Nordic Ecolabelling of

Stoves



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Consultation proposal

Nordic Ecolabelling

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

Addresses

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

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

What is a Nordic Ecolabelled stove?

A stove is fired on solid biofuel (wood, wood pellets, briquettes, etc.) and radiates heat in the room in which it is located. The stove may also distribute heat via a water or ventilation system. On a daily basis, the relevant heat sources are called wood-burning stoves, inset fireplaces, pellet stoves, heat-accumulating stoves such as tiled stoves and stove mass heaters, and sauna stoves, etc. The stoves are relatively simple combustion systems of approximately 3-15 kW. The primary function of the stoves is to function as a supplement to the building's primary heating system, but in certain cases may serve as the building's primary heating system in, for example, low-energy buildings (heat-accumulating stoves, pellet stoves or continuously burning stoves).

The biofuel may be added manually or automatically. As a rule, wood/firewood is placed in the stove manually, while wood pellets are fed automatically. In a closed stove the combustion air intake is via specific ducts that can usually be regulated. However, the stove must be designed in such a way that the customer is not able to shut off the combustion air completely. The manufacturer must also clearly inform the customer of how the stove is to be used and maintained in order to function optimally, and that the stove should be installed by competent installation technicians.

A Nordic Ecolabelled stove produces low emissions of particles, organic gaseous carbon/volatile hydrocarbons (OGC) and carbon monoxide (CO) and has high energy efficiency. Emissions have a negative effect on health and the emission volumes vary considerably between the various types of stoves. Pellet stoves must also comply with strict noise level requirements.

The Nordic Ecolabel requires the prohibition of the use of production chemicals with specific hazard classifications. The surface finishing of the stove must be completely hardened before it leaves the factory. The requirement ensures that the consumer is not exposed to volatile organic compounds as the surface finishing hardens. The requirement of pressure testing of all wood-burning stoves and inset fireplaces ensures the high quality of the Nordic-Ecolabelled stove.

Why choose the Nordic Ecolabel?

- The manufacturer may use the Nordic Ecolabel trademark for marketing. The Nordic Ecolabel 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 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 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 includes a number of different product types that all share in common that they are fired with solid biofuel (wood, pellets, briquettes, etc.) and radiate heat in the rooms in which they are located. The stove is a closed fireplace, which means that combustion takes place in a closed fire chamber. The criteria include both local heat sources and heat sources that can be used in a heating system. Local stoves are not usually dimensioned to be able heat the entire building. Stoves may be designed for intermittent combustion, or for continuous combustion. The following product types are subject to the criteria document:

- Heat-accumulating stoves in which the heat energy is stored in solid material (usually stone), but in certain cases can also be accumulated in water in a tank.
- Manually operated stoves for intermittent combustion. Stoves that are designed to complement another heat source. Any such stove must not burn 24 hours a day.
- Manually operated stoves for continuous combustion. A stove that can burn 24 hours a day and function as a dominant heat source in a low-energy building, for example.
- Automatically-operated stove designed for the combustion of wood pellets (pellet stoves).
- Inset fireplaces for intermittent combustion.
- Sauna stoves (Swedish = bastueldstäder).

Solar collectors may be included in the heating system. Open fireplaces (fires) and stoves designed for liquid fuel are not covered by the criteria document.

How to apply

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

Icons in the text

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

✉ Enclose

🔑 The requirement checked on site

Application

Applications are made to the national ecolabelling organisation and the application is valid for 12 months. Applications may be processed by another ecolabelling organisation according to agreement between the organisations. The applicant is notified of this. Companies located outside the Nordic countries make applications to the national ecolabelling organisation of the primary market.

The application must consist of a completed application form together with all of the documentation required to demonstrate compliance with the requirements specified in the criteria document (this is specified for each requirement). The application form must specify in which Nordic countries the products in question are to be sold and the estimated turnover from the products in each country.

Further information and assistance may be available. Visit the relevant national website for information.

Sales in the Nordic region

Once granted, a licence is valid throughout the Nordic region. The licence document specifies in which Nordic countries the products are sold according to the information provided on the application. The products are published on Nordic Ecolabelling's website(s). The licensee undertakes to inform Nordic Ecolabelling of any changes as to where the product is sold. If the product is to be sold in other Nordic countries than those initially specified in the application, the licensee must provide written notification of this and submit any extra documentation required to Nordic Ecolabelling in the country that issued the license.

On-site inspection

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

Costs

An application fee is charged to companies applying for a licence. There is an additional annual fee based on the turnover of the Nordic Ecolabelled stove.

Enquiries

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

What are the requirements of the Nordic Ecolabelling?

To be awarded a Nordic Ecolabel licence, all requirements must be fulfilled.

On-site inspection on the production site performed by Nordic Ecolabel.

In order to be granted a Nordic license, the following documentation must be attached to the application:

- Copy of the installation manual, as well as operating and maintenance instructions in all relevant languages.
- Documentation of compliance with the national regulations for packaging recycling systems.

1 Production

1.1 Production requirements

O1 Description of the production process

The production process for the Nordic Ecolabelled stove must be described.

The description must include the following:

- Name and contact details of:
  - production location(s) for final manufacture of stoves
  - subsuppliers of surface finishing and metal coating
  - subsuppliers of other components subject to the requirements
- A description of the production process for the stove stating the various process stages, including cleaning technique. The production technique and cleaning technique for surface finishing and metal coating must be stated.
- Copy of the environmental licence/permit or inspection report from the environmental authority concerning final production, with details of emissions subject to the licence during the past year.

Final production of the stove does not concern production of raw materials such as steel, glass or plastic elements. Production of cast iron is deemed to occur if the cast iron producer manufactures cast iron stoves. Cast iron parts for other stoves are not subject to the requirement.

✉ A description of the stove's production process according to the requirement. Copy of the environmental licence/permit or inspection report from the environmental inspection authority concerning final production, with details of emissions subject to the licence during the past year.

O2 Materials requirements

The manufacturer must draw up a list of all of the elements included in the stove, stating the type and material, as well as technical drawings with measurement dimensions.

Materials and construction must comply with relevant requirements in the current standard for the stove type in question, EN13240/prEN16510-1 (wood-burning stoves), EN13229/ prEN16510-1 (inset fireplaces), EN14785/ prEN16510-1 (pellet stoves), EN15250/ prEN16510-1 (heat-accumulating stoves) or EN15821(sauna stoves). The requirement includes, for example, quality, thickness of materials, durability and permitted surface temperatures (safety) of materials.

A guarantee for materials and construction faults of at least five years must be given for the bearing structure (excluding the interior of the combustion chamber) on normal use.

✉ A description of materials for all of the elements included in the stove, as well as technical drawings with measurement dimensions approved by the test laboratories in connection with testing of the stove.

✉ Declaration from the manufacturer that the requirements of the materials and construction have been fulfilled. Appendix 2 may be used.

O3 Chemical products, classification

The manufacturer must draw up a list of the chemicals used in the final production (painting, installation and final inspection) of the stove and for surface treatment. Chemical products such as glue, sealant, cleaning/degreasing products, paints and varnishes used in the final production of the stove and for surface finishing may not be classified according to the table below.

Final production of stoves does not concern the production of raw materials such as steel, cast iron, glass or plastic elements.

Table 1 List of non-permitted classification of the final chemical compound used in the product, in accordance with CLP regulation 1272/2008 or later.

Signal word	Hazard phrase	Hazard description	Risk phrase
		Environmentally hazardous	
Warning, Aquatic acute 1	H400	N	R50
Warning, Aquatic chronic 1	H410	N	R50/53
Warning, Aquatic chronic 2	H411	N	R51/53
-, Aquatic chronic 3	H412	-	R52/53
-, Aquatic chronic 4	H413	-	R53
-, Ozone	EUH059	N	R59
		Carcinogenic	
Hazardous, Carc. 1A or 1B	H350	T	R45 and/or
Hazardous, Carc. 1A or 1B	H350i	T	R49
Warning, Carc. 2	H351	Xn	R40
		Mutagenic,	
Hazardous, Muta. 1A or 1B	H340	T	R46
Warning, Muta. 2	H341	Xn	R68
		Reprotoxic	
Hazardous, Repr. 1A or 1B	H360	T	R60
Hazardous, Repr. 1A or 1B	H360	T	R61
Warning, Repr. 2	H361	Xn	R62 and/or
Warning, Repr. 2	H361	Xn	R63
-	H362	-	R33
-	H362	-	R64
		Very toxic	
Hazardous, Acute Tox. 1 or 2	H330	Tx (T+ in Norway)	R26
Hazardous, Acute Tox. 1	H310	Tx (T+ in Norway)	R27
Hazardous, Acute Tox. 2	H300	Tx (T+ in Norway)	R28 and/or
Hazardous, STOT SE 1	H370	Tx (T+ in Norway)	R39
		Toxic,	
Hazardous, Acute Tox. 2 or 3	H330 or H331	T	R23
Hazardous, Acute Tox. 3	H331	T	R24
Hazardous, Acute Tox. 3	H301	T	R25
Hazardous, STOT SE 1	H370	T	R39 and/or
Hazardous, STOT SE 1	H372	T	R48
		Sensitising	
Hazardous, Resp. Sens. 1	H334	Xn	R42
Warning, Skin sens. 1	H317	Xi	R43

The classification applies in accordance with the EU's dangerous substances directive 67/548/EC with subsequent amendments and adjustments, and/or CLP regulation 1272/2008 with subsequent amendments. During the transition period, i.e. up to 1 June 2015, classification in accordance with the EU's dangerous substances directive or the CLP regulation may be used. After the transition period, only classification in accordance with the CLP regulation will apply.

Metal coating of parts is exempt from the requirement. On metal coating of parts, requirement O5 must be fulfilled.

Paint/varnish for surface finishing of stoves classified with R52/53 or H412 is exempt from the requirement, subject to the condition that the product is applied in a closed system.

Hardeners for paint/varnish, where the hardener is classified with R43 or H317 are also exempt from the requirement. This exemption is, however, subject to the condition that adequate safety equipment is used when the hardener is mixed with the paint/varnish, and that the final two-component product (hardener+paint/varnish) is applied in a closed system.

✉ List of chemicals used in final production and for surface finishing.

✉ Safety datasheet issued within the last three years for the final chemical compound used in the Ecolabelled product, in accordance with Annex II of Reach (regulation 1907/2006/EC, with later amendments and additions).

✉ Routine for the use of safety equipment for use on mixing hardener with paint/varnish. Description of method to apply the final two-component product.

✉ Description of method to apply paint/varnish classified with R52/53 (H412).

O4 Component substances in chemical products

The following substances may not be included in the chemical products (e.g. glue, sealant, cleaning/degreasing products, paint and varnish) that are used in the final production of the stove, as well as for external coating:

- lead (Pb), mercury (Hg), chromium IV (CrIV), cadmium (Cd) and compounds thereof
- halogenated organic compounds
- alkylphenols, alkylphenol ethoxylates or other substances that can build alkylphenols or alkylphenol ethoxylates
- phthalates
- nanoparticles (from nanomaterials*)
- substances on the EU's candidate list in accordance with REACH, 1907/2006/EC, article 59, section 10 on the website of the European Chemicals Agency (ECHA). In the background document there is a link to the list.

There is exemption from the list for metal coating of parts. On metal coating of parts, requirement O5 must be fulfilled.

The following definition must be used concerning "included": Unless otherwise stated, included substances are all substances in the product, including additives (such as preserving agents or stabilisers) in the raw materials, but not contaminants from raw materials production. Contaminants are residual substances from raw materials production that are included in the finished product in concentrations below 100 ppm (0.0100% by weight, 100 mg/kg), but not substances added deliberately to a raw material or product for a purpose, irrespective of the quantity. Known degradation products from constituent substances are also considered to be included.

**The definition of nanomaterial follows the European Commission's definition of nanomaterial from 18 October 2011, with the exception of the threshold for the distribution of particle size, which is now reduced to 1%: Nanomaterial is a natural accidentally or deliberately produced material that contains particles in their free state, or in the form of aggregate or agglomerate, and where at least 1% of the particles in the distribution of number by size has one or more dimensions in the size range of 1 - 100 nm. This definition applies to all of the material, even particles outside the range of 1 - 100 nm, for as long as 1% of the material is particles in the size range of 1 - 100 nm. The definition concerns nanoparticles in both bound and unbound state.*

✉ Declaration or other equivalent documentation from the chemicals producer/supplier. Appendix 3 may be used.

O5 Metal coating of parts

Metal parts may not be coated with lead (Pb), mercury (Hg), cadmium (Cd), chromium VI (CrVI), nickel (Ni) or compounds thereof.

Exceptionally, parts may be coated with chromium III, nickel or compounds thereof in cases where this is necessary due to chemical or mechanical wear, or other documented special technical requirements.

Any chromium- and nickel-plating processes must take place using cleaning techniques, ion-exchange techniques, membrane techniques or similar techniques, in order to be able to recover the metals to the greatest possible extent. Residual products from coating must be used in recycling or waste handling schemes. The system must be without a drainage system.

✉ Report on any need for metal coating from the stove manufacturer. Declaration from the manufacturer that the requirement concerning metal coating is fulfilled, and a report on which cleaning technique may be used. Appendix 2 may be used.

O6 Surface treatment and hardening of surface finishing

Surface treatment and subsequent drying of stoves must take place in closed systems, or in closed, ventilated rooms.

The surface finishing at the completed stove must be completely hardened before the stove leaves the factory.

The requirement also includes subsuppliers.

✉ Description of surface treatment/drying and hardening process. Declaration from the manufacturer of the stove that the requirement is fulfilled. Appendix 2 may be used.

O7 Product and transport packaging

It must be possible to recycle or reuse materials in product and transport packaging. The manufacturer must submit a description of the packaging, as well as instructions for how the packaging is to be handled in the Nordic countries in which the Nordic Ecolabelled stove is sold.

Chlorine-based plastic and biocide-treated/impregnated wood may not be used in the product and transport packaging.

✉ A description of the product and transport packaging and instructions for handling in the individual Nordic countries can be found in the installation manual, see O19.

O8 Waste

The manufacturer must perform sorting at source of the various waste fractions occurring in the production of stoves, such as waste wood, waste glass, waste electronics, plastic and metal. A waste plan with a description of waste fractions and of how the waste is handled (such as reuse, depositing and incineration) must be submitted.

✉ A waste plan with a description of waste fractions and waste recipients for the company (who collects the individual waste fractions) from the manufacturer of the stove.

1.2 Use and quality requirements

O9 Pressure testing/leak measurement

As part of its quality management system, the manufacturer must pressure test/perform control measurement for leaks of finished manually operated stoves and inset fireplaces in which the combustion air intake is via an air duct directly from the outdoors. The measured leak m^3/h, measured by excess or under-pressure, may not exceed the leak measurement (leak before testing) performed by the test laboratory in accordance with the current standard.

The requirement does not concern heat-accumulating stoves, pellet stoves and sauna stoves.

The result of pressure measurements showing that the requirement is complied with must be archived by the licence holder during the licence term.

✉ Routine in the quality management system describing the method used for pressure testing/leak testing, and the measures to be performed if the requirement is not complied with.

✉ The result of pressure measurements showing that the requirement is complied with must be archived by the licence holder during the licence term.

O10 Design of the stove's air intake

The stove may not be designed in such a way that it is possible to completely close off the air intake to the combustion chamber.

✉ Declaration from the manufacturer that the requirement is fulfilled. Appendix 4 may be used.

1.3 Stone coating

O11 Extraction of natural stone, environmental requirements

The extraction of natural stone may not:

- disturb the deeper-lying, enclosed groundwater reservoirs;
- disturb the surface water with public water collection or sources, or water areas listed in the register created under Directive 2000/60/EC of the European Parliament and of the Council of conserved areas or of watercourses with an average flow rate of > 5 m^3 /s.
- There must be a closed system for the recovery of waste water in order to avoid the spreading of sawdust to the environment and to supply the recirculation cycle. The water is stored close to the place where it is used in the quarry and from where it is then led (via closed pipes) to a suitable treatment plant. After clarification the water must be recirculated.

Natural stone is defined in CEN/TC 246 as pieces of naturally occurring stone and includes marble, granite and other natural stone (such as sandstone and soapstone).

Wastewater solely includes water used in production, and not freshwater from rain and groundwater.

✉ Declaration from the manufacturer/supplier of natural stone that the requirement is fulfilled. Appendix 5 may be used.

O12 Extraction of natural stone, working conditions

The following UN and ILO Conventions must be complied with by the producer (quarry) of natural stone:

- The UN Convention on the Rights of the Child, article 32
- The UN Convention (61/295) on the Rights of Indigenous Peoples
- ILO Convention no. 29 on Forced Labour
- ILO Convention no. 87 on Freedom of Association and Protection of the Right to Organise
- ILO Convention no. 98 concerning the Application of the Principles of the Right to Organise and to Bargain Collectively
- ILO Convention no. 100 on Equal Remuneration
- ILO Convention no. 105 on Abolition of Forced Labour
- ILO Convention no. 111 concerning Discrimination in Respect of Employment and Occupation
- ILO Convention no. 138 concerning the Minimum Age for Admission to Employment
- ILO Convention no. 148 concerning the Working Environment (Air Pollution, Noise and Vibration)
- ILO Convention no. 155 concerning Occupational Safety and Health and the Working Environment
- ILO Convention no. 170 concerning Safety in the use of Chemicals at Work
- ILO Convention no. 182 on the Worst Forms of Child Labour

If the natural stone is quarried in a country in which these conventions are part of the requirements made by the authorities, no further documentation is required, as this is subject to O31.

✉ Declaration from the manufacturer/supplier of natural stone that the requirement is fulfilled. Appendix 5 may be used.

1.4 Supplementary heating system components

O13 Solar collector

If the heating system includes a solar collector, this must be type approved in accordance with EN 12975.

✉ Declaration from the manufacturer/supplier of solar collectors, see Appendix 6.

O14 Fuel pellet hopper

The manufacturer of the Nordic Ecolabelled pellet stove must inform the customer of how a hopper for the wood pellets should be designed:

- to ensure that the recommended fuel retains its quality when the fuel pellets are emptied into the customer's storage hopper;
- so that any carbon monoxide that may occur when wood pellets are stored does not entail a health risk or mortal danger.

✉ Information must be provided in the instruction manual.

2 Operation of the Nordic Ecolabelled stove

O15 Emissions to air

The stove may not exceed the threshold values for organic gaseous carbon (OGC), carbon monoxide (CO) and particles in the following table:

Table 2 Threshold values for emissions from Nordic Ecolabelled stoves tested with 13% O_2. The requirement applies to a normal load, if not otherwise stated.

	OGC	CO	Particles
	mg/m^3	mg/m^3	g/kg
Manually operated stove or inset fireplace for intermittent use	100	1250	2.0 ($\bar{x}$ for up to 4 loads) 5.0 (for each load)
Manually operated stove or inset fireplace for continuous use	60	800	2.0 ($\bar{x}$ for up to 4 loads) 5.0 (for each load)
	mg/m^3	mg/m^3	mg/m^3
Manually operated heat-accumulating stove	100	1100	50
Manually operated sauna stove	120	1700	100
Pellet stove with automatic pellet feed	10	200	15

Testing must be performed on the following terms. Test instructions are stated in Appendix 1:

Manually operated heat-accumulating stoves.
Tested at normal load according to:

- CEN/TS 15883:2009/prEN 16510-1 for OGC
- EN 15250/prEN 16510-1 for CO
- CEN/TS 15883:2009, Annex A.1 /prEN 16510-1 for particles

Manually operated sauna stoves.

Tested at nominal load for CO, OGC and particles according to:

- CEN/TS 15883:2009/prEN 16510-1 for OGC
- EN 15821/prEN 16510-1 for CO
- CEN/TS 15883:2009, Annex A.1/prEN 16510-1 for particles

Pellet stoves with automatic pellet feed.

Tested at nominal load for test of CO, OGC and particles according to:

- CEN/TS 15883:2009/prEN 16510-1 for OGC
- EN 14785 /prEN 16510-1 for CO
- CEN/TS 15883:2009/prEN 16510-1 for particles

Manually operated stoves (for intermittent or continuous use) or inset fireplaces.

Tested at nominal load for measurement of CO and OGC, as well as up to 4 loads within different load areas for particles, according to:

- CEN/TS 15883:2009/prEN 16510-1 for OGC
- EN 13240/prEN 16510-1 for CO concerning stoves, and EN 13229/prEN 16510-1 for CO concerning inset fireplaces

- NS 3058 and NS 3059, with loads defined in class 1 and class 2, for testing of particles

Requirements of laboratories, testing of stoves and measurement of emissions are stated in Appendix 1.

✉ Full test report.

O16 Efficiency

Efficiency, (nk), at nominal load tested according to the respective standard must be at least:

- 85% for manually operated heat-accumulating stoves according to EN 15250/prEN16510-1
- 60% for manually operated sauna stoves according to EN 15821
- 78% for manually operated stoves or inset fireplaces for intermittent use according to EN13240 /prEN16510-1
- 85% for manually operated stoves or inset fireplaces for continuous use according to EN13240 /prEN16510-1
- 87% for pellet stoves with automatic pellet feed according to EN 14785/prEN16510-1

Requirements of laboratories, testing of stoves and measurement of efficiency are stated in Appendix 1.

✉ Full test report.

O17 Noise

The noise level from automatic pellet feed pellet stoves may not exceed 50 d(B)A during normal use according to ISO 3743.

Laboratory requirements are stated in Appendix 1.

✉ Full test report.

O18 Declaration concerning test of emissions, efficiency and noise

A test laboratory must declare the stove to be tested in accordance with the standards stated in O15-O17.

The test laboratory must be accredited according to the current standards stated in Appendix 1.

✉ Declaration that the requirement is fulfilled.

3 Customer information

O19 Installation manual

There must be an installation manual for each stove delivered. The installation manual must be written clearly in the national language in the Nordic country in which the stove is sold and installed. The manual must also be available on the manufacturer and/or distributor's website(s). The manual must present recommendations and information concerning:

- the installation of the stove and any particle filter in the designated way, and a recommendation for the stove to be installed by an authorised/competent distributor/installation technician, as well as reference to the present;
- technical information/specifications concerning the stove;
- the required volume of air for combustion, air volume in m^3 per hour;

- distance to flammable material;
- position of the stove on refractory material (free-standing stoves);
- the space required for operation, maintenance and cleaning;
- instructions for the type of smoke flue/chimney to which the stove may be connected in terms of flue gas temperature, drawing, dimensions, height and position of the smoke flue/chimney;
- instructions for the design of the wood pellet hopper, if this fuel type is used how the wood pellet hopper must be designed for the fuel to retain its quality on emptying and storage, and so that any carbon monoxide arising as a consequence of the storage of wood pellets does not present a health risk or mortal danger;
- ventilation and installation of sauna stoves according to the dimensions of the sauna;
- how the packaging is to be handled in the Nordic countries in which the stove is sold.

✉ A copy of the installation manual must be included when the stove is delivered to the installation technician and customer.

O20 Operating and maintenance instructions

Operating and maintenance instructions must be included with each stove delivered. The instructions must be written clearly in the national language in the Nordic country in which the stove is sold and installed. The instructions must also be available on the manufacturer and/or distributor's website(s). The instructions must include details of:

- information on whether the stove is classified as a stove intended for intermittent or continuous operation;
- information on how various fuel types (types, materials, quality, moisture content) affect output and emissions;
- fuel types suitable for the stove, and that fossil fuels should not be used that Nordic Ecolabelled wood pellets should be used in pellet stoves;
- recommendations for the handling and storage of firewood, wood pellets and any other solid biofuels;
- how the stove is lit. For wood-burning stoves and inset fireplaces, a "Top down" lighting method is recommended;
- instructions for filling and the volume and size of firewood on lighting/filling
- adjustment of air intake how, by which measures, sufficient combustion air to the stove is ensured;
- that low air intake can lead to poor combustion, high emissions and poor efficiency;
- instructions for cleaning, inspection and maintenance of the stove and any particle filter;
- instructions describing the recommended maintenance;
- content of the guarantee and validity in number of years must be stated. The guarantee must fulfil the requirement in O2.

✉ A copy of the operating and maintenance instructions must be included when the stove is delivered to the installation technician and customer.

4 Information to distributors and installation technicians

O21 Competence requirements

In cases where the stove is equipped with a water tank (water bank) and/or solar collector, the manufacturer must inform the distributor/installation technician that:

- the stove equipped with water tank and/or solar collector must be installed by a certified installation technician.

✉ Information provided to the distributor or installation technician.

O22 Dimensioning and design of the heating system

In cases where the stove is equipped with a water tank and/or solar collector, the manufacturer of the stove must ensure that the installation technician has easy access to relevant information and technical data, so as to be able to undertake the dimensioning of the heating system.

✉ Declaration from the manufacturer of the stove that the requirement is fulfilled.

O23 Other information

The manufacturer must inform the distributor that:

- The stove must be installed by a competent installation technician.
- The customer/user must have access to the installation manual and the operating and maintenance instructions.

✉ Information provided to the distributor.

5 Quality and regulatory requirements

To ensure that Nordic Ecolabel 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.

O24 Nordic Ecolabel licence person

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

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

O25 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.

O26 Quality of the stoves

The licensee must guarantee that the quality of the production of the Nordic Ecolabelled stove 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 stoves.

O27 Planned changes

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

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

O28 Unplanned nonconformities

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

✉ Procedures detailing how unplanned nonconformities are handled.

O29 Traceability

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

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

O30 Take-back system

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

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

O31 Legislation and regulations

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

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

O32 Marketing

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

✉ Appendix 7 duly completed.

Marketing

The Nordic Ecolabel is a very well-known and well-reputed trademark in the Nordic region. Nordic Ecolabelled products and services may be marketed using the Nordic Ecolabel so long as the associated licence is valid.

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

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

Design of the Nordic Ecolabel

Design of the Nordic Ecolabel:



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

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

Follow-up inspections

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

The licence may be revoked if it is evident that the stove 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 XX on DAY MONTH YEAR. The criteria are valid until DAY MONTH YEAR.

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

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

New criteria

In any forthcoming new criteria it will be relevant to include the following items in the evaluation:

- Materials and chemicals requirements
- Surface finishing - requirement to use water-based surface finishing
- RPS concerning whether the stove is easy to dismantle for recycling
- Levels of emissions and efficiency required It must be investigated whether requirements are to be made of emissions of Black Carbon (BC)
- New technologies to improve combustion in the stove
- Relation to EU ecodesign and energy labelling
- Impact of particle size on health

Terms and definitions

Term	Explanation or definition
BC	Black Carbon
CO	Carbon monoxide
OGC	Organically bound carbon/volatile hydrocarbons
PAH	Polycyclic aromatic hydrocarbons
NOx	Nitrogen oxides
VOC	Volatile organic compounds
RPS	Relevance, Potential and Controllability: Tool to analyse whether environmental problems are relevant, whether there is potential for improvement, and whether a licence holder has the control measures in place to achieve these environmental improvements.
PVC	Poly vinyl chloride
CMR substances	CMR substances are carcinogenic , mutagenic and reprotoxic substances
PM2,5	Threshold value for fine particles (PM2.5)

Appendix 1 Test

Test:

The stove must be tested to determine the content of flue gas emissions in the form of carbon monoxide (CO), hydrocarbons expressed as organic gaseous carbon (OGC), particles and efficiency. Testing is based on European standards, while particle measurement (applying to manually operated stoves and inset fireplaces) is performed with loads defined in class 1 and class 2 of the Norwegian standard (NS).

Pellet stoves with automatic pellet feed must also be tested for noise.

The test laboratory must draw up a complete test report with details of:

1. choice of testing method
2. results from all measurements
3. clear definition of the stoves
4. performance of testing according to the stated method, with the exception of the stated exemptions
5. specification of test fuels
6. the laboratory's fulfilment of the requirements stated and proof that the test is performed on an impartial and competent basis

Products to be tested are selected randomly from the manufacturer's stock or from the open market.

Nordic Ecolabelling is entitled to require supplementary documentation of the fulfilment of requirements and test reports.

Test laboratory:

Test of emissions and efficiency must be performed by laboratories that are accredited to the current standard and which fulfil the general requirements in standard EN ISO/IEC 17025. A non-accredited laboratory may perform tests if the laboratory has applied for accreditation according to the current testing method, but has not yet been granted approval, or if accreditation is not available for the technical specification or proposed standard. In such case, the laboratory must prove that it is an independent, competent laboratory.

If there is no accredited test laboratory, another laboratory may be used, subject to approval by Nordic Ecolabelling.

Noise can be tested by the manufacturer of the stove if the manufacturer has been inspected by the notified authorising body in accordance with Directive 2002/14/EC relating to noise emission

Appendix 2 Declaration concerning materials requirements (O2), metal coating of parts (O5), surface treatment and hardening of surface finishing (O6)

Manufacture of the stove (to be completed by the manufacturer of the stove)

Name of stove:
Manufacturer:

Materials requirements (O2)

The following requirements are fulfilled: ☐Yes ☐No

- Materials and construction comply with relevant requirements in the current standard for the stove type in question, EN13240/prEN16510-1 (wood-burning stoves), EN13229/ prEN16510-1 (inset fireplaces), EN14785/ prEN16510-1 (pellet stoves, EN15250/ prEN16510-1 (heat-accumulating stoves) or EN15821(sauna stoves). The requirement includes, for example, quality, thickness of materials, durability and permitted surface temperatures (safety) of materials.

We hereby declare that

- A guarantee for materials and construction faults of at least five years is given for the bearing structure (excluding the interior of the combustion chamber) on normal use.

Metal coating of parts (O5)

The following requirements are fulfilled: ☐Yes ☐No

- Metal parts not coated with lead (Pb), mercury (Hg), cadmium (Cd), chromium VI (CrVI), nickel (Ni) or compounds thereof.
- Exceptionally, parts may be coated with chromium III, nickel or compounds thereof in cases where this is necessary due to chemical or mechanical wear, or other documented special technical requirements.

Any chromium- and nickel-plating processes must take place using cleaning techniques, ion-exchange techniques, membrane techniques or similar techniques, in order to be able to recover the metals to the greatest possible extent. Residual products from coating must be used in recycling or waste handling schemes. The system must be without a drainage system.

✉ Report on any need for metal coating from the stove's manufacturer. The declaration has been drawn up on the basis of adequate information from the subsupplier.

Surface treatment and hardening of surface finishing (O6)

The following requirements are fulfilled: ☐Yes ☐No

- Surface treatment and subsequent drying of stoves must take place in closed systems, or in closed, ventilated rooms.
- The surface finishing of the completed stove must be completely hardened before the stove leaves the factory.

✉ Description of surface treatment/drying and hardening process.

Manufacturer of the stove, signature:

Date	Name of company
Contact person	Telephone
Contact person (name in capitals)	E-mail

Appendix 3 Declaration concerning component substances in chemicals

Production of chemicals (to be completed by the chemicals producer/supplier)

Name of chemical product:

Component substances in chemical products (O4)

The following requirements are fulfilled: ☐Yes ☐No

The following substances may not be included in the chemical products (e.g. glue, sealant, cleaning/degreasing products, paint and varnish) that are used in the final production of the stove, as well as for external coating:

- lead (Pb), mercury (Hg), chromium IV (CrIV), cadmium (Cd) and compounds thereof
- halogenated organic compounds
- alkylphenols, alkylphenol ethoxylates or other substances that can build alkylphenols or alkylphenol ethoxylates
- phthalates
- nanoparticles (from nanomaterials*)
- substances on the EU's candidate list in accordance with REACH, 1907/2006/EC, article 59, section 10 on the website of the European Chemicals Agency (ECHA). In the background document there is a link to the list.

There is exemption from the list for metal coating of parts. On metal coating of parts, requirement O5 must be fulfilled.

The following definition must be used concerning "included": Unless otherwise stated, included substances are all substances in the product, including additives (such as preserving agents or stabilisers) in the raw materials, but not contaminants from raw materials production. Contaminants are residual substances from raw materials production that are included in the finished product in concentrations below 100 ppm (0.0100% by weight, 100 mg/kg), but not substances added deliberately to a raw material or product for a purpose, irrespective of the quantity. Known degradation products from constituent substances are also considered to be included.

**The definition of nanomaterial follows the European Commission's definition of nanomaterial from 18 October 2011, with the exception of the threshold for the distribution of particle size, which is now reduced to 1%: Nanomaterial is a natural accidentally or deliberately produced material that contains particles in their free state, or in the form of aggregate or agglomerate, and where at least 1% of the particles in the distribution of number by size has one or more dimensions in the size range of 1 - 100 nm. This definition applies to all of the material, even particles outside the range of 1 - 100 nm, for as long as 1% of the material is particles in the size range of 1 - 100 nm. The definition concerns nanoparticles in both bound and unbound state.*

Producer/supplier of the chemical:

Date	Name of company
Contact person	Telephone
Contact person (name in capitals)	E-mail

Appendix 4 Declaration concerning the air intake to the stove

Manufacture of the stove (to be completed by the manufacturer of the stove)

Name of stove:
Manufacturer:

Design of the stove's air intake (O10)

The following requirements are fulfilled: ☐Yes ☐No

- The stove is not designed in such a way that it is possible for the customer to completely close off the air intake to the combustion chamber.

Manufacturer of the stove, signature:

Date	Name of company
Contact person	Telephone
Contact person (name in capitals)	E-mail

Appendix 5 Declaration concerning extraction of natural stone

Stone covering (to be completed by the manufacturer (quarry)/supplier of natural stone)

Name of natural stone:
Producer (quarry)/supplier:

Extraction of natural stone, environmental requirements (O11)

The following requirements are fulfilled: ☐Yes ☐No

The extraction of natural stone did not:

- disturb the deeper-lying, enclosed groundwater reservoirs
- disturb the surface water with public water collection or sources, or water areas listed in the register created under Directive 2000/60/EC of the European Parliament and of the Council of conserved areas or of watercourses with an average flow rate of > 5 m^3 /s.
- There is a closed system for the recovery of wastewater to avoid the spreading of sawdust to the environment, and to supply the recirculation cycle. The water is stored close to the place where it is used in the quarry, and to which it is subsequently led (via closed pipes) to a suitable treatment plant. After clarification the water must recirculated.

Natural stone is defined in CEN/TC 246 as pieces of naturally occurring stone and includes marble, granite and other natural stone (such as sandstone and soapstone).

Wastewater solely includes water used in production, and not freshwater from rain and groundwater.

Extraction of natural stone, working conditions (O12)

The following requirements are fulfilled: ☐Yes ☐No

The following UN and IL Conventions are fulfilled by the producer (quarry) of natural stone:

- The UN Convention on the Rights of the Child, article 32
- The UN Convention (61/295) on the Rights of Indigenous Peoples
- ILO Convention no. 29 on Forced Labour
- ILO Convention no. 87 on Freedom of Association and Protection of the Right to Organise
- ILO Convention no. 98 concerning the Application of the Principles of the Right to Organise and to Bargain Collectively
- ILO Convention no. 100 on Equal Remuneration
- ILO Convention no. 105 on Abolition of Forced Labour

- ILO Convention no. 111 concerning Discrimination in Respect of Employment and Occupation
- ILO Convention no. 138 concerning the Minimum Age for Admission to Employment
- ILO Convention no. 148 concerning the Working Environment (Air Pollution, Noise and Vibration)
- ILO Convention no. 155 concerning Occupational Safety and Health and the Working Environment
- ILO Convention no. 170 concerning Safety in the use of Chemicals at Work
- ILO Convention no. 182 on the Worst Forms of Child Labour

If the natural stone is quarried in a country in which these conventions are part of the requirements made by the authorities, no further documentation is required, as this is subject to O31.

Producer (quarry)/supplier of natural stone, signature:

Date	Name of company
Contact person	Telephone
Contact person (name in capitals)	E-mail

Appendix 6 Declaration concerning supplementary solar collectors

Supplementary solar collectors (to be completed by the producer/supplier of the solar collector)

Name of solar collector:
Producer/supplier:

Solar collector (O13)

The following requirements are fulfilled: ☐Yes ☐No

- Supplementary solar collectors for the Nordic Ecolabelled stove are type-approved in accordance with EN 12975.

Producer/supplier of the solar collector, signature:

Date	Name of company
Contact person	Telephone
Contact person (name in capitals)	E-mail

Appendix 7 Marketing of Nordic Ecolabelled stoves

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

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

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

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

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