

Nordic Ecolabelling of

Windows and Exterior Doors



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Nordic Ecolabelling

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Addresses

In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Swan. 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 Ecolabelled window or exterior door?

The goal of the Nordic Ecolabelling criteria is to promote the use of energy-efficient windows and exterior doors that are also manufactured with a minimum of environmental impact. The criteria apply to fixed and opening windows, window doors and exterior doors.

Windows and doors have a long technical service life. Their greatest environmental impact therefore comes from the energy losses they cause from the heated building in which they are installed.

The extent of the energy losses is determined by the total heat transfer coefficient (U-value) and the solar energy transmittance (G-value). The Nordic Ecolabel sets high requirements on energy efficiency. An energy-efficient window reduces the building's heating requirement and climatic impact.

The principal materials used in windows and exterior doors are glass, wood, plastic and metals such as aluminium and steel. Plastics and metals may be used for profiles, beads, fittings and film and/or coatings. A range of wood preservatives and finishes, putty, glue, insulating material, sealants and filler gases may also be used. Seen over the entire lifecycle, the variation in environmental impact due to the use of different materials is relatively small for Nordic Ecolabelled windows and exterior doors.

The Nordic Ecolabelling criteria promote recycling. Frames, casements and door leaves that are not made of renewable materials must comprise a minimum of 30% recycled material. Environmental requirements are also set for chemicals, wood preservatives, plastic additives and the sorting of waste at source. The requirements also apply to the materials used by subcontractors of thermopane units, frames and casements, as well as packaging. 70% of the solid wood in exterior doors and windows must come from certified forests.

The manufacturer of the window/exterior door must provide a 10 year warranty.

Requirements are also stipulated for installation and care instructions. The manufacturer must with each delivery provide recommendations regarding maintenance. In order to ensure the quality of ecolabelled windows or exterior doors, these must satisfy relevant product certification requirements. The manufacturer must also have documented procedures and instructions for quality and environmental assurance.

Nordic Ecolabelled windows and exterior doors:

- Reduce climatic impact through low energy losses.
- Reduce the environmental impact of production through tough environmental requirements on primary materials and the production process.
- Offer superior function and a long service life since they are sold with good fitting and care instructions.

Why choose the Nordic Ecolabel?

- Licensees may use the Swan trademark for marketing purposes. The Nordic Ecolabel, the Swan, is a very well-known and well-reputed trademark in the Nordic region.
- The Nordic Ecolabel is a cost-effective and simple way of communicating environmental work and commitment to customers and suppliers.
- Reducing environmental impact often creates scope for lowering costs, such as by cutting the consumption of energy and reducing amounts of packaging and waste.
- Environmentally suitable operations prepare the manufacturer of windows and exterior doors 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. The Nordic Ecolabel can be seen as an aid in this work.
- The Nordic 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 Ecolabel licence can also be seen as a mark of quality.

What can carry the Nordic Ecolabel?

The product group is limited to fixed and opening windows, window doors and exterior doors.

The frame, door leaf or window casement may comprise of wood, wood-aluminium, aluminium, plastic, steel or composite material.

Exterior doors are defined as doors forming the boundary between free and heated areas. Door types that can be ecolabelled are exterior doors that are the barrier between indoor and outdoor environments, such as doors on houses, apartments, offices and other buildings that have a regulated indoor temperature.

How to apply

Each requirement is marked with the letter R (requirement) and a number. All requirements must be fulfilled for the award of a licence.

The requirements section can also be used as a checklist. Each requirement is followed by two checkboxes – Yes and No – to indicate whether the requirement is met.

Icons in the text

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

- ✉ Enclose
- 📍 Requirement checked on site.

Application

The application shall be sent to Nordic Ecolabelling in the country in which the window or exterior door is sold or in which the applicant carries on activities. See page 2 for addresses. The documents required for application are an application form and documentation demonstrating fulfilment of the requirements (specified in each requirement).

Further information and assistance may be available. Visit the Web site of the national ecolabelling body for more information.

Sales in other Nordic countries

Registering a licence in another Nordic country allows the Nordic Ecolabel to be used on a larger market. The following must be submitted to Nordic Ecolabelling:

- Form for sales in the country in question.
- Documentation demonstrating compliance with technical requirements and applicable standards (R26).
- Customer information in the local language (R28).
- If registering in Denmark, the U-value must be specified in the format 1.23x1.48 m (R3).
- Documentation detailing for which recycling system the window or exterior door is designed (R23 and R36).
- Take-back system for packaging (R36).

Registration is free of charge but an annual fee shall be paid in accordance with the national regulations.

On-site inspection

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

Costs

An application fee is charged to companies applying for a licence. There is an additional annual fee based on the revenue produced by the window or exterior door carrying the Nordic Ecolabel.

Enquiries

Please contact Nordic Ecolabelling if you have any queries or require further information. See page 2 for addresses.

What are the requirements for the Nordic Ecolabel?

To be awarded a Nordic Ecolabel:

- All obligatory requirements must be fulfilled.
- Nordic Ecolabelling must inspect the manufacturing facilities on-site.

1 Product description

Are the requirements met?

R1 Description

Yes No

Describe the design of the window or exterior door and how it is manufactured.

Description of product and production.

Appendix no. _____

R2 Component materials

Yes No

Specify the materials and chemical products of which the window/exterior door comprises. Specify the percentage weight of each material and component of the entire window/exterior door. It is not necessary to specify the percentage weight for chemical products such as adhesives and surface treatments.

Written details of all materials and components used in manufacturing the window or exterior door and their percentage weights.

Appendix no. _____

2 Environmental requirements

2.1 Energy requirements

Are the requirements met?

R3 U-value, heat transfer coefficient

Yes No

Windows:

The window's U-value can be specified for one of two formats: 1.2 x 1.2 m or 1.48 x 1.23 m.

For a 1.2 x 1.2 m window, the heat transfer coefficient (U-value) must not exceed 1.0 W/m²K for the entire window including the frame.

For a 1.48 x 1.23 m window, the heat transfer coefficient (U-value) must not exceed 0.95 W/m²K for the entire window including the frame.

Window doors:

The heat transfer coefficient (U-value) must not exceed 1.0 W/m²K for the entire window door including the frame for a door size of 0.9 x 2.1/1.3 m. 1.3 m is the height of the glass section of the window door.

Exterior doors:

The heat transfer coefficient (U-value) must not exceed 1.0 W/m²K for the entire door including the frame for a door size of 0.9 x 2.1 m or 1.0 x 2.1 m.

The U-value must be given to two significant figures. Results will be rounded off as follows: 1.049 W/m²K is rounded down to 1.0 and 1.05 W/m²K is rounded up to 1.1.

The method for measuring the U-value is described in Appendix 1. The U-value must be determined through testing or calculation in accordance with an approved international standard that is performed by an accredited national institute or equivalent.

Details of how the U-value is determined. Test results and calculations must be included.

Appendix no. _____

- R4 Solar energy transmittance and daylight transmittance of windows** Yes No
- The solar energy transmittance (G-value) of the window pane must be $50 \pm 2\%$ or higher measured perpendicular to the glass. The daylight transmittance must be $63 \pm 2\%$ or higher.
- The method of measurement is described in Appendix 1. The G-value must be determined through testing or calculation in accordance with an approved international standard that is performed by an accredited national institute or equivalent.
- Details of how measurements are performed and the results of testing. Appendix no. _____
- R5 Air permeability of windows and doors** Yes No
- The window or exterior door must fulfil Class 4 according to EN 12207 for air permeability under negative and positive pressure.
- Results of air permeability tests. Details of how air permeability is tested. Appendix no. _____

2.2 Material requirements

- R6 Recycled content in non-renewable materials** Yes No
- Components of a window, balcony door or exterior door such as the frame, casements or door leaf that are made of non-renewable materials must comprise at least 30% by weight recycled material.
- This requirement does not apply to parts that constitute less than 3% by weight of the total product. Hinges, handles, fittings, stabilization boards in exterior doors and insulation are not subject to this requirement. If the weather protection of the window, balcony door or exterior door consists mainly of aluminium, this aluminium are exempt from the requirement on renewable materials unless the aluminium is a part of the load-bearing structure and constitute more than 8% by weight of the total window or exterior door or more than 11% by weight of the total balcony door. Non-renewable components of the window pane/sealed glazing unit are also exempt from this requirement.
- Recycled material is defined as post-consumer recycled material, recycled waste materials from window and door manufacturing and waste from other production such as plastics and metals. Production waste from the manufacture of window and door profiles is not considered recycled material.*
- Non-renewable materials: specify the proportion of recycled materials used. Declaration from the supplier that the material is recycled. Appendix no. _____
- R7 Non-recycled plastic materials** Yes No
- Plastic materials must not contain additives of lead, cadmium, halogenated paraffins, organic tin compounds, phthalates or halogenated flame retardants. This requirement does not include small plastic parts such as capping plates, clips and bricks.
- Declaration from the plastics manufacturer that plastic parts fulfil this requirement. Appendix 2 can be used. Appendix no. _____

- R8 Recycled plastic materials** Yes No
 Recycled plastics must not contain lead or cadmium.
 Recycled plastics must be tested for their content of lead, cadmium, halogenated paraffins, organic tin compounds, phthalates and halogenated flame retardants. The tested content of lead or cadmium must not exceed 100 ppm (mg/kg). This requirement does not include small plastic parts such as capping plates, clips and bricks.
Appendix 1 describes the method for testing the contents of plastics.
- Test results demonstrating the fulfilment of the requirement. Appendix no. _____
- R9 Chlorine production** Yes No
 Mercury and asbestos must not be used to produce chlorine for making plastics. This requirement does not include small plastic parts such as capping plates, clips and bricks.
- Declaration from the plastic manufacturer regarding the method used to produce chlorine. Appendix 2 may be used. Appendix no. _____
- R10 Marking of plastic parts** Yes No
 Plastic parts heavier than 50 g must be visibly labelled for recycling in accordance with ISO 11469. This requirement does not apply to glazing beads and glazing blocks that constitute less than 3% by weight of the total weight of the window.
- Description of materials labelling for plastic parts. Appendix no. _____
- R11 Filler gas** Yes No
 Filler gases that contribute to the greenhouse effect, with a Global Warming Potential (GWP) >5 over a period of 100 years, may not be used in the insulating units.
Inert gases (e.g. argon, krypton) have a GWP <5.
- Details of filler gases used for insulation, and confirmation that the gases do not contribute to the greenhouse effect by having a GWP >5 over a period of 100 years. Appendix no. _____
- R12 Wood raw material** Yes No
 The licensee must ensure that wood raw materials do not originate from forest environments meriting protection due to their high biological and/or social value. Nordic Ecolabelling may revoke a licence if it is found that wood raw materials are derived from forest environments of this type.
- Name of wood (in Latin and one Nordic language) and geographic origin (country/state and region/province/municipality) of the kinds of wood used. Nordic Ecolabelling may request further documentation if there is any doubt as to whether the wood raw materials are derived from forest environments meriting protection due to their high biological and/or social value. Appendix 3 is designed for documenting wood raw materials. Appendix no. _____

R13 Solid wood

Yes No

At least 70% (annual average) of the solid wood must come from certified forests. Certification must be administered by a third party in accordance with a forestry standard that fulfils the requirements in Appendix 4 on standards and certification systems.

Fibreboards are not subject to this requirement.



The amount of timber derived from certified forest must be stated and the basis for calculations must be shown. Appendix 3 may be used by the timber supplier.

Appendix no. _____

Copy of the certificate for certified forest environments both signed and approved by the certification body. The name of the forest certification system must be clear.

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

R14 Insulation material

Yes No

Thermal insulation materials must not contain halogenated flame retardants or flame retardants containing borax or boric acid.

Expanding insulation material must not be produced using fluorinated propellants such as hydrofluorocarbons (HFC). Typical materials include expanded polystyrene (EPS) and extruded polystyrene (XPS).

Mineral insulation material must not be classified as carcinogenic according to Council Directive 97/69/EC.



Declaration from the supplier of the insulation material and product specifications for the product.

Appendix no. _____

R15 Separability

Yes No

It must be possible to separate glazing from metals and plastics in the window / exterior door for recycling at the end of the unit's service life.



Description of how wood, metal and plastics can be separated.

Appendix no. _____

2.3 Chemical requirements

Are the requirements met?

R16 Classification of chemical products

Yes No

Chemical products used during the manufacture of the Nordic Ecolabelled window or exterior door must not be classified as in the following table. Substances shall be classified according to Nordic regulations for the classification and marking of dangerous chemicals and/or the European substance and preparation directives, 67/548/EEC and 1999/45/EEC (with amendments).

Danger class	Symbol and R-phrase
Dangerous for the environment	N with R50, R50/53 or R51/53*
Carcinogenic	T with R45 or R49; Xn with R40
Mutagenic	T with R46; Xn with R68
Toxic for reproduction	T with R60 or R61; Xn with R62 or R63
Very toxic	T+ with R26, R27, R28 or R39
Toxic	T with R23 or R24, R35, R39 or R48
Harmful	Xn with R22, R48, or R68

Exceptions are made for vacuum impregnation where R51/53 is accepted.

Table B6a in Appendix 6 can be used for translation to the Globally Harmonised System (GHS).

- Material safety data sheet as required by applicable legislation in the country of application, e.g. Annex II of REACH (Council Regulation 1907/2006/EEC) for all chemical products.

Appendix no. _____

R17 Handling of chemical products

Yes No

A description of handling procedures used to avoid environmental damage and personal injury must be provided for all chemical products that are used during the manufacture of the Nordic Ecolabelled window or exterior door and if classified as in the following table. Substances shall be classified according to Nordic regulations for the classification and marking of dangerous chemicals and/or the European substance and preparation directives, 67/548/EEC and 1999/45/EEC (with amendments).

Danger class	Symbol and R-phrase
Dangerous for the environment	R52, R53 or R52/53 without N
Sensitising	Xn with R42 or Xi with R43
Corrosive	C with R34 or R35
Harmful	Xn with R20, R21, or R65
Explosive	E with R2 or R3
Extremely flammable	Fx (F+ in Norway) with R12
Highly flammable	F with R11, R15 or R17

Table B6b in Appendix 6 can be used for translation to the Globally Harmonised System (GHS).

- Description of how chemicals are handled in a safe manner to avoid personal injury.

Appendix no. _____

R18 CMR substancesYes No

Chemical products used in the manufacture of a Nordic Ecolabelled window or exterior door must not contain substances classified as carcinogenic (Carc with R45 and/or R49), mutagenic (Mut with R46) and/or toxic for reproduction (Rep with R60 and/or R61).

The total content of substances classified as carcinogenic (Carc with R40), mutagenic (Mut with R68) and/or toxic for reproduction (Rep with R62 and/or R63) must not exceed 0.5% by weight in products used to manufacture the Nordic Ecolabelled window or exterior door.

An exception is made for the quantity of DBT and DOT organic tin compounds (TBT and TPT are prohibited) which are permitted to the specified limit values in the following three product types:

- 0.5% in SMP polymers such as MS polymers
- 0.2% in silicone products and PUR polymers with silanes replacing isocyanates
- 0.03% in PUR polymers containing isocyanates.

“Content” refers to substances or ingredients that are actively added by the chemical manufacture or its suppliers. For two component products it is the ingredients in the separate components that shall comply with the requirements. If it can be documented that the use and hardening of the product is performed in a closed system with the help of robots, these requirements can alternatively apply to the hardened product. Impurities that are classified as above and found in such concentrations that they are specified on the products material safety data sheet are also considered constituent substances.

Table B6c in Appendix 6 can be used for translation to the Globally Harmonised System (GHS).



Material safety data sheet as required by applicable legislation in the country of application, e.g. Annex II of REACH (Council Regulation 1907/2006/EEC) for all chemical products and Appendix 5 duly completed and signed by the chemical manufacturer.

Appendix no. _____

R19 Prohibited substancesYes No

The following substances are prohibited from chemical products used in the manufacture of a Nordic Ecolabelled window or exterior door.

- Halogenated organic solvents
- Alkylphenoethoxylates (APEO) and alkylphenol derivatives (APD)
- Perfluorinated and polyfluorinated alkylated substances (PFAS)
- Phthalates, with exemption of sealants
- In sealants the following phthalates are prohibited: DEHP, DBP, BBP, 711P, DIBP, DMEP, DIDP or DINP
- Halogenated flame retardants
- Boron compounds
- Bisphenol A

“Content” refers to substances or ingredients that are actively added by the chemical manufacture or its suppliers. Impurities that are classified as above and found in such concentrations that they are specified on the products material safety data sheet are also considered constituent substances.



Appendix 5 duly completed and signed by the chemical manufacturer.

Appendix no. _____

R20 NanomaterialsYes No

If nanometals, nanominerals, nanocarbon compounds and/or nanofluorine compounds are used in the glass/window/door or the chemical products used for manufacturing a Nordic Ecolabelled window or exterior door, documentation must exist demonstrating that the use of the nanomaterials in question cannot cause environmental or health problems.

Nanoparticles are defined as microscopic particles that are less than 100 nm in dimension. Nanometals, for example, include nanosilver, nanogold and nanocopper.

- Declaration from the manufacturer of the window or exterior door and from the chemical producer (Appendix 5) that nanomaterials are not used, or documentation regarding environmental and health aspects.

Appendix no. _____

R21 Solvents for impregnation and surface treatmentYes No

Pressure impregnation is not permitted.

The emission of volatile organic compounds (VOC) resulting from impregnation shall not exceed 11 kg/m³.

The emissions from surface treatment must not exceed 75 mg C/Nm³.

This requirement is equivalent to the requirements of Council Directive 1999/13/EC on volatile organic compounds for manufacturing facilities that use more than 25 or 15 tons of organic solvents a year for impregnation or surface treatment respectively. For Nordic Ecolabelled windows and exterior doors, the requirement applies irrespective of the quantity of organic solvent used. Volatile organic compounds (VOC) are defined as organic compounds that at 293.15 K have a vapour pressure of 0.01 kPa or greater. Appendix 1 describes the requirements of the test body used to VOC classification.

- Calculation of the solvent balance or measurement of the emissions using the method described in Council Directive 1999/13/EC.

Appendix no. _____

2.4 Waste management during manufacture

Are the requirements met?

R22 Production wasteYes No

The manufacturer of windows or exterior doors, and manufacturers of thermopanes, must, where applicable, separate the different types of waste arising from production of the window or exterior door at source, e.g. timber waste, impregnated timber waste, glass waste, plastic, aluminium and other metals. Furthermore, a plan for separating waste at source must be drawn up, describing how the waste is dealt with, e.g. recycling, landfill and incineration. If the waste is environmentally hazardous this must be stated.

Environmentally hazardous waste must be treated and dealt with in accordance with the authorities' prevailing regulations in the country of manufacture.

Handling and recycling requirements for individual materials apply to the entire production process in the production plant where ecolabelled products are manufactured. The requirements also apply to subcontractors' production of insulating units, casements and frames.

The requirements are as follows:

- Standard window panes: glass waste must be recycled.
- Selective glass (coated window panes): glass waste must be recycled if suitable facilities exist in the window's country of manufacture.
- Aluminium waste and other metal waste must be recycled.
- Plastic waste must be recycled. The requirement applies to components subject to R6.
- Material or energy recovery of all wood and wood-based waste. This does not apply to impregnated wood.

- Impregnated wood, discarded windows, chemical residues and their packaging and other materials must be dealt with in accordance with the authorities' regulations or stipulations.
- Environmentally hazardous waste must be collected by an approved waste management company.
- Residual waste must be collected by an approved waste management company.

A waste plan for separating timber waste, impregnated timber waste, glass waste, plastic, aluminium and other metals at source, including details of how the waste is dealt with in terms of e.g. recycling, landfill or incineration. The report must show that requirements on individual materials specified above are fulfilled.

Appendix no. _____

Declaration of any environmentally hazardous waste.

Confirmation that environmentally hazardous waste is dealt with in accordance with prevailing regulations in the country of manufacture.

R23 Take-back system for plastic window and door materials

Yes No

Windows and exterior doors made of plastic shall be covered by a system that ensures their collection for recycling in the countries in which they are sold as Nordic Ecolabelled.

Particulars/description of the types of take-back systems in which the company participates.

Appendix no. _____

R24 Packaging

Yes No

Halogenated plastics and timber that is treated with wood preservatives/biocides must not be used in packaging.

Details of all packaging materials used by the manufacturer and subcontractors.
Declaration stating that the packaging does not contain any halogenated plastics, wood treated with biocides or wood preservatives.

Appendix no. _____

2.5 Functional requirements

Are the requirements met?

R25 Durability/longevity of exposed wood parts

Yes No

To guarantee the durability of the window or exterior door, the wood must be suitably treated. Exposed wooden parts must be:

- Treated with preservatives that fulfil penetration class P5 according to EN 351 1 or 351 2, or
- Coated with wood preservative through dipping or flowcoating (e.g. 2ØKO in Denmark) and be made of heartwood or wood of similar quality.

The system for surface treatment must provide documented maintenance-free use tested according to EN 927 "Coating materials and coating systems for exterior wood". The system shall fulfil the limit values for "stable end use category" in Table 1 of EN 927-2. The "Exposure condition" defined in Table 2 of EN 927-1 shall be "Medium".

Test reports complying with EN 351-1 and 351-2 for wood preservatives and EN 927 for surface treatment systems.

Appendix no. _____

R26 Technical requirementsYes No

Ecolabelled windows and exterior doors must fulfil the relevant standards in the country in which they are sold. For example, Svensk Fönster och Dörrkontroll (Sweden), Norsk Dørr- og Vindus Kontroll (Norway), Dansk Vindues Certificering (Denmark) or P-labelling (Sweden).

- Details of and declaration stating which standards are fulfilled in the country in which the window or exterior door is sold.

Appendix no. _____

R27 GuaranteeYes No

The window manufacturer must provide a 10-year guarantee covering function, thermopanels and wood rot. The guarantee must encompass all functional requirements in the applicable/relevant standards.

The door manufacturer must provide a 10-year guarantee for form stability and a 2-year guarantee for function.

- Guarantee certificate supplied with the window/exterior door or information on the manufacturer's Web site.

Appendix no. _____

R28 Customer informationYes No

The following must be enclosed with each delivery of windows or exterior doors or provided as information on a product-related website:

- a) Instructions on the handling of the window/exterior door during transportation, reception and storage at the building site.
- b) Instructions on how the window/exterior door shall be installed into a wall, adjusted and protected during the construction period. General physical parameters for fitting must be specified. Instructions on how the window/exterior door should best be installed from an energy point of view, in order to prevent heating loss as a result of poor installation. In addition, the fitting instructions must assist installation without the risk of the window/door, or the wall into which it is placed, suffering damage resulting from the effects of moisture from convection, diffusion or external factors such as rain or snow.
- c) Information on the window's g-value and U-value or the exterior door's U-value. Specify for which format the U-value applies. Information stating that the window is not recommended for installation in buildings that need to be cooled, due to properties of the glass that is constructed to contain as much heat as possible inside the building. If these windows are installed in a building with a calculated need of cooling, the customer needs to be informed of solutions for energy efficiency, for example sun blinds or sun-screening.
- d) Instructions describing the recommended maintenance for the window/exterior door. Care instructions must contain details on how often the finish should be checked and maintained/re-applied, and which surface treatment is recommended.
- e) Information that a window with a low U-value increases the risk of condensation on the outside in humid conditions when the radiant efficiency between the window and surroundings is great. E.g. on a calm, starry night. Windows that are recessed into the facade or that have a capping are less susceptible to condensation.
- f) Details of what should be done with the window or exterior door once it reaches the end of its service life.

- Written recommendations included with the delivery of the window/exterior door to the customer, satisfying the requirements as regards handling, installation and care as specified in R28 (a-f).

Appendix no. _____

3 Quality and regulatory requirements

Are the requirements met?

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

If the window or door manufacturer's environmental management system is certified to ISO 14 001 or EMAS, where the following procedures are applied, it is sufficient if the accredited auditor certifies that the requirements are implemented.

R29 Laws and regulations

The licensee must ensure that applicable laws and regulations in force are observed at facilities at which the Nordic Ecolabelled product is manufactured. For example, safety, work environment, environmental legislation, plant-specific conditions and concessions.

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

Yes No

R30 Licence administrators

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

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

Yes No

Appendix no. _____

R31 Documentation

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

Checked on site.

Yes No

R32 Quality of windows and exterior doors

The licensee must guarantee that the production quality of the Nordic Ecolabelled window or exterior door is maintained throughout the validity period of the licence.

Procedures for collating and, where necessary, dealing with claims and complaints regarding the quality of the Nordic Ecolabelled window or exterior door.

Yes No

Appendix no. _____

R33 Planned changes

Written notice must be given to Nordic Ecolabelling of planned changes that have a bearing on the Nordic Ecolabelling requirements.

Procedures detailing how planned changes are handled.

Yes No

Appendix no. _____

R34 Unplanned nonconformities

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

Procedures detailing how unplanned nonconformities are handled.

Yes No

Appendix no. _____

R35 TraceabilityYes No

The licensee must have a traceability system for the production of the Nordic Ecolabelled window or exterior door.

Description of/procedures for the fulfilment of the requirement.

Appendix no. _____

R36 Take-back systemYes No

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

Declaration from the applicant regarding affiliation to existing take-back/recycling/processing agreements.

Appendix no. _____

R37 MarketingYes No

Marketing of the Nordic Ecolabelled window or exterior door shall comply with "Regulations for the Nordic Ecolabelling of products" of 22 June 2011 or later version.

Appendix 6 duly completed.

Appendix no. _____

Marketing

The Nordic Ecolabel, the Swan, is a very well-known and well-reputed trademark in the Nordic region. Nordic Ecolabelled windows and exterior doors may be marketed using the Nordic Ecolabel as long as the associated licence is valid.

The label must be positioned so that there is no doubt as to what the label refers and so that it is clear that the window or exterior door is ecolabelled.

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

Design of the Nordic Ecolabel

Design of the Nordic Ecolabel:



Licence number

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

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

Follow-up inspections

Nordic Ecolabelling may decide to check whether the window or exterior door fulfils Nordic Ecolabelling requirements during the licence period. This may involve a site visit, random sampling or similar test.

The licence may be revoked if it is evident that the window or exterior door does not meet the requirements.

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

How long is a licence valid?

Nordic Ecolabelling adopted the criteria for windows and exterior doors on 3 November 2008. The criteria are valid until 31 December 2012.

The Secretariat Manager's Meeting adopted on 16 February 2010 adjustments in chapter 2. The new version is called 3.1.

The Secretariat Manager's Meeting adopted on 20 June 2010 a adjustment in R16. The new version is called 3.2.

The Secretariat Manager's Meeting adopted on 7 December 2010 a adjustment in R18. The new version is called 3.3.

The Nordic Ecolabelling Board adopted on 15 December 2011 adjustments to R6, R18 and R19, and decided to prolong the validity of the criteria with 2 years to 31 December 2014. The new version is called 3.4.

An 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

Prior to the review of this criteria document, the following items shall be evaluated.

- Tightening of the U-value and G-value requirements.
- Possibility to set requirements of the entire window's G-value and an energy contribution calculation based on the window's U-value and G-value.
- Requirements on wood preservatives and other chemical products with which the window or exterior door is treated.
- Requirements as to the limitation of the use of organic solvents.
- Limit values for the content of environmentally hazardous and harmful substances in recycled plastics.

Appendix 1 Test methods and analysis laboratories

Requirements on the analysis laboratory

The analysis laboratory used shall fulfil the general requirements of standard EN ISO 17025 or have official GLP status.

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

- the analyses and tests are monitored by the authorities, or if
- the manufacturer has a quality management system encompassing sampling and analyses and has been certified 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.

Sampling methods for measuring the energy-related requirements

The U-value must be measured according to the applicable ISO 8990 standard or EN-ISO 12567-1, known as the 'Hot-box method'. As an alternative, the U-value can be calculated according to the standard EN 673 (glazing) and EN ISO 10077 2 (frame/casement). A computer simulation program, e.g. FRAME, VISION or equivalent, can be used to assist calculations.

The U-value of exterior doors shall be calculated in accordance with EN ISO 10077-2.

The total solar light transmittance (TST or G-value) and daylight transmittance (LT) must be measured in accordance with EN 410 or ISO 9050.

The air permeability of exterior doors shall be measured according to EN 12207.

Test methods for measuring the content of plastics

The following test methods may be used to analyse a plastic's content of lead, cadmium, halogenated paraffins, halogenated flame retardants, organic tin compound and phthalates: inductively coupled plasma - mass spectrometry (ICP-MS), scanning electron microscope (SEM) with energy-dispersive X-ray spectroscopy (EDS), Fourier Transform Infrared Spectroscopy (FTIR), or equivalent method.

Appendix 2 Declaration of contents of plastic materials

Manufacturer/supplier
Name of the product

- We hereby declare that the plastic material stated above does not contain any of the following additives: lead, cadmium, halogenated paraffins, organic tin compounds, phthalates or halogenated flame retardants.

- Mercury and asbestos have not been used to produce chlorine for making plastics.

Manufacturer's/supplier's signature

Date	Company
Administered by	Phone

Appendix 3 **Specification of wood raw materials (supplier)**

Product name:
Product description:
Manufacturer/supplier:

For the documentation of wood raw material:

- Type of wood and geographical origin (country/state and region/province/district).
- Copy of certificate of forest certification.
- Amount (%) of timber from certified forest used in the product.

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

Type of wood	Geographical origin	Forest standard	Quantity (%) of timber from certified forests used in the product

Signature of supplier:

Date	Company name
Administrated by	Phone

Appendix 4 Requirement of forest certification

Wood used shall be certified by a third party in accordance with current forestry standards that fulfil Nordic Ecolabelling requirements on standards and certification systems.

The following requirements apply to standards, certification systems and certification bodies approved by Nordic Ecolabelling.

Standards

1. The standard must balance economic, ecological and social interests and comply with the UN Rio Declaration, Agenda 21 and the Statement of Forest Principles, and respect applicable international conventions and agreements.
2. The standard must contain absolute requirements. It must encourage and promote sustainable forestry.
3. The standard must be generally available. It must have been developed in an open process in which stakeholders with ecological, economic and social interests have been invited to participate.

The certification system

The certification system must be open, have wide-spread national or international credibility and be able to verify that the requirements in the forestry standard (see above) are fulfilled.

The certification body

The certification body must be independent and recognised. It must be able to verify that the requirements in the standard are met, able to communicate the results and be suitable for the efficient application of the standard.

Nordic Ecolabelling may request further documents to assess whether the requirements regarding standards and certification systems are met.

Appendix 5 Declaration on the contents of chemical products

(Wood preservatives, paint, adhesive, sealants, putty, etc.)

Name of the product
Manufacturer/supplier

Product description:

Wood preservative Sealant
Undercoat Adhesive
Topcoat Filler
Other:

Please specify: _____

1) Does the chemical product contain CMR substances?*

Carcinogenic (Carc with R45 and/or R49) Yes No
Mutagenic (Mut with R46)
Toxic for reproduction (Rep with R60 and/or R61)

2) Does the chemical product contain CMR substances?*

Carcinogenic (Carc with R40) Yes No
Mutagenic (Mut with R68)
Toxic for reproduction (Rep with R62 and/or R63)
If Yes specify the quantity as a percentage by weight of each substance:

3) Is the declaration about CMR substances done for a hardened two component product?*

Yes No

4) If yes, the chemical product is part of a two component product, is the use and is the hardening performed in a closed system with the help of robots?*

Yes No

**For two component products it is the ingredients in the separate components that shall comply with the requirements. If it can be documented that the use and hardening of the product is performed in a closed system with the help of robots, these requirements can alternatively apply to the hardened product.*

5) Does the chemical product contain halogenated organic solvent? Yes No

- 6) Does the chemical product contain alkyl phenol ethoxylates (APEO) or alkylphenol derivatives (APD)? Yes No
- 7) Does the chemical product contain perfluorinated and polyfluorinated alkylated substances (PFAS)? Yes No
- 8) Does the chemical product* contain phthalates?
*With the exception of sealants Yes No
- 9) If the chemical product is a sealant, does it contain any of the following phthalates: DEHP, DBP, BBP, 711P, DIBP, DMEP, DIDP or DINP? Yes No
- 10) Does the chemical product contain halogenated flame retardants? Yes No
- 11) Does the chemical product contain boron compounds? Yes No
- 12) Does the chemical product contain bisphenol A? Yes No
- 13) Does the chemical product contain nanometals, nano-minerals, nanocarbon compounds and/or nanofluorine compounds? Yes No

Nanoparticles are defined as microscopic particles that are less than 100 nm in dimension. Nanometals, for example, include nanosilver, nanogold and nanocopper.

Signature of chemical manufacturer

Date	Company name
Handled by	Telephone

Appendix 6 – Translation key to Globally Harmonised System (GHS)

The classification requirements under R16 and R17 and the requirements on CMR under R18 apply 67/549/EEC with amendment for REACH following Council Directive 2006/121/EC on substances and Council Directive 1999/45/EEC on preparations (with amendments). During the transition to the Globally Harmonised System (GHS), the product and substance classifications can be translated using Table B6a, B6b and B6c.

Note that the producer of chemical products and constituent substances is responsible for classification.

Table B6a: Translation of R16 to GHS

Classification	Danger class and risk phrases as per Council Directive 1999/45/EC	GHS
Dangerous for the environment	N with R50, R50/53 or R51/53	Ecotoxicity Acute Category 1, H400 Ecotoxicity Chronic Category 1, H410 Ecotoxicity Chronic Category 2, H411
Carcinogenic	T with R45 and/or R49, or Xn with R40	Carcinogenicity Category 1A, H350 Carcinogenicity Category 1B, H350 Carcinogenicity Category 2, H351
Mutagenic	T with R46, or Xn with R68	Germ Cell Mutagenicity Category 1A, H340 Germ Cell Mutagenicity Category 1B, H340 Germ Cell Mutagenicity Category 2, H341
Toxic for reproduction	T with R60 or R61, or Xn with R62 or R63	Reproductive Toxicity Category 1A, H360 Reproductive Toxicity Category 1B, H360 Reproductive Toxicity Category 2, H361
Very toxic	T+ with R26, R27, R28 or R39	Acute Toxicity Category 1 H330 Acute Toxicity Category 2, H330 Acute Toxicity Category 1, H310 Acute Toxicity Category 2, H310 Acute Toxicity Category 1, H300 Acute Toxicity Category 2, H300 Specific Target Organ Toxicity after Single Exposure Category 1, H370
Toxic	T with R23, R24, R25, R39 or R48	Acute Toxicity Category 3, H331 Acute Toxicity Category 3, H311 Acute Toxicity Category 3, H301 Specific Target Organ Toxicity after Single Exposure Category 1, H371 Specific Target Organ Toxicity after Repeated Exposure Category 1, H372
Harmful	Xn with R22, R48, or R68	Acute Toxicity Category 4, H302 Specific Target Organ Toxicity after Repeated Exposure Category 2, H373 Specific Target Organ Toxicity after Single Exposure Category 3, H335

Table B6b: Translation of R17 to GHS

Classification	Danger class and risk phrases as per Council Directive 1999/45/EC	GHS
Dangerous for the environment	R52, R53 or R52/53 without N	Ecotoxicity Chronic Category 3, H412 Ecotoxicity Chronic Category 4, H413
Sensitising	Xn with R42 or Xi with R43	Respiratory Sensitisation Category 1, H334 Skin Sensitisation Category 1, H317
Corrosive	C with R34 and R35	Skin Corrosion/Irritant Category 1A, H314 Skin Corrosion/Irritant Category 1A, H314
Harmful	Xn with R20, R21, or R65	Acute Toxicity Category 4, H332 Acute Toxicity Category 4, H312 Aspiration Hazard Category 1, H304
Explosive	E with R2 or R3	Explosives – Unstable Explosive, H200 Explosives – Division 1.1, H201 Explosives – Division 1.2, H202 Explosives – Division 1.3, H203 Explosives – Division 1.4, H204 Organic Peroxides Type A, H240 Organic Peroxides Type B, H241 Self-reactive substances and Mixtures Type A, H240 Self-reactive substances and Mixtures Type B, H241
Extremely flammable	Fx (F+ in Norway) with R12	Flammable Gases Category 1, H220 Flammable Aerosols Category 1, H222 Flammable Liquids Category 1, H224
Highly flammable	F with R11, R15 or R17	Flammable Gases Category 2, H221 Flammable Aerosols Category 2, H223 Flammable Liquids Category 3, H225 Flammable Solids Category 1, H228 (Flammable Solids Category 2, H228)

Table B6c: Translation of R18 to GHS

Classification	Danger class and risk phrases as per Council Directive 67/548/EEC	GHS
Carcinogenic	T with R45 and/or R49, or Xn with R40	Carcinogenicity Category 1A, H350 Carcinogenicity Category 1B, H350 Carcinogenicity Category 2, H351
Mutagenic	T with R46, or Xn with R68	Germ Cell Mutagenicity Category 1A, H340 Germ Cell Mutagenicity Category 1B, H340 Germ Cell Mutagenicity Category 2, H341
Toxic for reproduction	T with R60 or R61, or Xn with R62 or R63	Reproductive Toxicity Category 1A, H360 Reproductive Toxicity Category 1B, H360 Reproductive Toxicity Category 2, H361

Appendix 7 Marketing of Nordic Ecolabelled windows and/or exterior doors

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

Further, we confirm that we are familiar with the criteria document regarding the Nordic Ecolabelling of the window or exterior door.

We undertake to advise those individuals within the company involved in marketing the Nordic Ecolabelled window or exterior door of the criteria for the Nordic Ecolabelling of windows and exterior doors and "Regulations for the Nordic Ecolabelling of products" of 22 June 2011 or later version.

Location and date	Company
Signature, contact person	
Clarification of signature	Phone
Signature, marketing manager	
Clarification of signature	Phone

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