

About Nordic Swan Ecolabelled

Copy and Printing Paper – Supplementary Module



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Background document

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044 Copy and Printing Paper – Supplementary Module, version 5.0, 05 October 2020

Addresses

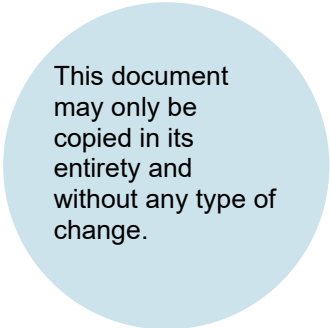
In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Nordic Swan Ecolabel. These organisations/companies operate the Nordic Ecolabelling system on behalf of their own country's government. For more information, see the websites:

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1 Environmental impact of the copy and printing paper

Nordic Ecolabelling assesses a product's environmental impact throughout its life cycle. In order to achieve environmental benefits, Nordic Ecolabelling must be able to set requirements that are relevant for the environment. For paper- / board-based products, primarily four areas are of greatest significance when assessing the product's environmental impact. The first is forestry, and the others are related to chemicals use, emissions to air and water, and energy consumption for production of pulp and paper. By setting requirements for sustainably sourced fibres and/or recycled fibre, production chemicals, energy consumption, emissions to air and water and waste, Nordic Ecolabelling is relevant in its tenacious work for the environment. These environmental impacts are described exhaustively in the background document for paper products – the Basic and Chemical Modules.

1.1 UN Sustainable Development Goals

The UN Sustainable Development Goals are a universal call to action to fight poverty and inequalities, protect the planet and tackle climate change by 2030. The Nordic Swan Ecolabel is a powerful tool for securing a sustainable future. The Nordic Swan Ecolabel actively contributes to reach goal 12: responsible consumption and production. Nordic Swan Ecolabelled paper products have less impact on the environment, and the requirements ensure control of the value chain.

How Nordic Swan Ecolabelled paper products contribute to Goal 12



- Fibre raw materials must be sustainably sourced and energy use in production is limited. This contributes to **sustainable management and efficient use of natural resources**.
- Strict requirements for chemicals and emissions limit the release of harmful substances to air and water. Thus, the Nordic Swan Ecolabel contributes to phasing out substances that are hazardous to health and the environment.
- To reduce the amount of waste, all waste from the production of pulp and paper must be recycled or reused when possible.

Nordic Swan Ecolabelled paper products also contribute to other UN Sustainable Development Goals, and this is how:



Reduces the use of chemicals harmful to health and the environment

Strict requirements on chemicals

Limits on emissions to water



Contributes to cleaner water

Strict requirements on chemicals

Limits on emissions to water



Improves energy efficiency

Limits on energy consumption

Limits on the emission of greenhouse gases



Requires efficient use of resources

Limits on energy consumption

Limits on the emission of greenhouse gases



Prevents water pollution

Strict requirements on chemicals

Limits on emissions to air and water



Promotes biodiversity and sustainable use of terrestrial ecosystems

Fibre raw materials must be sustainably sourced

Strict requirements on chemicals

2 Justification of the requirements

This chapter presents proposals for new and revised requirements, and explains the background to the requirements, the chosen requirement levels and any changes compared with previous versions 4 of Supplementary Module of Copy and Printing Paper. Many of the arguments for the proposed changes are also explained in more detail in the background document for Paper Products – Basic and Chemical Modules.

2.1 Definition of the product group

The product group of copy and printing paper includes the following types of paper:

Wood-containing and wood-free unconverted and unprinted copying and printing paper that is made from chemical and/or mechanical pulp and/or recycled fibre for writing, printing and copying.

The following boards made from chemical and/or mechanical pulp and/or recycled fibre can also be Nordic Swan Ecolabelled: Solid bleach board (SBB), solid bleached sulphate (SBS) and solid unbleached board (SUB), Folding boxboard (FBB), White lined chipboard (WLC).

Only paper with a distinct trade name can be ecolabelled. Paper with a trade name that may appear on both ecolabelled and non-ecolabelled paper is not eligible for Nordic Swan Ecolabelling. These criteria do not apply to tissue paper, greaseproof paper, coffee filters, cardboard (other than the aforementioned), kraft paper or sack paper.

“Wood-free paper and board refers to paper having, in principle, only chemical pulp in its fibre composition. In practice, however, it may contain a small amount of other fibres or pulps. Wood-containing paper and board comprise of a considerable amount of non-cellulosic compounds (more than 5 %) as an essential constituent of its fibre composition¹. Paper also contains various quantities of filler. Examples are coated and uncoated copy and printed paper on rolls or in sheets, newsprint, magazine paper, lightweight coated (LWC) and super calendar (SC) paper.

Paperboard is a broad term. Common trade terms of board are also included in the product group. These types included have been selected since the criteria are well-suited and due to demand from printing companies wishing to print ecolabelled postcards and similar.

2.2 Definitions

Term	Definition
BAT-AELs	The range of emission levels obtained under normal operating conditions using a best available technique or a combination of best available techniques, as described in BAT conclusions, expressed as an average over a given period of time, under specified reference conditions (Art 3.12. of Directive 2010/75/EU).
FBB	Folding boxboard (FBB) is a multi-layer board comprising a surface layer of bleached cellulose pulp, a mid-layer of mechanical pulp (groundwood or thermomechanical pulp) and a backing of bleached or unbleached cellulose pulp.
Inspected paper	Inspected paper is assessed by Nordic Ecolabelling and meet the requirements for paper that can be used by Nordic Swan Ecolabelled printing companies. Requirements are set in the Basic Module, Appendix 1.
LWC	Lightweight coated

¹ https://eippcb.jrc.ec.europa.eu/reference/BREF/PP_revised_BREF_2015.pdf

My Swan Account	My Swan Account. Nordic Ecolabelling's web-based application tool for paper and paperboard manufacturers. The tool also applies to pulp and chemical producers wishing to have their products assessed by Nordic Ecolabelling.
Recycled fibre	Recycled material is defined in accordance with ISO 14021 in the following two categories. Material in the pre-consumer phase. Material that has been taken from the waste flow during the manufacturing process. The exception is the re-use of material that is generated in a process, e.g. waste that can be recycled within the same process that generated it. Material in the post-consumer phase. Material generated by households or by trade, industry or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose. This includes the return of materials from the distribution chain.
SBB	Solid bleached board (SBB) and solid unbleached board (SBB) and solid bleached sulphate (SBS). Solid board comprises several layers of a single material such as cellulose pulp or mixed pulp.
SC	Super calandered paper
SBS	See SBB above.
SUB	See SBB above.
TMP/GW	Thermomechanical pulp/groundwood
WLC	White lined chipboard (WLC) is a multi-layer board with a surface layer of bleached cellulose pulp and a core and backing made of recycled fibre. Bleached and unbleached cellulose backings are also available.
Wood-containing paper and board	Paper and board containing a considerable amount of non-cellulosic compounds (more than 5 %) as an essential constituent of its fibre composition.
Wood-free paper and board	Paper having, in principle, only chemical pulp in its fibre composition. In practice, however, it may contain a small amount of other fibres or pulps.

2.3 Information about the production

O1 Information about the paper

Applicant shall provide the following information about the paper product(s):

- Name of the paper manufacturer.
- Trademark/trade name of the paper product, paper grade and type (as book, cover, magazine, newspaper) and grammage (g/m²) for which paper(s) is/are available.

The documentation required is to be submitted with the aid of the web-based application tool.



Overview of the above points in the web-based application tool. Representative product samples are to be supplied upon request from Nordic Ecolabelling.

Background to requirement

This requirement is unchanged. However, it is amended slightly in order to clarify which basic information is required regarding the paper.

O2 Basic and Chemical Modules (ver. 3)

Paper must meet all the requirements in the Basic Module and the Chemical Module, version 3 or later.

If the paper already carries the Nordic Swan Ecolabel, or has been assessed by Nordic Ecolabelling, the requirement is fulfilled. State the licence number or information on the trading name and the manufacturer of the assessed material.



The documentation required from the pulp and paper mill are to be submitted with the aid of the web-based application tool.

Background to requirement

This requirement is unchanged. However, it is amended slightly. For a product to be granted a licence to carry the Nordic Swan Ecolabel, the relevant requirements in the Basic Module and Chemical Module, version 3 or later, in addition to the requirements in this Supplementary Module, must be fulfilled.

Nordic Ecolabelling has longstanding experience with requirements of pulp and paper products. Since the raw materials, chemicals and manufacturing processes in pulp and paper production are similar, Nordic Ecolabelling has introduced a so-called modular system for paper products.

The Basic Module contains general requirements concerning forestry management, emissions, energy use and waste disposal with regard to pulp and paper production.

The Chemical Module contains general requirements with regard to the use of chemicals in the manufacture of pulp and paper.

Supplementary Modules, e.g. this document, contain those requirements regarding specific paper products, which must be fulfilled in order to grant a licence for the products to carry the Nordic Swan Ecolabel. The requirements' levels in a supplementary module may be more stringent or more lenient than those of the Basic or Chemical Module. If the levels in the modules differ, the requirement levels specified in the applicable Supplementary Module are to be applied.

2.4 Energy and greenhouse gases

O3 Energy

The following requirement must be fulfilled for Nordic Swan Ecolabelled copy and printing paper

$$P_{\text{electricity_total}} < 2.3$$

$$P_{\text{fuel_total}} < 2.3$$

For paper comprising solely of TMP/GW* produced on-site, the limit value for $P_{\text{fuel_total}}$ is 1.15.

$P_{\text{electricity_total}}$ and $P_{\text{fuel_total}}$ include the energy scores from paper production and the pulps that are used.

A more detailed description of documentation requirements and calculation methods is provided in Appendix 4 of the Basic Module, version 3 or later in which $P_{\text{electricity}}$ and P_{fuel} are also defined. $P_{\text{electricity_total}}$ and $P_{\text{fuel_total}}$ include the energy scores from production of both paper and the constituent pulps.

* *Thermomechanical pulp/groundwood*

- ☞ The pulp/paper manufacturer shall submit calculations in accordance with Appendix 4 of the Basic Module (version 3) showing compliance with the limit values. Worst case calculations shall be enclosed to demonstrate that each pulp recipe meets the requirements in case pulp mixture specific calculations are not documented for each pulp mix. Nordic Ecolabelling also provides a spreadsheet that is to be used for these calculations.

Background to requirement

Requirement is tightened since reference values in the Basic Module have been updated. Total point score calculation has been adjusted in order to balance the calculation between pulp mill and paper mill. In the previous requirements, point scores of pulp mill dominated the calculation of the final point scores and in order to make comparison equal, the equation have been changed, see also closely 4.2.3. in Appendix 4 in the Basic Module. Consequently, the P_{total} score limit values have been adjusted from 1.15 to 2.3. For paper comprising solely of TMP/GW produced on-site, the limit value for $P_{\text{fuel_total}}$ 1.15 remains.

The requirement stipulates the declaration of the total energy consumption in pulp and paper production processes per tonne of product, specified for fuel and electricity. This is calculated using actual values from the producer and reference values provided by Nordic Ecolabelling. These reference values have been tightened in this revision. The new ambition levels are based, first and foremost, on data provided by licence holders. A new point limit of 2.3 indicates that the average value of the paper product's total energy consumption may not exceed 15 % of the level under optimal conditions. The points model permits a higher level of energy consumption in order to allow the paper manufacturer an increased degree of flexibility.

The background document to the Basic Module provides comprehensive information on the energy requirement and Appendix 4 in the Basic Module describes the calculations in detail. Nordic Ecolabelling also provides a spreadsheet that is to be used for these calculations.

O4 Energy requirements for special paper and niche products

Maximum total energy score for the production of special paper and niche products:

$$P_{\text{electricity_total}} < 2.5$$

$$P_{\text{fuel_total}} < 2.5$$

Definition of special paper and niche products:

The production of special paper/niche products must fulfil the following conditions:

1. Production capacity must not exceed 10 tonnes/day, based on annual figures.
2. Production quantities must not exceed 10 tonnes/day, based on annual figures.
3. Production requires the paper machine's pump system to be emptied so often that the resetting time (time required to change paper quality) is at least 7% of the net production time.

If this exemption rule is used for a paper mill or integrated mill, the emission figures for other paper or pulp production must not include emissions that stem from one or more paper making lines included in this special paper production.

This exemption shall only be used for paper making lines that fulfil items 1, 2 or 3. This exemption rule shall not be used as part of the calculation of the mean value for various paper making lines.

$P_{\text{electricity_total}}$ and $P_{\text{fuel_total}}$ include the energy scores from paper production and the pulps that are used. A more detailed description of how the energy scores are calculated is provided in the Basic Module (version 3).

- ☞ Calculations, performed according to Appendix 4 of the Basic Module (version 3), demonstrating compliance with points score limits. Nordic Ecolabelling also provides a spreadsheet that is to be used for these calculations.

Background to requirement

This requirement is unchanged apart from change of total score calculation that has been adjusted in order to balance the calculation between pulp mill and paper mill. In the previous requirements, point scores of pulp mill dominated the calculation of the final point scores and in order to make comparison equal, the equation have been changed, see also closely 4.2.3. in Appendix 4 in the Basic Module.

For special paper and niche products, there is a requirement limit regarding fuel and electricity consumption of 2.5. This is the same level as in the Basic Module. A point limit of 2.5 indicates that the average value of the total energy consumption may not exceed 25% of the level under optimal conditions.

The criteria document clarifies which products that can be ecolabelled as special paper or niche products. The definition is unchanged from the previous version. Special paper and niche products are permitted a higher point limit since these are often produced using special techniques and in small volumes. It is more difficult to control these processes and they are less efficient than the equivalent large-scale production.

Because special papers are often marketed and sold on the consumer market, Nordic Ecolabelling wishes to enable consumers to choose Nordic Swan Ecolabelled special paper (e.g. letter paper).

O5 Emissions of greenhouse gases

a) The emission of greenhouse gases from fuels used for production of process heat must not exceed the following limit values:

- 525 kg CO₂ /tonne paper for paper made from 100 % deinked/recycled pulp
- 450 kg CO₂ /tonne paper for paper made from 100 % chemical pulp
- 500 kg CO₂ /tonne paper for paper made from 100 % mechanical pulp

For paper comprising a mixture of chemical pulp, recycled pulp and mechanical pulp, a weighted limit value is calculated based on the proportion of each pulp type.

b) The paper manufacturer shall supply calculations of the total emissions of CO₂ kg per tonne paper.

- ☞ **The pulp/paper manufacturer** shall submit calculations in accordance with Appendix 4 to demonstrate fulfilment of the requirement. Nordic Ecolabelling also provides a spreadsheet that is to be used for these calculations.

- ☞ **Paper manufacturer** shall submit a calculation of emissions of greenhouse gases given in kg CO₂ per tonne paper. Details of how the CO₂ values are

calculated with reference to e.g. system boundaries, assumptions and factors used must be included.

Background to requirement

The requirement for emissions of greenhouse gases is new in the Supplementary Module of Copy and Printing Paper. As the limit values for energy consumption are stricter in the Supplementary Module, it is highly justified that also limit values for greenhouse gases are stricter than those set in the Basic Module.

The Nordic Ecolabelling wishes a transition towards 100 % renewable energy. General principles for setting requirements for energy use and greenhouse gas emissions from energy are:

- Limiting the energy consumption
- Promoting energy sources with low environmental and climate impact.

Since the production of paper consumes large amounts of energy, strict requirements on energy consumption of electricity and fuels are set. The purpose of the requirement on greenhouse gas emissions is to further limit the use of fossil fuels and restrict the use of fuels with the highest greenhouse gas emissions.

In part a) of the requirement, the greenhouse gas emissions of fuels used for production of process heat are limited. The structure of the requirement is the same as in the Basic Module, but the limit values are stricter. The background of the Basic Module provides comprehensive information on the requirement and Appendix 4 in the Basic Module describes the calculations in detail. Nordic Ecolabelling also provides a spreadsheet that is to be used for these calculations.

In part b) of the requirement, paper manufacturer shall calculate the greenhouse gas emissions in kg CO₂ per tonne paper. The Nordic Swan Ecolabel wishes to set requirements that reduce the greenhouse gas emissions and that lead to a direct environmental benefit. Calculations of carbon footprint helps to identify the hotspots and are a step towards acting, but do not in themselves provide any environmental benefit. Many companies calculate the greenhouse gas emissions of their products and services but there is not yet a harmonised, mandatory calculation method. Therefore, the manufacturer may choose which calculation method to use, however, details of how the CO₂ values are calculated with reference to any system boundaries, assumptions, factors and such shall be given. The EU Commission has initiated an extensive work to develop Product Environmental Footprint (PEF) which will hopefully result in more harmonised documentation of a product's carbon footprint. Nordic Ecolabelling follows the development of the European Commission's work on PEF.

2.5 Packaging

O6 Information to consumers

Product packaging must be clearly marked with indicative information on how packaging is to be sorted. The information must be clearly visible to the end-consumer and be of such a nature that the consumer understands what is meant. Labelling can be in the form of symbols/pictograms* or text, e.g. "paper packaging". Labelling can be embossed, stamped or printed.

** Symbols are e.g. labels advocated by the Green Dot, FTI or Rinki. General symbols such as recycling symbols or general text can also be used but must first be approved by Nordic Ecolabelling. Note, however that, the Green Dot label will not be approved as a general symbol.*

- 📎 Enclose documentation such as a picture of the label, artwork or equivalent, to document fulfillment of the requirement.

Background to requirement

This requirement is new. Information how the packaging of Nordic Swan Ecolabelled paper is to be recycled should be clearly displayed on the ream of paper. The requirement is only applied to paper sold on consumer markets, such as copy paper.

The waste phase of packaging's life cycle is affected by many factors such as the how consumers sort the paper in the final phase. Studies show that households do not generally have any objections to sorting their waste, but households do often lack clearer information on how to sort packaging at source.² This information breach can be decisive for the motivation to sort waste. A requirement is therefore set in the criteria for how paper for consumers should display the information that the packaging is to be recycled. The requirement is also in line with Article 4 of the European Waste Directive 2008/98/EC concerning the waste hierarchy, of which the first section considers a prioritisation scheme for preventive measures, preparation for reuse and recycling of materials.

It is important that the labelling is clearly visible and of such a nature that it can be understood by the consumer. It is stated that this is possible using symbols/pictograms such as those recommended by the Green Dot, FTI or Rinki. If the same product is sold in several Nordic countries, the labelling may be identical, even if the recommended symbols can vary across national borders. It is also possible to use text labels. General recirculation symbols can also be used, such as three arrows in a circle, or general text such as "recirculate me". In such case this must be specifically approved by Nordic Ecolabelling. It must be emphasised that the label or text used is of such a nature that it is easy for an ordinary consumer to understand what it means, as the intention of the requirement is to increase the sorting of packaging. The Green Dot label will not be approved as a sorting symbol since this is only a receipt label showing that remuneration has been paid for the packaging.

² <http://norden.diva-portal.org/smash/get/diva2:788195/FULLTEXT03.pdf>

2.6 Quality and regulatory requirements

Quality and regulatory requirements are general requirements that are always included in Nordic Ecolabelling's product criteria. The purpose of these is to ensure that fundamental quality assurance and applicable environmental requirements are dealt with appropriately. They also ensure compliance with Nordic Ecolabelling's requirements for the product throughout the period of validity of the licence.

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


O7 A primary licence contact

The company shall appoint a primary licence contact.

The primary licence contact must:

- Maintain the company information and the names of the designated persons in the customer portal.
- Ensure that the company meets Nordic Ecolabelling requirements during the validity of the licence.
- Report planned changes within the business which affect the Nordic Ecolabelling requirements to Nordic Ecolabelling (please see Planned changes).
- Report unexpected incidents which affect the Nordic Ecolabelling requirements to Nordic Ecolabelling (please see Unexpected incidents).
- Train and inform relevant persons among the licensee's personnel in the requirements of Nordic Ecolabelling.
- Report changes in the company structure to Nordic Ecolabelling, e.g. new ownership or mergers.
- Ensure that "Regulations and Guidelines for using the Nordic Swan Ecolabel" are followed.


Primary licence contacts' responsibility may be delegated to other designated persons, who have to report to the primary licence contact on their responsibilities.

 Declaration that requirement is met.

O8 Customer complaints

The licensee must guarantee that the quality of the Nordic Swan Ecolabelled product or service does not deteriorate during the validity period of the licence. Therefore, the licensee must keep an archive over customer complaints.

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

 Routines for handling and archiving customer complaints.

O9 Planned changes

Planned changes affecting the Nordic Ecolabelling requirements must be reported to Nordic Ecolabelling.

These changes must be approved by Nordic Ecolabelling before being implemented in the production. Typical business changes which always should be reported are:

- The product composition is planned to be altered.
- Production sites, materials, chemicals, suppliers, or similar are planned to be altered.

- Trade names are planned to be altered.
- Longer shutdowns that may affect the Nordic Ecolabelling requirements are planned to be carried out.
- The product will be launched on the market in other Nordic countries than those specified at the time of application.

Please keep in mind that most changes are so significant that the primary licence contact may need to start an application to update the licence.



Declaration that requirement is met.

O10 Unexpected incidents

An unexpected incident occurs when one or several of Nordic Ecolabelling requirements cease to be met.

In the event of such an incident, the primary licence contact must inform Nordic Ecolabelling immediately after the incident is discovered and submit a report which contains:

- Description of how the incident occurred.
- Account of the scope of the incident.
- Description of how the incident affects the fulfilment of the Nordic Ecolabelling requirements.
- Description of corrective actions taken after the incident and a plan for avoiding similar incidents in the future.

If the plan encompasses changes in relation to the licence documentation, the primary licence contact may need to start an application to update the licence.



Declaration that requirement is met.

O11 Traceability

The licensee must be able to trace the Nordic Swan Ecolabelled products in the production. A manufactured / sold product should be able to trace back to the occasion (time and date) and the location (specific factory) and, in relevant cases, also which machine / production line where it was produced. In addition, it should be possible to connect the product with the actual raw material used.



Description of/routines for the fulfilment of the requirement.

O12 Annual follow-up

Every year a follow-up of the environmental requirements must be made in line with instructions from Nordic Ecolabelling, see also requirement O16 in the Basic Module, version 3 or later.

Nordic Ecolabelling may examine a selection, or all, of the requirements.

3 Areas that are not subject to requirements

This section presents requirements that are not included in the criteria, but which were discussed during the development of the criteria.

Transport and distribution

Requirement for transport has been removed due to low potential and steerability. The requirement for transport was introduced in the previous revision of the criteria. The requirement was only applied to Nordic Swan Ecolabelled paper. The paper manufacturer must supply calculations of the total CO₂ impact of all forms of transport from the forest to the paper mill (requirement R11 in the Basic Module, version 2). However, calculations were mainly done by the pulp manufacturer.

Experience with the requirement showed that paper manufacturer is seldom able to control transport to the mill. Location of the paper mill is also crucial for what transports are needed. Thus, requirement for transport has been removed due to low potential to gain environmental benefits. In addition, transport is currently optimized efficiently by the industry. FSC's new traceability standard from 2017 also makes it possible for groups with several production sites within the Eurozone to book certified credits / volumes jointly. This means that wood does not have to be transported long distances and thus, CO₂ emissions from transport are reduced.

4 Changes compared to previous generation

Overview of changes to criteria for Copy and Printing Paper generation 5 compared with previous generations 3 and 4 is presented in Table 1 below. Comparison of Nordic Swan Ecolabel and EU Ecolabel requirement levels for graphic paper is also included in the table.

Table 1 Overview of changes to Nordic Ecolabelling (NE) criteria for copy and printing generation 5 compared with previous generations 3 and 4. Comparison of Nordic Swan Ecolabel and EU Ecolabel requirement levels is also presented.

Requirement	Nordic Ecolabelling – Copy and Printing Paper, version 3, 2005	Nordic Ecolabelling – Copy and Printing Paper, version 4, 2011	Nordic Ecolabelling – Copy and Printing Paper, version 5, 2020	EU Ecolabel, new criteria adopted 11 January 2019
Product definition		Copy and printing paper and cardboard	Liner and fluting included in the scope of the Basic Module	Graphic paper copy and printing paper, newsprint is included within the scope of the criteria.
Fibre raw material				
Certification	20% certified fibre raw material or 75% recovered fibre	30% certified ¹ fibre raw material or 75% recycled fibre Assessment of forestry standards ²	70% certified ³ or recycled fibre in the paper, the remaining proportion of fibre must be covered by the FSC/PEFC control schemes - certified wood raw material must be accounted/recorded to paper/production line. Regarding pulps, fibres from eucalyptus and acacia must be at least 70% certified, see also traceability.	70% certified fibre raw material or recycled fibre
Traceability	Traceability requirements for all wood and fibre raw materials	Pulp and paper mills must be COC certified. Traceability requirements for all wood and fibre raw materials	Pulp and paper mills must be COC certified. Updated prohibition list for tree species not allowed to be used in NE paper. Even if eucalyptus and acacia are prohibited in the list, they are allowed to be used in pulp if degree of certification is at least 70%	CoC certificate, balance sheet for calculation of the 70% cert. fibre in the EU Ecolabelled paper.

¹ In addition to wood fibres, Nordic Ecolabelling permits the use of bamboo, cotton linters, linen and flax.

² Nordic Ecolabelling stipulates strict requirements in respect of standards according to which forestry must be certified.

³ FSC or PEFC

Chemicals ⁴				
Exclusion list, Restrictions on substances of very high concern (SVHC)	No	No	Ban on substances in the Candidate List. Ban on certain substances such as CMR classified substances, PBT and vPvB substances, endocrine disruptors, nanomaterials/-particles and microplastics. Impurities allowed in concentrations lower than 0,1% (w/w), applied to production chemicals used.	Ban on substances in the Candidate List in concentrations greater than 0,10 % (w/w), applied to the paper product.
General prohibition of classified chemicals	No	Yes, applied to production chemicals used.	Yes, applied to production chemicals used. A new classification category Aquatic chronic 3: H412 has been introduced.	Yes, applied to chemicals that remain in the paper product (0,10 % w/w).
Alkylphenol ethoxylates (APEOs)	Prohibited in specific chemical groups	Prohibited in specific chemical groups	Prohibited in specific chemical groups.	Prohibited in specific chemical groups
De-inking chemicals	Yes	As previous	Yes, slightly amended. All surfactants used must be readily or inherently biodegradable.	Yes
Biocides	Yes	As previous	Yes, slightly amended. Now includes reference to regulation (EC) No 528/2012.	Yes, includes reference to regulation (EC) No 528/2012.
Residual monomers	Yes Acrylamide limit 700 ppm	New requirement on classified residual monomers. Ban on bisphenol A.	Acrylamide limit 1000 ppm, see the Exclusion list above. Ban on bisphenol A, F and S in paper	No (removed)
Foam inhibitors	Yes	As previous	Yes, slightly amended.	No
Wet strength agents	Yes	As previous	As previous	No
Bleaching agents	Chlorine gas prohibited	As previous	As previous	Chlorine gas prohibited
Dyes for printing and colouring	Yes	New requirement on classified constituent substances	Removed, included in req. for classified chemicals.	Included in req. on classified substances

⁴ In EU Ecolabel criteria wastewater treatment chemicals excluded unless the treated wastewater is recirculated back into the process. Pulp chemicals not included in the EU Ecolabel Criteria.

Heavy metals in pigments and dyes	Yes	Clarification of requirement on heavy metals	Metals included, harmonised partly with EU Ecolabel	Yes
Impurities in dyes	Pb, Hg, Cr and Cd under 100 ppm	As previous	Harmonised with EU Ecolabel	Yes, metals and ionic impurities in dyes
Phthalates	Prohibited	As previous	As previous	No
Amines/Azo dyes	Yes	As previous	Yes, clarified that the requirement regards azo dyes, link to Regulation (EC) No 1907/2006 Annex XVII, Appendix 8	Yes
Adhesives	Yes	As previous	Yes, slightly amended. Now regards only those ethylene glycol ethers that are classified.	No
GMO starch	No	Yes, prohibited	As previous	No
Emissions to air / water				
Emissions: COD, P, S and NOx	Yes, individual emissions <1.5 Total <4	As previous – New reference value for NOx	Individual emissions points <1.3, Total <4, tightened reference values	Individual emissions points <1.3 Total <4
AOX	Weighted average from used pulps <0.25 kg/t Each individual pulp <0.4 kg/t	Weighted average from used pulps <0.17 kg/t Each individual pulp <0.25 kg/t	Weighted average from used pulps <0.14 kg/tonne in paper, each individual pulp <0.16 kg/ADt	<0.17 kg/ADt for each individual pulp
Chelating agents	Yes	Yes	Removed	No
CO ₂	1300 kg/t paper (excl. drying of pulp) 1800 kg/t paper (incl. drying of pulp) Applied to fossil fuels	1000 kg/tonne paper (100% recycled fibre pulp) 900 kg/tonne paper (100% chemical pulp) 1600 kg/tonne paper (100% mechanical pulp) ⁵ Applied to fuels and purchased electricity	525 kg/tonne paper (100% recycled fibre pulp) 450 kg/tonne paper (100% chemical pulp) 500 kg/tonne paper (100% mechanical pulp) Applied to fuels used for production of process heat, higher limit values set in the Basic Module For NE paper, calculation of emissions of greenhouse gases	1 100 kg/tonne paper (100% deinked/recycled pulp) 1 000 kg/tonne paper (100% chemical pulp) 1 600 kg/tonne paper (100% mechanical pulp) ⁶

⁵ The emission of CO₂ from purchased electricity and fossil fuels used for producing process heat and electricity on-site must not exceed the following limit values. CO₂ emissions from purchased electricity shall be calculated on a basis of 385 g CO₂/kWh. This means that no deductions may be made for green electricity.

⁶ For grid electricity, factor of 384 kg CO₂ /MWh (European average) shall be used unless the applicant can present documentation from contracting suppliers.

CO ₂ , transport	No	CO ₂ from transport (from forest to mill)	Removed	No
Energy				
Electricity	Score $P_{\text{electricity}} < 1.75$ and $P_{\text{energytotal}}: (P_{\text{electricity}} + P_{\text{fuel}})/2 < 1.25$	Score $P_{\text{electricity}} \leq 1.15$	Score $P_{\text{electricity}} \leq 2.3$, ≤ 2.5 in the Basic Module	$P_{\text{total}} = P_E + P_F$ shall not exceed 2,5
Fuel (heat)		Score $P_{\text{fuel}} \leq 1.15$	Score $P_{\text{fuel}} \leq 2.3$, ≤ 2.5 in the Basic Module	$P_{\text{total}} = P_E + P_F$ shall not exceed 2,5
Reference value: electricity, fuel, pulp and paper	Yes, from BREF 2001	Tightened reference values by average 23%	Update of reference values, total score calculation adjusted	Update of reference values
Energy requirement, special + niche paper	$P_{\text{energytotal}}: (P_{\text{electricity}} + P_{\text{fuel}})/2 < 1.5$	Score $P_{\text{electricity}} \leq 1.25$ Score $P_{\text{electricity}} \leq 1.25$	Score $P_{\text{electricity}} \leq 2.5$ Score $P_{\text{fuel}} \leq 2.5$	No
Other				
Sorting of waste	Yes	As previous	Yes	Yes
Information to consumers	No	No	Yes, regarding recycling of packaging	Yes, regarding recycling of paper
Fitness for use			No	Yes
Annual reporting	Emissions from pulp and paper production	Emissions, energy, certification and production chemicals regarding both pulp and paper	Yes, slightly amended. Emissions and energy from pulp production, for paper, list of pulps and chemicals used.	