



Swan labelling of  
**Tissue paper – Supplementary module**  
Proposal to version 4 • XX month 2005 – XX month 200X



**Nordic Ecolabelling**



In November 1989, the Nordic Council of Ministers adopted a measure to implement an official voluntary ecolabelling scheme, the Swan. The organizations/companies listed below administer the Swan ecolabelling schemes on assignment from their national governments.

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



# Swan labelling of Tissue Paper

005/Proposed report circulated for comment, version 4, September 2005

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## **What is Swan-labelled Tissue Paper?**

Swan-labelled tissue paper consists of fibres from sustainable forestry and/or recycled fibres and the production process has taken place with low levels of emissions being released into the air and water.

Energy consumption during production is low and the quantity of chemicals dangerous to health and the environment has been limited both during production and in the paper product itself.

## **Why choose the Swan label?**

- The licence holder may use the Swan trademark for marketing. The Swan label is a very well-known and well-reputed trademark in the Nordic region.
- The Swan label is a cost-effective and simple way of communicating environmental work and commitment to customers and suppliers.
- Environmental issues are complex. It can take a long time and extensive resources to gain an understanding of a specific area. Swan labelling can be seen as aid in this work.
- The Swan label not only covers environmental issues but also quality requirements, since the environment and quality often go hand in hand. This means that a Swan licence can also be seen as a mark of quality.

## **What can bear the Swan label?**

Cellulose-based tissue paper made from new and/or recycled fibres can be Swan-labelled. This means that, for example, toilet paper, kitchen towels, paper towels, tissues, napkins and paper cloths are allowed to bear the Swan label. In the case of wet-wipes, nonwovens and products that are laminated with non-cellulose-based materials, there are specific criteria.




## How to apply

The Swan requirements for paper products are subdivided into a Basic module, a Chemical module and supplementary modules for various product areas. The Basic module contains requirements for paper and pulp manufacturers, while the Chemical module contains requirements laid down for chemicals manufacturers. The various additional modules contain specific requirements within the various product areas, and this is therefore the supplementary module for Tissue paper.

Each requirement is labelled with the letter R (for requirement) and a number. All the requirements must be met for a licence to be obtainable.

### 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
-  Enclose procedure in environmental and quality management system

### Application

The application shall be sent to Nordic Ecolabelling in the country in which the tissue paper is sold. See page 2 for addresses. The application documents comprise an application form and documentation demonstrating fulfilment of the requirements (specified in the criteria).

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

### Sales in other Nordic countries

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

- Form for sales in other Nordic countries.
- Documentation showing that national regulations are observed.

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

## **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 Swan labelled Tissue paper.

## **Enquiries**

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

# **1 Environmental requirements**

## **1.1 Description of the tissue paper**

### **R1 Description of the product**

Describe the product and how it meets the definition of what can be Swan-labelled, see above under the section “What can bear the Swan label?”

Describe the manufacturing process for the product, including the conversion process.

Compile a list of constituent materials, e.g. production chemicals, pulps and packaging materials used. In the case of production chemicals and pulps, the name, trade name and the name of the supplier must be apparent, and for pulps, too, the name of the mill. Indicate the trade name of the finished product, the type designation, the weight per unit area ( $\text{g/m}^2$ ), the weight per unit volume ( $\text{kg/m}^3$ ) and the moisture content.

Description and list as above. In the case of inquiries from Nordic Ecolabelling, product samples must be submitted.

## **1.2 Basic requirements for pulp and paper manufacture**

### **R2 Requirements for paper pulp**

All paper pulps used in the manufacture of the Swan-labelled tissue paper must meet the requirements of the Basic module and the Chemical module unless otherwise indicated in the requirements below.

Has the paper pulp previously been dealt with by Nordic Ecolabelling?

- If you answered yes to the question above, documentation must be enclosed concerning timing and which secretariat dealt with the paper pulp.
- If you answered no to the question above, documentation must be enclosed showing how the requirements of the Basic and Chemical module are met.

### R3 Requirements for the tissue paper product

Manufacture of the end product must meet the requirements of the Basic module and the Chemical module, where relevant, unless otherwise indicated in the requirements below. This applies also to converters.

- Documentation showing how relevant requirements in the Basic and Chemical modules are met.

## 1.3 Emissions into the air and water

### R4 Total emission points $P_{\text{emissions,total}}$

In the case of the tissue paper product, a total emissions points rating  $P_{\text{emissions,total}}$  must be calculated. This must not be higher than 4.0.

$$P_{\text{emissions,total}} = P_{\text{COD}} + P_p + P_S + P_{\text{NOX}} \leq 4.0$$

None of the individual emissions points ( $P_{\text{COD}}$ ,  $P_p$ ,  $P_S$  and  $P_{\text{NOX}}$ ) may be  $\geq 1.5$

In calculating the product's total emissions points rating  $P_{\text{emissions,total}}$  from emissions from pulp and paper production, the product group-specific reference values for paper manufacturing set out in Table 1 below are used. To calculate the individual emissions points ( $P_{\text{COD}}$ ,  $P_p$ ,  $P_S$  and  $P_{\text{NOX}}$ ) and reference values for various pulp types, reference is made to Chapter 1.9, K19 of the Basic module.

**Table 1**

Paper type	Reference values for emissions			
	$\text{COD}_{\text{ref}}$	$P_{\text{ref}}$	$S_{\text{ref}}$	$\text{NO}_{x,\text{ref}}$
<b>Tissue paper</b>	2.0	0.01	0.3	0.29 g/kWh* (the reference value for fuel consumption for tissue paper production) <sup>1</sup>

<sup>1</sup>Taken from the table "Energy for tissue paper production" in Appendix 5 to this document or from the Basic module, Appendix 2.1, table: "Energy for tissue paper production"

- Calculations and supporting data showing that the requirement is met.

### R5 Emissions of AOX

Emissions of AOX into water must not exceed 0.05 kg/tonne paper product.

Emissions are calculated as the weighted total of measured emissions from the production of the constituent pulp components.

In the case of the individual pulps used for the tissue paper production, the Basic module requirement K45 0.4 kg AOX/tonne pulp applies.

- Description of the result from the calculation of the total weighted emissions of AOX from the production of the constituent pulps in the tissue paper.

## 1.4 Product safety and quality

### Chemicals

Requirements concerning production chemicals not quoted below, e.g. printing inks and adhesives, are set out in the Chemical module.

#### **R6 Chloro-organic substances in wet strength agents and in other auxiliary chemicals**

Wet strength agents may contain a total of no more than 0.1% low-molecular chloro-organic compounds – calculated on the basis of the dry matter content – that are classified as hazardous to health or the environment in accordance with the latest amendment of EU Directive 67/548/EEC. Examples of such low-molecular chloro-organic compounds are epichlorohydrin (ECH), dichloroisopropanol (DCP) and chloropropanediol (CPD).

Other auxiliary chemicals used on yankee cylinders in tissue paper production must not contain epichlorohydrin (ECH), dichloroisopropanol (DCP) or chloropropanediol (CPD).

- Certification in the form of completed Appendix 1 from the chemicals supplier confirming that the requirement relating to wet strength agents is met and certification in the form of a completed Appendix 1 from the chemicals supplier confirming that the auxiliary chemicals do not contain epichlorohydrin.

#### **R7 Perfumes**

Perfumes or other scents must not be actively added to the paper product.

- Completed Appendix 2.

#### **R8 Additives to toilet paper**

Cosmetic additives or body care preparations must not be added to toilet paper.

- Completed Appendix 2.

#### **R9 Additives of cosmetic or body care preparations (e.g. lotions)**

Cosmetic or body care preparations such as scents whose main function is other than to give the paper product a scent must meet the following requirements:

- If the preparation in the paper product is incorporated in less than 10 kg/tonne paper, none of the constituent substances in the preparation may be classified as carcinogenic (Carc), mutagenic (Mut), reproduction-toxic (Rep) or sensitising with R42 and/or R43.

- If the preparation in the paper product is incorporated in more than 10 kg/tonne paper, the preparation must meet the requirements of the Nordic Ecolabelling criteria document for Cosmetics.
- If the tissue paper product is marketed in such a way that it conforms to the definition for a cosmetic product, the preparation must meet the requirements of the Nordic Ecolabelling criteria document for Cosmetics regardless of the quantity of preparation added in the paper product.

Completed Appendix 2 and safety data sheet in accordance with Directive 2001/58/EC for any added lotion or body care preparation.

## R10 Content of harmful substances and bleeding

Tissue paper products manufactured from recycled fibres or mixtures of recycled and virgin fibres may contain no more than:

Parameter	Limit value	Test metod
Formaldehyde	1 mg/dm <sup>2</sup>	EN 1541 water extract
Glyoxal	1.5 mg/dm <sup>2</sup>	BfR (BgVV) B.IV.4.3.2.2
PCB	2 mg/kg	EN ISO 15320

In the case of tissue paper products manufactured from virgin fibres, recycled fibres or mixtures of recycled and virgin fibres, the following requirements apply:

Parameter	Test methods and level
Slime control agents and antimicrobial substances	No growth-inhibiting effect for micro-organisms according to test method SS-EN 1104, level 5
Optical brightener	No bleeding according to test method SS-EN 648, latest edition, level 5
Dyes and inks for printing and dyeing	No bleeding according to test method SS-EN 646, latest edition, level 5

Test results.

Summary of the test results above if manufacture follows "The Guidelines for tissue paper kitchen towels and napkins", Policy statement concerning tissue paper kitchen towels and napkins, Partial Agreement in the Social and Public Health Field, Council of Europe.

## Product function

### **R11 Absorbptivity of kitchen towels and paper towels (both sheets and rolls)**

The absorbptivity of kitchen towels and paper towels must be at least 5 g water/g paper measured for 30 seconds by test method ENV 12625-8. The test must be conducted on the converted product and enclosed with the application.

Test results.

### **R12 Strength/perforation of kitchen towels**

The ratio between the strength of the paper longitudinally and over the perforation must be at least 2 according to EN 12625-4:1999. The test must be conducted on the converted product and enclosed with the application.

Test results.

### **R13 Toilet paper**

In order not to block the waste system, the toilet paper must not have wet strenght.

The toilet paper is considered to be strong when wet if its wet tensile strength is greater than 10 N/m in the machine direction, with this being applicable to 18 g/m<sup>2</sup>/s paper according to test method EN12625-4:1999.

The index value may also be used, and the requirement then is that the wetting index in the machine direction may be no more than 0.55 Nm/g. The test must be conducted on the converted product and enclosed with the application.

Test results.

Description of the way of working to ensure that the toilet paper does not have wet strenght in the case of product switching during the manufacturing process.

## **1.5 Packaging**

### **R14 Packaging material**

Packaging (article, group or transport packaging) for the Swan-labelled product must not be made from chlorine-based plastics.

Packaging made from combination material must be usable for material recycling.

Description of the material composition of the packaging.

### **R15 Design of the packaging**

Packaging of the product must be optimised from the transport point of view.

## 2 Quality and regulatory requirements

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

### R16 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 Swan-labelled product is manufactured.

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

### R17 Swan licence person

The company shall appoint a person responsible for ensuring the fulfilment of Swan 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.

### R18 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.

### R19 Quality of tissue paper

The licensee must guarantee that the quality of the production of the Swan-labelled tissue paper 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 Swan-labelled tissue paper.

### R20 Planned changes

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

- Procedures detailing how planned changes are handled.

### R21 Unplanned nonconformities

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

- Procedures detailing how unplanned nonconformities are handled.

**R22 Traceability**

The licensee must have a traceability system for the production of the Swan-labelled tissue paper.

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

**R23 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 Swan-labelled tissue paper are marketed.

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

**R24 Annual reporting**

Every year, follow-up of the environmental requirements shall be carried out in accordance with a checklist (Appendix 3 to this document or in the Basic module) from Nordic Ecolabelling. The checklist must be signed by the person responsible for the Swan licence and then sent to Nordic Ecolabelling. Note that this applies both to paper and to paper pulps.

- Completed Appendix 3.

**R25 Marketing**

Marketing of the Swan-labelled tissue paper must comply with "Regulations for Nordic Ecolabelling" 12 December 2001 or later versions.

- Appendix 4 duly completed.

### 3 Analyses

#### Analysis laboratory and test bodies

The analysis laboratory/test body used must be impartial and competent. The applicant must be responsible for documentation and analysis costs.

The analysis laboratory must meet the general requirements pursuant to standard EN 45001/DS/EN/ISO/IEC 17025 or be an official GLP-approved laboratory.

The manufacturer's laboratory may be approved to conduct analyses and tests if the authorities monitor sampling and the analysis process or if the manufacturer has a quality system involving sampling and analyses and the laboratory is certified to ISO 9001/9002. Functional testing and analyses may, after an assessment by Nordic Ecolabelling, be conducted by the manufacturer himself even if the laboratory is not certified.

The sampling and analyses must be performed in a competent manner. The analytical methods in Table 2 below are approved by Nordic Ecolabelling. Alternatively, analytical methods which are considered by an independent and competent body to be equivalent are accepted. The Basic module comprises methods of analysis approved for analyses in connection with pulp and paper production.

**Table 2 Methods of analysis approved by Nordic Ecolabelling**

Formaldehyde	EN 1541 water extract EPA 8315A
Glyoxal	BfR (BgVV) B.IV.4.3.2.2 EPA 8315A
PCB	EN ISO 153 20 EPA 8270
Slime control agent	EN 1104
Bleeding of optical brightener	EN 648
Bleeding of colour and pressure	EN 646
Absorbitivity of tissue paper	EN 12625-8
Tensile strength of tissue paper	EN 12625-4

## Marketing

The Swan label is a very well-known and well-reputed trademark in the Nordic region. Swan-labelled products and services may be marketed using the Swan label 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 tissue paper is ecolabelled.

More information on marketing can be found in " Regulations for Nordic Ecolabelling" 12 December 2001 or later versions.

## Design of the Swan label

Design of the Swan label:



Licence number

In addition to packaging, the Swan label may also be applied to dispensers only containing tissue paper that is Swan-labelled. The Swan label may also be printed or imprinted on the tissue paper itself.

## Follow-up inspections

Nordic Ecolabelling may check that the product meets the Swan requirements even after licensing has been granted. This may, for example, be done via on-site visits or spot checks.

## **How long is a licence valid?**

Nordic Ecolabelling adopted the criteria for Tissue paper 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**

At the next revision, it should be assessed whether the module system functions for this product group. It should also be investigated whether the requirements should be made more stringent at the time of the next revision. New requirements introduced in this revision should be followed up.

## Appendix 1 Chloro-organic compounds in wet strength agents and auxiliary chemicals

Product name:
Function:
Chemicals manufacturer/supplier:
Case (e.g. name of the paper manufacturer)

### Low-molecular organic compounds

Does the wet strength agent contain low-molecular organic compounds classified as hazardous to health or the environment according to Directive 67/548/EEC?

If so, clearly indicate chemical name, CAS number, risk phrases and concentration:

\_\_\_\_\_ % by weight based on the dry matter content

\_\_\_\_\_ % by weight based on the dry matter content

\_\_\_\_\_ % by weight based on the dry matter content

Note that the wet strength agent may contain no more than 0.1% by weight low-molecular organic compounds.

### Auxiliary chemicals used on yankee cylinders

Does the preparation contain epichlorohydrin (ECH), dichloroisopropanol (DCP) or chloropropanediol (CPD)?

Place and date:	Company:
Signature:	
Clarification of name:	



## Appendix 3                      Annual reporting to Nordic Ecolabelling

Form for annual reporting for pulp and paper covered by a Swan licence.

Form for paper manufacturers

Year \_\_\_\_\_

Mill name: \_\_\_\_\_

Paper name: \_\_\_\_\_

Quantity produced \_\_\_\_\_ tonnes of paper

*The quantity produced is the quantity of paper to which the emissions/year relate.*

Emissions from the paper machine (unless integrated):

COD \_\_\_\_\_ kg/tonnes of paper

P \_\_\_\_\_ kg/tonnes of paper

S \_\_\_\_\_ kg/tonnes of paper

NOx \_\_\_\_\_ kg/tonnes of paper

Place and date:	Company:
Signature:	
Clarification of name:	

Form for annual reporting for pulp and paper covered by a Swan licence.

Form for pulp manufacturers:

Year: \_\_\_\_\_

<b>Mill name:</b>	
<b>Pulp name:</b>	
<b>Quantity produced*:</b>	<b>tonnes of pulp</b>
<b>% wood from certified forestry</b>	<b>%</b>
<b>COD</b>	<b>kg/tonnes 90% pulp</b>
<b>P</b>	<b>kg/tonnes 90% pulp</b>
<b>S</b>	<b>kg/tonnes 90% pulp</b>
<b>NOx</b>	<b>kg/tonnes 90% pulp</b>
<b>AOX</b>	<b>kg/tonnes 90% pulp</b>
<b>Chlorate</b>	<b>kg/tonnes 90% pulp</b>
<b>EDTA/DTPA</b>	<b>kg/tonnes 90% pulp</b>

The quantity produced is the quantity of pulp to which the emissions/year relate.

<b>Place and date:</b>	<b>Company:</b>
<b>Signature:</b>	
<b>Clarification of name:</b>	

## **Appendix 4                      Marketing of Swan-labelled Tissue paper**

We hereby certify that we are well acquainted with the regulations governing the use of the Nordic Swan ecolabel, as detailed in "Regulations for Nordic Ecolabelling" 12 December 2001 or later versions. We agree to follow these regulations when marketing the Swan-labelled tissue paper.

Further, we confirm that we are familiar with the criteria document regarding the Swan labelling of Tissue paper.

We undertake to advise those individuals within the company involved in marketing the Swan-labelled tissue paper of the criteria for the Swan labelling of Tissue paper and "Regulations for Nordic Ecolabelling" 12 December 2001 or later versions.

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Date and place	Company
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Signature, contact person

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Clarification of name	Phone
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Signature, marketing director

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

## Appendix 5 Reporting of energy consumption in paper manufacture

### Energy for tissue paper manufacture

Put a cross against the process	Tissue paper manufacture Subprocesses	Fuel kWh/t Reference	Electricity kWh/t Reference	Fuel used KWh/adt	Electricity used, KWh/t
	Pulp processing		200		
	Pulps (non-integrated use)		50		
	Paper machine including Yankee	2011	1150		
	Electricity consumption, unspecified		100		
	Mechanical treatment (waste water)		40		
	Biological treatment (waste water)		46		
	1. Alternative process:				
	2. Alternative process:				
	3. Alternative process:				
	4. Alternative process:				
	Total used for processes with x				
	Total reference value for processes with x				