

**Background document**

**for**

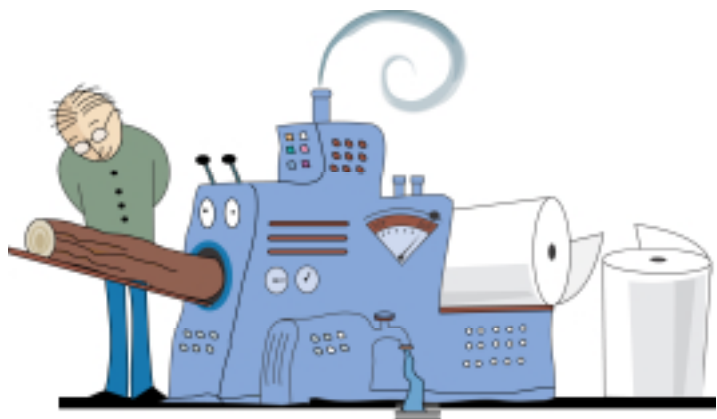
**Supplementary Module**

**Criteria for Swanlabelled**

**Copy and Printing Paper**

Draft Proposal

25 June 2004



## Joint Nordic ecolabelling

In November 1989, the Nordic Council of Ministers adopted a measure to implement a voluntary, positive ecolabelling scheme in the Nordic countries. The scheme is administered by the Nordic Ecolabelling Board. The board among other things choose product groups and lay down the final criteria. Secretariats in the participating countries are responsible for implementing the scheme on national level.

The objective of ecolabelling is to provide information to consumers to enable them to select products that are the least harmful to the environment. Ecolabelling is intended to stimulate environmental concern in product development and a sustainable society.

In its work on ecolabelling Nordic Ecolabelling follows the ISO 14024 standard: "Environmental labels and declarations - Type 1 ecolabelling - Principles and Procedures". The product groups and environmental and performance requirements selected by Nordic Ecolabelling reflect the objectives, principles, practices and requirements of the standard. ISO 14024 includes the requirements that criteria should be objective, reasonable and verifiable, that interested parties should be given the opportunity to participate and that their comments are evaluated.

The criteria are based on evaluation of the environmental impacts during the actual products' life cycle. The criteria set requirements towards a number of these factors. Upon approved application all products found to meet the criteria are awarded the environmental label. Due to new knowledge and production methods the criteria must be updated regularly. New revised criteria are presented at least 1 year prior to the expiry date. During the period of validity minor corrections may be adopted. This will normally not affect already approved licences.

A handling fee is paid upon submission of a complete application. The turnover value of the product determines the additional annual fee.

### Address

#### Denmark:

Ecolabelling Denmark  
c/o Dansk Standard  
Kollegievej 6  
DK-2920 CHARLOTTENLUND  
Tel: +45 72 300 450  
Fax: +45 72 300 451  
Web site: [www.ecolabel.dk](http://www.ecolabel.dk)  
E- mail: [info@ecolabel.dk](mailto:info@ecolabel.dk)

#### Iceland:

Umhverfisstofnun  
Su urlandsbraut 24  
IS-108 REYKJAVIK  
Tel: +354 591 20 00  
Fax: +354 591 20 20  
Home page:  
[www.umhverfisstofnun.is](http://www.umhverfisstofnun.is)

#### Sweden:

SIS Ecolabelling AB  
SE-118 80 STOCKHOLM  
Tel: +46 8 55 55 24 00  
Fax: +46 8 55 55 24 01  
Homepage: [www.svanen.nu](http://www.svanen.nu)

#### Finland:

SFS-Miljömärkning  
Pb 116  
FIN-00241 HELSINKI  
Tel: +358 9 1499 331  
Fax: +358 9 1499 3320  
Homepage: [www.sfs.fi/ymparist/](http://www.sfs.fi/ymparist/)

#### Norway:

Ecolabelling Norway  
Kr. Augusts gt. 5  
N-0164 OSLO  
Tel: +47 22 36 57 40  
Fax: +47 22 36 07 29  
Homepage: [www.ecolabel.no](http://www.ecolabel.no)

*This document may only be reproduced in its entirety, and with no modifications of any kind. Excerpts may be used provided that the Nordic Ecolabelling is cited as a source.*

## Contents

<b>1</b>	<b>SUMMARY AND OUTLINE OF THE MAIN CHANGES INTRODUCED IN THIS .....REVISION</b>	<b>4</b>
<b>2</b>	<b>INTRODUCTION .....</b>	<b>5</b>
<b>3</b>	<b>THE MARKET .....</b>	<b>6</b>
<b>4</b>	<b>THE IMPACT OF THE PRODUCT ON THE ENVIRONMENT .....</b>	<b>7</b>
<b>5</b>	<b>OTHER ENVIRONMENTAL SYSTEMS.....</b>	<b>8</b>
<b>6</b>	<b>THE STRUCTURE OF THE CRITERIA AND THE BACKGROUND DOCUMENT.....</b>	<b>9</b>
<b>7</b>	<b>DEFINITION OF THE PRODUCT GROUP.....</b>	<b>10</b>
<b>8</b>	<b>REQUIREMENTS AS TO THE ECOLABELLING OF COPY AND PRINTING PAPER .....</b>	<b>11</b>
	<b>WITH BACKGROUND ASSESSMENTS.....</b>	<b>11</b>
8.1	REQUIREMENTS AS TO THE APPLICANT.....	11
8.2	REQUIREMENTS RELATING TO THE PAPER MANUFACTURER .....	11

## 1 Summary and outline of the main changes introduced in this revision

The purpose of this document is to outline the background to the requirements contained in the criteria document "Supplementary Module. Criteria for copy and printing paper, Version 2". The document also presents the arguments and reasons behind the requirements to applicants, consumers and other interested parties. The process of adopting criteria involves an assessment of the environmental impact of the product throughout its life cycle. The requirements are also selected on the basis of market conditions and the RPC of the individual requirements, (relevance, potential and controllability).

The main requirements relate to the production of the paper used in copy and printing paper, the aim being to reduce environmental impact by imposing requirements that promote

- the use of wood raw materials from sustainable forestry
- the use of environmentally-friendly chemicals
- low emissions to water and air
- low energy consumption
- sorting at source and recycling of waste
- eco and quality assurance
- satisfactory product quality

The criteria for copy and printing paper are divided into three documents: Supplementary Module, Basic Module and Chemical Module.

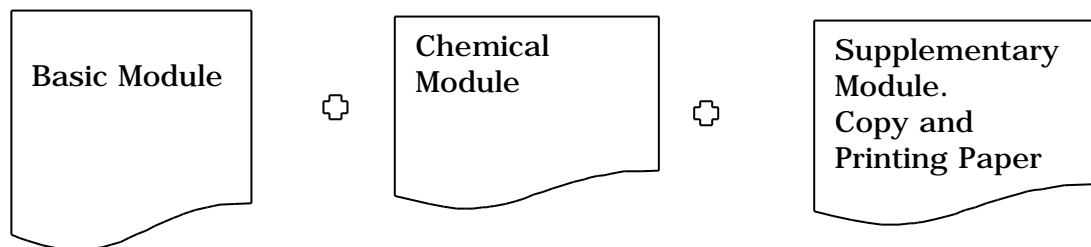
The Basic Module contains many requirements that are common to different pulp and paper production processes irrespective of the ultimate use to which the paper or pulp are put. The requirements in the Basic Module relate to forestry, emissions to water and air (AOX, COD, P, S, NO<sub>x</sub> and CO<sub>2</sub>), energy consumption, waste processing and quality and eco-assurance. The aim has been to make it easier for manufacturers to document fulfilment of the requirements. This applies in particular to manufacturers of pulp or paper for various types of paper products. The reason for separating the chemical requirements from the Basic Module is that many of the requirements are documented by subcontractors and accordingly it is useful to be able to send a full description of the chemical requirements to the individual subcontractor.

The requirements in the "Supplementary Module. Criteria for Swanlabelled copy and printing paper" contain general requirements that are common to all swan-labelled products (marketing, recycling systems etc.) and requirements that are specific to this product group. The latter are e.g. requirements related to information on the paper quality and on the applicant (if another than the paper manufacturer). There are no further requirements than the requirements specified in the basic and chemical modules, as to emissions to water and air, energy consumption, chemical use and sustainable forestry.

## 2 Introduction

Version 2 of the Criteria for copy and printing paper, valid from 3 December 1999 until 31 January 2006, is currently undergoing revision (2004). The new criteria are described in the consultative proposals for the "Supplementary Module. Criteria for Swanlabelled copy and printing paper, Version 3", "Basic Module. Criteria for Swanlabelled paper products" referred to as the Basic Module, and "Chemical Module. Criteria for chemicals for Swanlabelled paper products" referred to as the Chemical Module. Both the basic and the chemical modules were adopted by Nordic Ecolabelling in October 2003 after a public review.

For a copy and printing paper to be awarded a swanlabel, all the requirements in all three modules must be fulfilled:



The Supplementary Module may be both stricter and less stringent than the Basic Module. The requirements are set so about 1/3 of the papers on the market are able to fulfil the requirements.

The criteria for copy and printing paper were revised on the basis of an evaluation of the current criteria (in 2001), the conclusion of which was that the requirements should be compared with criteria for other paper products (coffee filters, tissue paper, greaseproof paper, packaging paper, paper envelopes and printed matter). Nordic Ecolabelling has in 2002/2003 invested a great deal of effort in co-ordinating the ecolabelling requirements for various paper products. This process resulted in the development of the Basic Module and the Chemical Module. The purpose of the Basic Module was inter alia to make it easier for manufacturers who produce several types of pulp or paper to document compliance with the requirements. During the development of the modules, experience was also gathered from the process of developing criteria for tissue paper, as well as for copying and graphic paper under the EU Flower Scheme. The reference values used are based on the EU:s BAT-values for the paper industry<sup>1</sup>.

Revision work for both the basic and chemical modules and now the supplementary module for copy and printing paper has been conducted at secretariat level by the following Nordic project group:

- Elisabeth Magnus, Ecolabelling Norway, project leader
- Birgitte Holm Christensen, Ecolabelling Denmark, Denmark
- Jaakko Suursalmi, SFS-Ecolabelling, Finland

- Ulla Sahlberg, SIS Ecolabelling AB, Sweden

The precursor for the criteria for printing paper was the criteria for fine paper (copy paper), valid from 8 June 1993 to 31 May 1997 (version 1 and 2). By establishing the criteria for printing paper in 1996 the graphic paper was also included, and version 1 of these criteria was valid from February 1996 until June 2001. The criteria were again revised in 1999 by a group from the secretariats and an experts group with representatives from industry and environmental organizations, among others.

In the criteria for printing matter, version 3, it is stated that the paper in swan-labelled printed matter must be swanlabelled or comply with the criteria for printing paper. This means that Nordic Ecolabelling not only handles applications for swanlabelling of copy and printing paper, but also handles documentation for paper used in printed matter. Information on paper approved for printed matter is not public, but printing houses with licence or applying for the swanlabel can receive this information. The criteria for printed matter, version 3, are valid until 14 March 2007. The formulation of the requirement for graphic paper will be dealt with in the revision of the criteria for printed matter.

### 3 The market

In the 80 and 90s the environmental legislation was developing vastly and the paper industry made large investments<sup>2</sup>. The industry has also undergone structural alterations where the concerns have become larger and more global. Even so, the environmental questions are still important within this industry.

Swanlabelling of printing paper was a great success in the 90s, and by 1 February 2001 there were 92 licences, se Table 1. The licensees were late in renewing their licences when version 2 became the only valid version of the criteria, and by 15 June only 3 licences were valid. The number has since then increased, and by 24 May 2004 there are 23 licences for printing paper, se table 1. There was more than one reason for the reduction in the number of licences; among the most important were globalization of the market and introduction of other environmental tools in business-to-business affairs.

Many paper producers stopped ecolabelling their paper, due to the fact that the requirements for the paper used in swanlabelled printed matter opened for paper that comply with the criteria for printing paper and not only required swanlabelled paper. One can say the swanlabel lost some of its significance, especially for paper used in the graphic industry. However, the paper industry has maintained their contact with Nordic Ecolabelling, more than 650 paper qualities from 50 paper mills have been assessed. Several smaller European paper producers, not connected to a greater concern, are still interested in using the swanlabel even for graphic paper. They use the label not only in the Nordic countries, but also in various European countries.

Also several producers of copy paper are using the swanlabel, and experience increasing demand from e.g public purchasing departments. This is also the case

outside the Nordic countries, like in the example from “State of the World”, referring to the city Ferrara in Italy buying paper with the Nordic Swanlabel<sup>3</sup>.

*Table 1. Licences and paper for swanlabelled printed matter.  
Note that one paper manufacturer can have more than one licence.*

	<b>February 2001 (version 1)</b>	<b>January 2002 (version 2)</b>	<b>May 2004 (version 2)</b>
<b>Licences for printing paper</b>	92 from 57 mills	14 from 13 mills	23 from 18 mills
<b>Paper approved for swanlabelled printed matter</b>	Paper from > 17 mills	350 trade names from 25 mills	632 trade names from 50 mills
<b>Approved marked pulps</b>	from ca. 50 mills	from ca. 44 mills	From about 63 mills

In 2001/2002 there was some confusion among paper wholesalers, about the importance of the swanlabel. There was also doubt about the authority’s possibilities to require ecolabelled products in public tenders. The new EU interpretation for integration of environmental considerations in public contracts from July 2001<sup>4</sup> and the latest verdicts in the EU court clearly show that environmental requirements for the production process can be set, and that the purchaser can emphasize other factors than price. This is also further described in instructions from the authorities in the various countries, e.g. in the guidebook from the Norwegian Ministry of Trade and Industry<sup>5</sup>. The guidebook clearly states that purchasing departments can require fulfilment of ecolabelling criteria, and that the contractor can use an ecolabel licence as documentation. The following quotation from the guidebook shows that the contractor is challenged to use ecolabelling: "The purchaser may as a rule use the specific requirements set by Nordic Ecolabelling or by the EU Flower or equal requirements, for licensing a product. On the other hand the purchaser can not demand that the product is ecolabelled. The supplier should be informed though, that a licence certificate is sufficient information, but other documentation is also accepted.

## 4 The impact of the product on the environment

When assessing the environmental impact of paper products, attention should be focused on four main areas. The first of these is forestry and the others relate to chemical consumption, emissions and energy use during the production of pulp and paper. These environmental effects are discussed in further detail in the background document to the Basic Model.

Transporting raw materials, packaging, finished products and waste also result in environmental effects during the life cycle of the product. Even so, Nordic Ecolabelling has not imposed requirements relating to transport, amongst other

reasons because of the lack of control that the manufacturer has over these factors.

Copy and printing paper can contain large quantities of pigments and fillers. The environmental effects of these have also been assessed during the development of the Basic Module, but so far no requirements are set for these constituents. For further information see the background document to the basic modules<sup>6</sup>.

## 5 Other environmental systems

Industry uses a number of means of showing its commitment to the environment. Generally, these means can be classified as eco management, environmental product declarations and ecolabelling.

### *Eco management*

Eco management systems allow companies to put their own houses in order and to define their own objectives for environmental improvements. It is a steering tool for the company to find the harmful effects on the environment caused by the activities and to make routines for purchases and environmental information. The main schemes are EMAS, which was developed within the EU, and ISO 14001 which is an international standard. These schemes are not visible externally, and does not provide for the exclusion of undesirable products or activities. Many European pulp and paper mills have either ISO 14 001 or EMAS certificates.

### *Environmental declarations*

Environmental product declarations provide detailed environmental information but impose no requirements on the products themselves. Facts are presented neutrally since there is no predetermined level of requirements. The utility of product declarations will depend on the purchaser's knowledge of the environmental issues pertaining to the product in question. Production declarations are therefore of most use to very professional purchasers who also have time to make comparisons.

At present there is no international system for environmental product declarations, although work is underway on such a system within the ISO. In addition, systems are being developed by various industries, e.g. the paper industry. One self declaration system of this type is Paper Profil<sup>7</sup> which is operated by the paper industry and covers a number of environmental parameters, e.g. the certification of wood, emissions, purchased electricity and quantity of waste land filled.

### *Ecolabelling*

Of all the systems discussed, ecolabelling is the system that makes it easiest for consumers to choose the products with the lowest environmental impact. Products are approved on the basis of specific environmental requirements and all the difficult assessments with regard to the environmental effects of the products are performed by the organizations that operate the systems. Ecolabelling is the only system that set threshold values for the products. The

criteria are based on cradle to grave assessments, so there will always be a series of requirements to meet. Ecolabelling schemes exclude products that do not satisfy their requirements and an independent third party verifies that the products fulfil the requirements. The swanlabel criteria are updated in an open process with participation for e.g. authorities, consumers, industry, researchers and environmental and trade organizations. The criteria are formulated to enhance best production practice. There is no grading of the ecolabelled products, either they fulfil the requirements or not. The requirements include raw materials, production processes, and the products themselves, and are revised about every third year. In most cases, the criteria also include environmental managements, but usually not as comprehensive as ISO 14 001 and EMAS certification systems.

The European ecolabel, the Flower, has criteria for both tissue paper and for copy and graphic paper. There are 18 countries co-operating to develop criteria within the Flower, and they have 283 licences within 21 product groups<sup>8</sup>. Within the paper section the Flower has 30 licences for tissue paper and 2 for copy and graphic paper. The Flower is also developing criteria for printed matter.

Also other ecolabelling programs have criteria for copy or printing paper. According to GEN<sup>9</sup> (Global Ecolabelling Network) there are 13 other programs with criteria for paper in addition to the Swan and the Flower. Bra Milöval<sup>10</sup> (Good Environmental Choice), managed by the Swedish Society for Nature Conservation, has criteria for paper but no licences for copy and printing paper.

## **6 The structure of the criteria and the background document**

The Supplementary Module is divided into two chapters. Chapter 1 regards the criteria for the applicant and chapter 2 regards the criteria for pulp and paper processes.

The main requirements relate to the pulp and paper production, the aim being to reduce environmental impact by imposing requirements that promote

- the use of wood raw materials from sustainable forestry
- the use of environmentally-friendly chemicals
- low emissions to water and air
- low energy consumption
- sorting at source and recycling of waste
- eco and quality assurance
- satisfactory product quality

As noted above, Nordic Ecolabelling has compiled many of the requirements that are common to paper and pulp production, irrespective of the use to which the paper or pulp is put. The requirements in the Basic Module relate to forestry, emissions to water and air (AOX, COD, P, S, NO<sub>x</sub> and CO<sub>2</sub>), energy consumption, waste processing and eco and quality assurance. The energy and emission

requirements make allowances for the environmental differences between the various processes used for the production of pulp and paper. The total scores for emissions and energy consumption are compared with reference values for the various processes. Only one modification of these requirements has been made during the development of the Supplementary Module.

For practical reasons chemical requirements are provided in a separate Chemical Module, in view of the fact that many of the requirements necessitate documentation from subcontractors/suppliers. This allows an overall description of chemical requirements to be sent to subcontractors. No additional chemical requirements have been made in the Supplementary Module.

The individual requirements of the Supplementary Module and their background are described in detail in Chapter 8. For each requirement in the criteria document the applicant must indicate whether or not the requirement is fulfilled by crossing off  yes or  no. Each requirement is followed by the symbol/word combination " **Documentation**", which describes the way in which the applicant must document fulfilment of the requirement. The applicant's documentation must be numbered and this number must be entered under "**Appendix No.** \_". The sections dealing with marketing and environmental and quality assurance refer to separate forms for documentation purposes. For a product to qualify for carrying a swanlabel, applicants must fulfil all requirements.

## 7 Definition of the product group

The product group encompasses wood based and wood free printing and graphic board, based on cellulose and/or mechanical pulp, for writing, printing and copying. Only paper that has traceability from the paper manufacturer to the retail dealer can be swanlabelled. This means that a trade name can not be used both on a swanlabelled paper and a paper that is not swanlabelled.

The criteria do not apply for the following paper products: tissue paper, grease-proof paper, envelope paper and packaging paper. Separate criteria apply for these products. A licence may also be sought for printed matter consisting of swanlabelled printing paper or printing paper that meet the requirements for paper in the criteria document on printed matter. For further information, please refer to the document on "printed matter".

The definition of the product group has in practise not been changed during this revision, but the name has been changed from printing paper to copy and printing paper.

## **8 Requirements as to the ecolabelling of copy and printing paper with background assessments**

When setting the criteria for Nordic Ecolabelling, the environmental impact of the product throughout its entire life cycle is assessed. The selection of requirements also involves the assessment of market conditions and the RPC of the individual requirements (relevance, potential and controllability), see Nordic Ecolabelling's Environmental Philosophy<sup>11</sup>. The conclusion of the evaluation of the printing paper requirements (in 2001/2002) was that the requirements should be compared with criteria for other paper products like tissue paper, paper envelopes, coffee filters and grease-proof paper.

This chapter discusses the background to the individual requirements in the Supplementary Module. The requirements in the Basic Modules and in the Chemical Module are described in further detail in the Background Documents for these<sup>6</sup>. The basic and chemical modules were on public review in 2003 and the summarized comments are available from Nordic Ecolabelling.

### ***8.1 Requirements as to the applicant***

Chapter 1 of the criteria document describes the information what an applicant for a swanlabelling licence must document. An application may be submitted by the manufacturer of the paper or by an importer or vendor of the product. The chapter describes the requisite structure of the application. Information on the paper and where it is sold is required in chapter 1.1. The requirement is not new, but a new appendix has been made to ease the documentation.

There is a requirement relating to marketing and that is general for all swanlabelled products. The requirement relating to recycling systems for products and packaging has not been changed and is intended to help to ensure that licence holders contribute to existing recycling system, be they statutory or industry agreements. The phrasing is harmonized with other criteria documents.

Satisfactory eco and quality assurance must also be documented in order to ensure that the swanlabelled products can be traced on the production line and that compliance with the requirements continues throughout the term of the licence. All these requirements apply irrespective of the product(s) to which an application for a swanlabel licence applies. The requirements for eco and quality assurance apply to the applicant and are harmonized with the corresponding requirements in the Basic Module. A specific appendix has been made to make the documentation easier for the applicant.

### ***8.2 Requirements relating to the paper manufacturer***

The pulp and paper production sites shall be declared. This information is important from the point of view of systemising the more detailed documentation relating to the production of a product.

The requirements for the pulp and paper production is mainly the same as the requirements set in the basic and chemical modules, and it is therefore referred to the background document for these modules<sup>6</sup>. In the Basic Module the requirements are divided into to chapters, one for the paper manufacturer and one for the pulp manufacturer. In the Supplementary Module a special reference value for the COD emission from CTMP production has been set.

The main changes related to version 2 of the swanlabel criteria for printing paper are:

**Wood:** The requirement that wood must originate in sustainable forestry operations was for the first time introduced in version 2 of the criteria for printing paper. Nordic Ecolabelling's forestry group judges whether a forestry operation is sustainable and approves the standards and certification systems used. The requirements for standards and certification systems have not been changed since the last version of the criteria for printing paper. The required proportion of fibre from certified sustainable forestry is increased from 15% to 20% in the Basic Module, due to experience from handling of applications. There is a steady increase in the access to wood from certified sustainable forestry, even though the access may be low in some regions. The paper producers can compensate by buying marked pulp or meet the requirement for return fibre.

There has also been a change in how to document the requirement for organizations with centralized fibre purchase. The requirement is harmonized with the requirements to other paper products and is given in the Basic Module.

### **Energy consumption**

The requirement for energy consumption was first introduced in version 2 of the criteria for printing paper. The requirement is tightened, and consumed energy must be related to the reference values for the actual processes. The energy requirement deals with both consumed fuels and electricity, and is independent on whether the energy is produced on site or purchased. The level of the requirements is based on the BAT-report<sup>1</sup>. The requirement is harmonized with the requirements to other paper products and is given in the Basic Module.

### **Chemicals**

The chemical requirements are given in the Chemical Module, and are simplified after the latest version of the criteria for printing paper. A full chemical description of all chemicals used in more than 1 kg/ton pulp or paper produced is no longer required. The documentation requirements are to a larger extent based on declarations from the chemical suppliers. Some process chemicals have reduced limits for ingredients with effects on health and environment, due to the development within the chemical industry. The Chemical Module includes requirements to dyes, which have been included in the criteria for swanlabelled tissue paper for many years. The Chemical Module also has a requirement for adhesives being used during production or conversion of paper products, and this is new compared to version 2 of the printing paper criteria.

**Emissions**

The emission requirements are, as in earlier versions of criteria for printing paper, based on the ratio of the actual emissions for the paper (from pulp and paper production) and reference values for the specific processes. The reference values are a result of assessments of the values found in the BAT-report<sup>1</sup>. The requirements as to emissions have been adjusted compared to version 2 of the criteria document, in part by changes to the reference values for the emissions and in part because the score requirements for the individual and total emissions have been made more stringent. The requirement relating to emissions of chloro-organic compounds (AOX) from bleached pulp has been removed from the matrix model for calculating emissions and is now the subject of a separate requirement. The reference values for nitrogen oxides are linked to the reference value for the fuel consumption. The calculation model for the emissions is given in the Basic Module, where the requirements are harmonized with the criteria for other paper products.

The reference value for CTMP is made more stringent, in relation to the value in version 2 of the criteria (from 15 to 10 kg/ton pulp). CTMP is a very important pulp for use in copy and printing paper and is mentioned by the BAT-report<sup>1</sup> as one of the most important pulps. The application has increased especially for graphic paper, and the reference value for CTMP emission is therefore of great relevance for the emission requirement in copy and printing paper. In the BAT-report new processes used within production of CTMP are mentioned, but no values are given. The BAT-report also gives low removal efficiency for wastewater treatment from this type of production. After reviewing the emission values for these new processes, Nordic Ecolabelling has concluded that the requirement for CTMP should be made more stringent to promote pulp from pulp mills using BAT processes.

**Other requirements**

The requirements relating to waste processing has not been changes since the latest revision of printing paper, but the authority requirement is changes so documentation is no longer required. The requirement will be follow up on inspections.

The requirements for eco and quality assurance have been adjusted so that they correspond with the equivalent requirements in other Nordic ecolabelling criteria documents. The requirements are set to assure the traceability of swanlabelled products in the production line and so environmental requirements are kept throughout the licences period.

**Other parameters assessed, but no given requirements**

There is no requirement to optical whiteners in the Chemical Module, but it has been assessed to include such a requirement, as is in the supplementary modules for coffee filter and grease-proof paper. Optical whiteners are normally derivates from 4, 4-diaminostilben-2, 2-disulphone acid. Normal use is 5-10 kg/tonnes paper, and optical whiteners have low retention on the paper machine. This means that the chemicals will partly stay in the paper, and partly follow the wastewater. The compounds are not biodegradable. Optical whiteners can contain up to 30 % urea as stabilizers, which can overdose the biological wastewater treatment system<sup>12</sup>. In spite of the environmental effects of optical

whiteners there are no requirements, because a ban can lead to increased use of bleaching chemicals. Nordic Ecolabelling will assess this requirement in the next revision.

The requirement for properties in use has been removed, because the requirement was not specific enough. No reasons for other requirements for performance properties have been found. However, a requirement for more specific information on the paper quality has been included.

There are not set any requirements to ream cover and other packaging materials either. Paper for ream cover are often coated with polyethen (PE) or consists of pure plastic foil (e.g. of PE), to prevent moist damage to the paper.

## References

---

<sup>1</sup> BAT- rapport: Integrated Pollution Prevention and Control (IPPC) Reference Document on Best Available Techniques in the Pulp and Paper Industry, European Commission, December 2001

<sup>2</sup> jäljillä, Metsäteollisuus ja ympäristö, Metsäteollisuus ry 1995

<sup>3</sup> State of the World, 2004, WorldWatch institutes Environmental report J. W. Cappelens 2004, page 160

<sup>4</sup> Kommisjonens fortolkningsmeddelelse om fellesskapets bestemmelser om offentlige kontrakter og mulighetene for å integrere miljøhensyn i offentlige kontrakter, Bruxelles KOM(2001) 274, 4 July.2001.

<sup>5</sup> Miljø og regelverk for offentlige anskaffelser, Veileder fra Nærings og Handelsdepartementet, January 2004, publikasjonsnr. K-0662 B

<sup>6</sup> Background document for the Basic and Chemical Module for Ecolabelling of Paper Products, Nordic Ecolabelling 2003.

<sup>7</sup> Paper Profile, <http://www.paperprofile.com/>, 20 January 2002

<sup>8</sup> The Flower web page [http://europa.eu.int/comm/environment/ecolabel/index\\_en.htm](http://europa.eu.int/comm/environment/ecolabel/index_en.htm), May 2004

<sup>9</sup> The Global Ecolabelling Network (GEN), <http://www.gen.gr.jp/>, 23 May 2004

<sup>10</sup> Good Environmental Choice (Bra Miljöval) home page, <http://www.snf.se/bmv/index.cfm>, 23 May 2004

<sup>11</sup> Environmental Philosophy, Nordic Ecolabelling, 16 June 2000

<sup>12</sup> Integrated Pollution Prevention and Control (IPPC), Reference Document on Best Available Techniques in the Pulp and Paper Industry, European Commission July 2000. ("BREF"), Annex I (Chemicals and additives in paper manufacturing)