fuels (e.g. wood waste, wood chips, biogas, straw, peat, pellets, natural gas, heating oil).*

b) Energy efficiency plan

The manufacturer of durable wood shall submit an energy efficiency plan. The plan's validity period is to be clearly stated.

Date	Company
Name of contact person (Capital letters)	Phone
Signature of contact person	Email