

Nordic Ecolabelling of
Sanitary products



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Nordic Ecolabelling

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

023 Sanitary products, version 5.3, 26 April 2012

Addresses

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

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What is a Nordic Ecolabelled sanitary product?

The Nordic Ecolabel is an official ecolabel with absolute requirements. A Nordic Ecolabelled sanitary product has less impact on the environment than other products within the same group and the Nordic Ecolabel provides a guarantee that the product fulfils strict environmental requirements.

In this version of the criteria particular emphasis has been placed on health, and the requirements applicable to additives that may be added to sanitary products during the production process in the form of chemicals, adhesives, fragrance, lotions, dyes etc. have been tightened up considerably.

Requirements are also imposed on performance, consumer information on the product and the manufacturer's waste processing.

Nordic Ecolabelled sanitary products have:

- Low environmental impact associated with production because of strict environmental requirements applicable to the raw materials used and the production processes involved.
- Low climate effect since the products can document low CO₂ emissions per product or the use of a high proportion of renewable raw materials.
- Lower impact on health because of strict requirements as to the additives used and the content of chemicals.

Why choose the Nordic Ecolabel?

- The Nordic Ecolabel, the Swan, enjoys a high degree of credibility and is widely known in the Nordic countries.
- Manufacturers and retailers can use the Nordic Ecolabel in their marketing.
- The Nordic Ecolabel is cost-effective and represents a simple way for manufacturers to communicate their environmental efforts and environmental commitment to customers and suppliers.
- Environmental questions are complex and understanding the specific issues involved can be a lengthy process. Nordic Ecolabelling can be viewed as a guide in this work.
- The Nordic Ecolabel's health and environment requirements provide the individual manufacturers with guidance on how they might contribute to the development of a sustainable society.
- Operations that are more environmentally friendly can prepare the manufacturer for future health and environment requirements.
- Since environmentally friendliness and quality often go hand in hand, Nordic Ecolabelling covers not only environmental requirements but also quality requirements. This means that a Nordic Ecolabel licence can also be viewed as a stamp of quality.

What can carry the Nordic Ecolabel?

The product group "Sanitary products" encompasses disposable products such as breast pads, children's diapers, incontinence care products (panty-liners, formed diapers and diapers with tape strips), sanitary towels (pads and panty-liners), tampons, cotton buds, cotton wool, toothpicks, underlays, draw sheets, bed linen, wash cloths and surgical gowns.

Wet wipes, paper handkerchiefs or wash cloths made of paper or multiple use wash cloths and mesh pants are not eligible for a Nordic Ecolabel under these criteria for sanitary products. These products can, however, be labelled after the criteria for the Nordic Ecolabel or the EU Ecolabel. Products that can be ecolabelled according to the criteria for tissue paper or cosmetic products (i.e. products that comply with the product group definitions in these criteria documents) cannot be ecolabelled according to the criteria for sanitary products. Please contact Nordic Ecolabelling for more information.

Products to which medication/medicines, disinfectant substances and the like have been added cannot be ecolabelled.

Relevant disposable products in addition to those specified above may be included in the product group upon request if they are viewed as sanitary products. This applies only to products made of materials for which requirements are imposed in the criteria. Nordic Ecolabelling will determine which new products may be included in the product group.

Other materials, components or additives in respect of which requirements are not imposed in the document may be present in no more than 5% by weight of the product. Packaging/materials around individual products in a package must be included.

How to apply

Applicant must submit the documentation specified for each individual requirement in this document. All information submitted to Nordic Ecolabelling will be treated confidentially. This also includes the applicant's name and the product's name until such time as a licence is granted.

Documentation must be submitted only on the materials contained in the sanitary product to which the application applies. Each requirement is labelled with the letter R (requirement) and a number. Subcontractors may submit confidential documentation directly to the ecolabelling organisation. All such information will be treated confidentially.

Symbols used in the text

Each requirement is accompanied by a description of the way in which the requirement is to be documented. Various symbols are also used to make this process easier. These symbols are:

- ☒ Enclose
- ℙ The requirement will be checked on site
- 📄 Submit procedures governing environmental and quality management system

Application

Applications must be submitted to Nordic Ecolabelling in the country in which the sanitary product will be sold/the business is conducted, see the address list on page 2. The application documents comprise an application form (which can be found on the home pages of the secretariats) and documentation showing that the requirements are fulfilled (the required documentation is specified after the requirements). Further information and assistance with application is available on the websites of the individual countries or by contacting one of the secretariats.

Sales in other Nordic countries

Registering the licence in the other Nordic countries allows the Nordic Ecolabel to be used on a larger market. To do so the following documents must be submitted to the secretariats in the countries in question:

- A completed application form for registration
- A copy of the licence in question
- A sample of the consumer information text, see R43
- Documentation that the manufacturer or importer is encompassed by national industry agreements on recycling systems for packaging, see M8.

Registration is free of charge, but an annual fee is payable in accordance with the regulations in force in the individual countries.

On-site inspections

Before a licence is granted, Nordic Ecolabelling will conduct an on-site inspection to verify that the requirements have been fulfilled. During the inspection the data used in calculations, original copies of submitted documentation, measurement certificates, purchasing statistics and the like confirming adherence to the requirements must be available for examination. Nordic Ecolabelling may conduct inspection visits at both end manufacturers and subcontractors.

Costs

An application fee is payable by companies applying for a licence. In addition an annual fee is payable based on the sales of the Nordic Ecolabelled sanitary products.

Inquiries

Nordic Ecolabelling will be happy to answer any queries you may have. Please see the address list on page 2.

What are the requirements of Nordic Ecolabelling?

For a Nordic Ecolabel licence to be awarded all requirements applicable to the product must be fulfilled. In the case of the requirements applicable to fluff pulp and paper, reference is made to the criteria for the Nordic Ecolabelling of Paper Products – Basic module and Chemical module, Version 1 or later, and supplementary modules for tissue paper, grease-proof paper and copy and printing paper.

Please note that the product must at all times fulfil all mandatory requirements – an exemption specified in a particular requirement will therefore not constitute a general exemption from other mandatory requirements.

1 Description of the product

Are the requirements met?

R1 Description of the product and the packaging

Yes No

The applicant must provide a description of the product and the primary packaging. Information must be provided on the raw materials, components, chemicals and if applicable other additives present in the product, providing e.g. CAS number, product safety datasheets or the equivalent. Subcontractors must be specified by business name, production site, contact person, the raw materials/chemicals they supply and the production processes they perform (e.g. printing).

A technical description must be provided of the production of the sanitary products.

Applicators for tampons are considered to form part of the product.

Primary packaging means both the packaging surrounding the individual product in a packet and the packaging on the packet as sold in retail outlets or directly to the customer. Primary packaging does not include transport packaging.

Information as described above.

Appendix no. _____

R2 Percentage composition

Yes No

The percentage composition of materials, chemicals and if applicable other additives in the product must be stated in terms of weight percentage of the total product excluding packaging. Similarly the composition of the primary packaging and if applicable attached information material must be stated.

Sewing thread present in quantities of less than 1% by weight is exempted from the requirements in the document and from the calculation of the composition of the product.

Other materials, components or additives for which no requirements are imposed in the document may make up a maximum of 5% by weight of the product. (Packaging/material around individual products in a pack must be included in the composition.)

Information as described above.

Appendix no. _____

2 Environmental requirements

2.1 The primary materials in the product and packaging

The table below shows a guide as to which requirements different types of raw materials need to comply with. The list is used only as guidance and does not necessarily include all relevant materials in sanitary products. Please note that the sanitary products shall always comply with the product specific requirements as described in the document.

Table 1 Guide of material types and material requirements

Cotton	R13-R14
Packaging	R22-R23
Elastic Side Panels, Fluted	R2; R19-R20; R22-R23
Fluff pulp/ Cellulose pulp	R4-R8
Chemical products (used in end-production)	R3
Adhesives (hotmelt, other)	R3; R30
Lycra (elastan, spandex)	R22-R23
Non-woven (incl. additives)	R3; R4-R8; R19-R20; R22-R23
Paper (e.g. tissue paper, copy and printing paper, silicone paper, other)	R9-R12
Polymers	R22-R25
SAP	R24-R25
Silicone (for treatment of silicone paper and possibly other purposes)	R28-R29
Tape	R2; R19-R20; R22-R23
Wood material	R21
Colours (for printing and dyeing of raw materials or products)	R3; R37-R38
Viscose	R15-R18
Other materials (Polyurethane, SEBS, other), max 5%	R2

2.1.1 Chemical products

R3 “Chemical products, classification” applies to all chemical products added during the production of sanitary products, even where additional requirements are imposed on the chemical products later in this document. This applies for example to glue, odour control substances (incontinence care products only), silicon, dyestuffs etc. The requirement does not apply to printing colours used in the packaging material.

R3 Chemical products, classification

Yes No

Chemical products used in the production of sanitary products must not be subject to a classification requirement as specified in Table 2.

Table 2 Classification of chemical products

Classification	EU Classification until 1 December 2010*	EU Classification after 1 December 2010*
Harmful to environment	N with R50, R50/53 or R51/53. R52, R53 or R52/53 (without N)	Aquatic acute with H400 Aquatic chronic 1/2/3/4 with H410, H411, H412, H413
Highly toxic	T + with R26, R27, R28, R39	Acute Tox. 1/2 with H330, H310, H300 STOT SE 1 with H370
Toxic	T with R23, R24, R25, R39, R48	Acute Tox 2/3 with H331, H330, H301 STOT SE 1 with H370 STOT RE 1 with H372
Harmful to health	Xn with R20, R21, R22, R68, R48, R65	Acute Tox 4 with H332, H312, H302 STOT RE 2 with H373 Asp. Tox 1 with H304 STOT SE 2 with H371
Irritant	Xi with R41	Eye Dam. 1 with H318
Allergenic	Xn with R42, Xi with R43	Resp.sens 1 with H334 or Skin sens 1 with H317
Carcinogenic	Carcinogenic with R40, R45, R49	Carc 1A/1B/2 with H350, H350i and/or H351
Mutagenic	Mut with R46, R68	Mut 1B/2 with H340 and/or H341
Toxic to reproduction	Rep with R60, R61, R62, R63, R64	Repr 1A/1B/2 with H360F, H360D, H361f, H361d, H360FD, H361fd, H360Fd, H360Df Lact with H362

* Classification according to Directive 67/548/EEC and Directive 1999/45/EEC (until 1 December 2010 and during the transition period 2010-2015) and Regulation 1272/2008/EEC (from 1. December 2010). The requirement also includes combinations of the above R phrases, e.g. T+ with R26/27/28.

Please note that the manufacturers of the chemical products are responsible for classification.

- Product safety data sheets for chemical products in accordance with the applicable regulation 1907/2006/EEC.

Appendix no. _____

2.1.2 Fluff-/Cellulose pulp

R4 Fluff-/Cellulose pulp, optical brightener

Optical brightener must not be added to the pulp.

Yes No

- Declaration from the pulp/cellulose manufacturer that the requirement has been fulfilled.

Appendix no. _____

R5 Fluff-/Cellulose pulp, general requirements as to productionYes No

The fluff-/cellulose pulp must fulfil the requirements in the Criteria document for "Nordic Ecolabelling of Paper Products – Basic Module", Chapter 2 for pulp suppliers and "Nordic Ecolabelling of Paper Products – Chemical Module". Version 1 or later applies in the case of both documents.

Has the pulp quality already been approved in accordance with the requirements in the Basic module and the Chemical Module?

If yes, state when and by which secretariat.

If no, documentation of the relevant requirements in the Basic module and the Chemical Module must be submitted. The requirements in the Basic Module include requirements as to the use of fibres from sustainable forestry operations, emissions, energy consumption, quality and environmental management and waste processing. The Basic Module also describes methods of calculation and analyses for use in calculating the values in R6, R7 and R8. These requirements must be fulfilled for the production of pulp including conversion to fluff pulp.

The fluff supplier must document that the requirements have been fulfilled.

Appendix no. _____

R6 Fluff-/Cellulose pulp – Fibre raw materialYes No

The use of recycled fibre in fluff-/cellulose pulp in sanitary products is not permitted. Off-cuts from production are not classified as recycled fibre and may therefore be used.

On a year-on-year basis a minimum of:

- 1) 20% of fibre raw materials in the pulp must arrive from certified forestry operations, or
- 2) 75% of fibre raw materials in the pulp must be woodshavings or sawdust or
- 3) a combination of 1 and 2.

If the fibre raw material in the pulp consists of less than 75% by-products such as wood shavings or sawdust, the proportion of fibre raw material based on certified wood from sustainable forestry operations must be calculated using the following formula:

Requirement applicable to the proportion of fibre raw material from certified forestry operation present in the pulp (Y):

$$Y (\%) \geq 20 - 0.267x$$

where x = the proportion of woodshavings or sawdust.

The manufacturer must ensure that wood materials do not derive from forestry environments worthy of protection for biological and/or social reasons. This requirement must be documented in the basis module.

Requirements as to certified fibre raw materials are described in further detail in Appendix 1.

The pulp manufacturer must document that the requirement is fulfilled and information on the proportion of fibre raw materials from certified forestry operations and the proportion of planer shavings or sawdust in the pulp must be reported annually for as long as the licence remains in force. The report for the preceding year must be submitted to Nordic Ecolabelling by 1 April together with calculations documenting fulfilment of the forestry requirement.

Appendix no. _____

R7 Fluff-/Cellulose pulp, energy requirements for productionYes No

Energy points from the production of pulp must fulfil the following requirements:

$$P_{\text{energy total}} = (P_{\text{el}} + P_{\text{fuel}})/2 < 1.25$$

and

$$P_{\text{el}} < 1.75$$

The energy points P_{el} and P_{fuel} for pulp are calculated as energy consumed divided by the reference value for energy for the process used, see R38 of the Basic Module.

Fluff pulp (especially): The fluffing of the pulp must take place only in the pulp production process, except in the case of mechanical tearing of the pulp which takes place in the production of sanitary products. In calculating energy points for pulp production, fluffing must be specified as a new process and the de facto energy consumption must be specified both as a reference value and as energy consumption.

Where a mixture of several pulps is used, R16 in the Basic Module describes how the energy points for the mixture are to be calculated.

Electricity and fuel consumption must be documented by means of calculations based on invoices and readings of own electricity meters.

- The pulp manufacturer must document that the requirements have been fulfilled and show the calculations of energy points on the basis of the methods described in the Basic Module.

Appendix no. _____

R8 Fluff-/Cellulose pulp, requirements as to emissions during productionYes No

Emissions of organic halogen compounds (AOX) to water must not exceed 0.15 kg/tonne of pulp.

The total of the emission points for COD and phosphorous to water and sulphur (S) and nitrogen oxides (NO_x) to air must not exceed 4:

$$P_{\text{emission total}} = P_{\text{COD}} + P_{\text{P}} + P_{\text{S}} + P_{\text{NOx}} \leq 4$$

The individual emission points for P_{COD} , P_{P} , P_{S} , P_{NOx} must not exceed 1.5.

Emission points are calculated by dividing the measured emissions by a reference value:

$$P_{\text{COD}} = \text{COD}_{\text{total}} / \text{COD}_{\text{reftotal}}$$

A description of the reporting of emission values is provided in R42, and the reference values for the emissions are provided in R19 of the Basic Module. If a mixture of several pulps is used a weighted total of the emissions and the reference values must be used for calculating the individual emission points equivalent to the method shown in R 19 in the Basic Module.

- The pulp manufacturer must document fulfilment of the requirements.

Appendix no. _____

2.1.3 Paper (tissue paper, copy and printing paper, other paper)

Documentation from the paper manufacturer can be forwarded directly to Nordic Ecolabelling. Paper, which is used as a component in complex materials such as tape or release paper (silicone paper) and where the paper makes up less than 2% of the product, does not have to comply with R9-R12.

R9 Paper, production requirementsYes No

State name, quality, weight per area and manufacturer of the paper.

Tissue paper or copy and printing paper shall comply with the supplementary modules for tissue paper or copy and printing paper, respectively.

Grease-proof paper shall either comply with the supplementary module for grease-proof paper or the requirements in the basic module and the chemical module with addition of requirements R14, R15, R25 and R26 in the supplementary module for grease-proof paper.



Documentation showing that the requirement is fulfilled. If the paper material holds a license according to other criteria documents (e.g. tissue paper, copy and printing paper), the license certificate should be forwarded to Nordic Ecolabelling.

Appendix no. _____

R10 Paper, from recycled fibersYes No

If the paper contains recycled fibers the content of the following harmful substances must not exceed:

Parameter	Cut-off value	Testmethod
Formaldehyd	1 mg/dm ²	EN 1541-aqueous extract
Glyoxal	1,5 mg/dm ²	DIN 54603
PCP	2 mg/kg	EN ISO 15318

Information about analytical laboratories is given in Appendix 2



Testresult showing that the requirement is fulfilled. (Nordic Ecolabelled tissue already complies with this requirement).

Appendix no. _____

R11 Paper, microbial activityYes No

Paper shall not have inhibitory effects on the growth of microorganisms according to testmethod EN 1104.

Information about analytical laboratories is given in Appendix 2.



Testresult showing that the requirement is fulfilled. (Nordic Ecolabelled tissue already complies with this requirement).

Appendix no. _____

R12 Paper, strenghtYes No

If the paper forms part of a product that is disposed of in the toilet the paper must not have wet strenght.

The toilet paper is considered to be strong when wet if its relative wet tensile strength is greater than 10% in the machine direction. The test must be conducted on the converted product.

The relative wet tensile strength is measured as the quotient between wet and dry tensile strength. If the tensile strength of the wet tissue paper is so low that it can not be measured the paper is not considered as strong when wet. The measurement of the tensile strength must be done by a standard and reproducable method.

Information about analytical laboratories is given in Appendix 2.



Testresult showing that the requirement is fulfilled. (Nordic Ecolabelled tissue already complies with this requirement).

Appendix no. _____

2.1.4 Cotton

R13 Cotton, bleaching with chlorine gas

Yes No

The cotton must not be bleached with the aid of chlorine gas (Cl₂).

Declaration from the cotton producer that the requirement has been fulfilled.

Appendix no. _____

R14 Cotton, raw fibre

Yes No

The cotton must be organically cultivated or cultivated in the transitional phase to organic production. The cotton must be produced and inspected in accordance with EU Directive 2092/91 or produced and controlled by equivalent means under an equivalent control system, such as KRAV, SKAL, IMO, OCIA, etc.

The string on tampons is exempted from this requirement.

Certificate or transition certificate from a competent body for the certification of organic cultivation. If in the case of cultivation in a transitional process no certificate is available, the ecolabelling organisation must be supplied with information on the supplier and method of cultivation and sufficient documentation showing that the cultivation is in the process of transition to organic production. The cotton plantation may be inspected by the ecolabelling organisation.

Appendix no. _____

2.1.5 Viscose

R15 Viscose, bleaching with chlorine gas

Yes No

Cellulose pulp or cellulose fibre must not be bleached with chlorine gas.

Declaration from the manufacturer of cellulose pulp and regenerated cellulose that the requirement has been fulfilled.

Appendix no. _____

R16 Viscose, COD emissions

Yes No

COD emissions from viscose production (the production of cellulose pulp and regenerated cellulose) must not exceed a combined total of 55 kg per tonne of regenerated cellulose. The quantity of COD may also be stated as the equivalent quantity of TOC.

Information on sampling, methods of analyses and analysis laboratories is provided in Appendix 2.

Analyses reports on measurement of COD or TOC emissions from the production of cellulose pulp and regenerated cellulose. The methods of analysis must be described and the laboratories responsible must be stated.

Appendix no. _____

R17 Viscose, sulphur emissions

Yes No

Sulphur emissions from the dissolving of pulp and fibre production must not exceed more than 20 kg S/tonne of viscose.

Calculation of sulphur emissions from the stated processes.

Appendix no. _____

R18 Viscose, zink emissions

Yes No

Zink emissions must not exceed 0.20 kg Zn/tonne of regenerated cellulose.

Information on sampling, methods of analyses and analysis laboratories is provided in Appendix 2.

Analysis reports on measurement of zink emissions from the production of regenerated cellulose. The methods of analyses must be described and the laboratories responsible must be stated.

Appendix no. _____

2.1.6 Non-woven

R19 Non-woven, general requirements

Yes No

The manufacturer of the non-woven used must specify the materials (raw materials and additives) used in production and state the names of raw material suppliers.

Fluff-/cellulose pulp and polymers, which are used in air-laid must fulfil relevant requirements from R4 - R8 and R22 - R25.

Viscose used in non-woven must fulfil the relevant requirements in R15 - R18.

Polymers present in non-woven must fulfil R22 – R23.

- The manufacturer of the non-woven must specify the materials used in production and the names of raw material suppliers.

Appendix no. _____

R20 Non-woven, chemicals

Yes No

All additives used in non-woven must fulfil R3 "Chemical products, classification".

This e.g. also applies to CaCO₃ and EVA (ethylene vinyl acetate). Process chemicals like spinning additives are exempted from the requirement.

- Documentation in accordance with R3.

Appendix no. _____

2.1.7 Wood materials

This requirement applies to wood materials used in cotton buds and toothpicks.

R21 Wood materials – forestry requirements

Yes No

The manufacturer must ensure that the wood materials used do not originate in forestry environments that require protection for biological and/or social reasons. Nordic Ecolabelling may revoke the licence if information comes to light that wood materials originating in forestry environments that require protection for biological and/or social reasons has been used.

On an annual basis at least 70% of the wood used must originate in certified forestry operations.

The requirements are described in further detail in Appendix 1.

- The manufacturer must document that the requirement has been fulfilled and data on the proportion of wood from certified forestry operations must be reported annually for as long as the licence remains in force. The report for the preceding year must be submitted to Nordic Ecolabelling before 1 April together with calculations showing that the forestry requirement is fulfilled.

Appendix no. _____

2.1.8 Polymers

Polymers that are subject to requirements when used in sanitary products are: polyethylene (PE), polypropylene (PP), polyester (PET), polystyrene (PS), polyacrylic acid-based super-absorbents (SAP), elastane (or: lycra, spandex) and polymers based on renewable raw materials (such as bio-SAP and starch-based thermoplastics). Other polymers may be present only in small quantities, see R2. This requirement does not apply to silicone.

- R22 Polymers, halogen-based** Yes No
 Sanitary products and their packaging must not contain halogen-based polymers, e.g. PVC.
- Declaration from the polymer manufacturer or documentation from the manufacturer of sanitary products showing that the requirement is fulfilled. Appendix 3 can be used. Appendix no. _____
- R23 Polymers, constituent substances** Yes No
 Polymers must not contain halogenated organic compounds or phthalates, except pollutants. Nor may the polymer contain organotin compounds or antimony.
- The limit for organotin compounds is 10 ppb.
- The requirement applies to the polymers in the sanitary product and to the packaging around the individual product in a pack.
- Pollutants are traces from raw material production present in concentrations of less than 100 ppm (0.01 weight per cent, 100 mg/kg), but not substances added to the raw material or the product deliberately and with a purpose, irrespective of quantity.
- Polyester must not contain antimony in concentrations > 200 ppm (the requirement does not apply to recycled polyester).
- Declaration from the polymer manufacturer that the requirement is fulfilled. Appendix 3 can be used. Appendix no. _____
- R24 Polymers, residual monomers in Super-absorbents (SAP)** Yes No
 Super-absorbents (SAP) may contain a maximum of 400 ppm residual monomers (the total of unreacted acrylic acid and cross linkers) that are subject to a classification requirement and have been allotted the risk- or hazard phrases specified in requirement R3, table 1.
- Information on sampling, methods of analysis and analysis laboratories is provided in Appendix 2.*
- The manufacturer must document the composition of the superabsorbent by means of a product safety data sheet which specifies the full name and CAS number and the residual monomers contained in the product classified in accordance with the above requirements and the quantities thereof. The methods used for analyses must be described and the names of the laboratories used for analysis must be stated. Appendix no. _____
- R25 Polymers, extracts in super-absorbents (SAP)** Yes No
 SAP may as a maximum contain 5% by weight of water-soluble extracts.
- Water-soluble extracts in SAP: Monomers and oligomers of acrylic acid with lower molecular weight than SAP and salts.*
- Information on sampling, methods of analysis and analysis laboratories is provided in Appendix 2.*
- The manufacturer must specify the quantity of water-soluble extracts in the super-absorbents. The methods of analyses used must be described and the analysis laboratories must be stated. Appendix no. _____

2.1.9 Composition of materials

R26 Composition of the materials in the sanitary product

Yes No

Sanitary products, including packaging/material around the individual product in a pack must fulfil requirement A, B or C:

- A. A minimum of 7.00 per cent by weight of the polymers must be based on renewable raw materials.
- B. The global warming potential (GWP) of the primary materials in the sanitary product must be less than or equal to 2.10 kg CO₂ eq/kg of sanitary product.

GWP is calculated as the weighted total of the contributions provided by the production of the main individual materials such as SAP, PE, PP, PET, polymers based on renewable raw materials, fluff, paper and viscose. For main individual materials which contain < 25% other components (e.g. EVA or CaCO₃ in non-woven materials) the GWP is calculated only for the main material. For other complex materials which contain more than 25% other components a weight based calculation is used. Other materials that may be present in a total quantity of less than 5% by weight according to R2 and materials specified in Chapter 2.2 (such as adhesive, silicon etc.) need not be added to the total GWP-value, but included in the products total weight:

$$\text{GWP/product} = \sum m_i * P_i / m_{\text{total}} \leq 2.10 \text{ kg CO}_2 \text{ eq/kg sanitary product}$$

P_i = GWP of the materials specified as kg CO₂ equivalents/kg of material

m_i = weight of the individual material, m_{total} = total weight of product

The GWP of the materials must be calculated using factory-specific data or the values provided in Table B1 in Appendix 4. Other figures, for example average figures for multiple production sites, must not be used. Contributions from the waste phase are not included. For the purposes of calculating GWP values, electricity must be multiplied by 400 g CO₂/kWh. (400 is used as the European mean figure for electricity production.)

An example of calculation and Table B1 containing values for GWP can be found in Appendix 4.

- C. At least 50.00 % by weight of the materials in the sanitary product must consist of renewable raw materials.

A polymer is counted as 100% renewable if it consists of more than 75% renewable raw materials.

Based on the percentage composition of a product (as specified in R2), the manufacturer of the sanitary product must document compliance with the requirement by means of a calculation.

Appendix no. _____

- A: A list of the renewable polymers used must be provided. The polymer manufacturer must state the proportion of renewable raw materials contained in the polymers used in the product.
- B: The calculation of GWP/product for the polymers used in the product must be documented.
- C: The calculation of renewable raw materials in the product must be documented.

- R27 Cotton buds and toothpicks, materials in the stick** Yes No
- The stick of cotton buds and toothpicks must be made of renewable raw materials, such as wood, board or polymers from renewable raw materials.
- If the stick is made of board, the material must not be bleached using chlorine gas.
- If the stick is made of wood, R21 will apply.
- A polymer is counted as 100% renewable if it consists of more than 75% renewable raw materials.*
- Documentation that the requirement is fulfilled. Appendix no. _____

2.2 Other materials and additives used in the production

All chemical products in this chapter used in the end production of sanitary products are subject to the general requirements applicable to the constituent substances of sanitary products, R3, Chemical products, classification.

- R28 Silicone treatment, solvents** Yes No
- Where components in sanitary products are treated with silicone, the manufacturer must ensure that employees are protected from the solvents.
- Information on the method used in silicone treatment and documentation showing that the employees are protected if solvents are used. Appendix 5 may be used to document the use of solvents. Appendix no. _____

- R29 Silicone treatment, siloxane** Yes No
- Neither octamethyl cyclotetrasiloxane D4 (CAS 556-67-2) nor decamethyl cyclopentasiloxane, D5, (CAS 541-02-6) may be present in chemical products used in the silicone treatment of components in sanitary products. The requirement does not apply to D4 and D5 contained as pollutants.
- Pollutants are traces from raw material production present in concentrations less than 100 ppm (0.01 % by weight, 100 mg/kg) in the final product, but not substances added to the raw material or the product deliberately and for a purpose, irrespective of quantity.
- Declaration that the requirement has been fulfilled. Appendix 5 may be used. Appendix no. _____

- R30 Adhesive** Yes No
- Adhesives must not contain phthalates, colophony resin or formaldehyde, with the exception of pollutants.
- Pollutants are traces from raw material production present in concentrations less than 100 ppm (0.01% by weight, 100 mg/kg) in the final product, but not substances added to the raw material or the product deliberately and for a purpose, irrespective of quantity.
- For formaldehyde, the maximum limit for the content of formaldehyde generated under the production of the adhesive is, however, 250 ppm (0.0250%) measured in newly produced polymer dispersion. The content of free formaldehyde in hardened adhesive (glue) must not exceed 10 ppm (0.001%). Hotmelt adhesives are exempted from this requirement.
- Declaration from the adhesives supplier that the adhesive used does not contain phthalates or colophony resin. Results of analysis of the formaldehyde content of the adhesive. Appendix 5 may be used. Appendix no. _____

- R31 Fragrance, scent and flavour additives** Yes No
 Perfume or other fragrance substances (e.g. essential oils and plant extracts) must not be present in the product.
 Flavour additives must not be added to toothpicks.
 Completed and signed declaration from the manufacturer. Appendix 5 may be used. Appendix no. _____
- R32 Lotion and skin care preparations** Yes No
 The product must not contain lotion, skin care and/or moisturising preparations.
 Completed and signed declaration from the manufacturer. Appendix 5 may be used. Appendix no. _____
- R33 Odour control substances** Yes No
 Odour control substances are permitted only in incontinence care products.
 In the case of products that are not incontinence care products, the manufacturer must declare that the requirement is fulfilled. Appendix 5 may be used. Appendix no. _____
- R34 Medicaments** Yes No
 Products containing chemical substances designed to prevent, alleviate or cure illness, sickness symptoms, pain and bacterial growth or to alter bodily functions cannot be ecolabelled.
 Lactic acid bacteria applied to tampons are exempted from the requirement.
 The manufacturer must declare that the requirement is fulfilled. Appendix 5 may be used. Appendix no. _____
- R35 Nanomaterials** Yes No
 Nanomaterials/nanoparticles/nanofibres (such as nanometals, nanominerals, pure nanocarbon compounds or nanofluoro compounds) must not be actively added to sanitary products unless adequate documentation exists that they will not cause health or environmental problems and that they are essential to the performance of the sanitary product. TiO₂ used for dyeing of polymers and viscose is exempted from this requirement.
For the purposes of this document nanoparticles are counted as microscopic particles where at least one of the dimensions is less than 100 nm. Nanometals include nanosilver, nanogold and nanocopper.
 Declaration from the manufacturer that the requirement is fulfilled. Appendix 5 may be used. Appendix no. _____
- R36 Flame retardants** Yes No
 Flame retardants must not be added to sanitary products.
 Declaration from the manufacturer that the requirement is fulfilled. Appendix 5 may be used. Appendix no. _____

2.3 Colours for printing and dyeing

R37 Dyeing

Yes No

Sanitary products must not be dyed. This requirement also applies to the single raw materials with exception of tampon strings. Materials that are not directly in contact with the skin may, however, be dyed if the dye has a special function. An example of a special function can be dyeing of nursing pads to reduce the visibility of the product through white or light coloured clothing. Titanium dioxide in polymers and viscose is exempted from this requirement. The requirement does not apply to packaging material and tape.

Exceptions may be granted in the case of certain specialist products for use in hospitals and nursing homes, subject to agreement with Nordic Ecolabelling. If the products are dyed, the dyestuffs must fulfil requirement R3 in this criteria document and R9 to R14 of the Chemical Module ("Nordic Ecolabelling of Paper Products – Chemical Module, Version 1 or later").

- Declaration from the manufacturer of the sanitary product that neither the product nor the raw materials have been dyed. In the case of exemptions for specialist products the manufacturer/supplier of the dyestuff must document that the requirement is fulfilled by means of health, safety and environment datasheets and a report on the contents of the product using Appendix 6 or the equivalent.

Appendix no. _____

R38 Inks for printing

Yes No

The inks must fulfil requirement R3 in this criteria document and R9 to R14 of the Chemical Module ("Nordic Ecolabelling of Paper Products – Chemical Module, Version 1 or later"). The requirement does not apply to printing on the packaging.

- The ink/dyestuff manufacturer/supplier must declare that the requirement is fulfilled by submitting health, safety and environment datasheets and a report on the content of the product with the aid of Appendix 6 or the equivalent.

Appendix no. _____

2.4 Packaging

R39 Packaging

Yes No

The manufacturer must report the type and quantity of packaging used.

For requirements applicable to the material contained in the packaging, see also requirement R26.

- Description and specification of the quantity and type of packaging material.

Appendix no. _____

R40 Labelling of plastic packaging

Yes No

Plastic packaging must be labelled in accordance with ISO 11469:2000 Plastic – Generic identification and labelling of plastic products, DIN6120 or the equivalent. The requirement does not apply to packaging of single products in a package.

- Samples of labelling of plastic packaging.

Appendix no. _____

2.5 Waste

R41 Production waste

Yes No

A waste plan for sorting at source must be attached to the application.

The quantity of waste generated during the manufacture and packaging of ecolabelled sanitary products, excluding tampons, must not exceed 5% (w/w) of the end products, unless the manufacturer is able to certify that the waste is reused or that materials are recovered from the waste. All waste generated during manufacturing of the product must be included in the statement of the quantity of waste.

In the case of tampon production, waste quantities must not exceed 10% (w/w).

Incineration with energy exploitation is accepted as reuse.

- The waste plan of the plant with a specification of quantities and end processing (e.g. incineration or recycling).

Appendix no. _____

2.6 Requirements applicable to the products

R42 Tampons

Yes No

Tampons may as a maximum contain 1,000 aerobic microorganisms per gram of product.

The quantity of aerobic microbes must be determined, see the test method specified in Appendix 2.

- Description of the test for aerobic microorganisms and a report on the test results.

Appendix no. _____

R43 Information on packaging

Yes No

The absorption ability must be specified on the packaging in the case of product types where this is relevant. E.g. for diapers, sanitary products (sanitary towels and panty-liners), tampons and incontinence care products this information can be provided by means of clear details of the size (e.g. the weight of the child in kilos or pictograms/values indicating the absorption capacity of the product).

In the case of relevant products, consumers must be urged not to discard them in the toilet. This information can be stated by use of a pictogram. Relevant products include diapers, sanitary towels, panty liners, tampons, cotton buds etc.

- Sample of the packaging information.

Appendix no. _____

R44 Performance

Yes No

The efficiency/quality of the product must be satisfactory and must match that of equivalent products on the market.

In the case of products where an acknowledged test exists, this test must be used. The test may be a laboratory test, the applicant's internal quality test, a consumer test or a comparative test with an equivalent product.

In the case of diapers, sanitary products (sanitary towels and panty-liners), incontinence care products and breast pad, the performance test must as a minimum include absorption capacity and rewet under pressure (dryness on the outside).

In the case of tampons the performance test must as a minimum encompass absorption capacity.

If a consumer test is performed, a minimum of 80% must be satisfied with the product out of a minimum of 10 users, see the conditions in Appendix 7.

- Documentation (test report or user report) of the performance of the product, including where applicable tests of absorption capacity and wet back. The chosen test must be described and data attached.

Appendix no. _____

3 Quality requirements and the requirements of the authorities

In order to ensure that the Nordic Ecolabel requirements are fulfilled throughout the licence period, the following procedures must be in place.

If the producer/importer/supplier has a certified environmental management system in accordance with ISO 14 001 or EMAS, in which the following procedures are implemented, it will be sufficient for the accredited auditor to document implementation of the requirements.

M1 Statutes and regulations

Yes No

The licenceholder must ensure that the applicable provisions on safety, working environment, environmental legislation and plant-specific conditions/licences are adhered to at all production sites for the Nordic Ecolabelled product. The product must also fulfil relevant product-specific requirements laid down by the authorities. For example, sanitary products that may be classified under the EU Directive on Medical Equipment, 93/42/EU as amended, must be safe to use and their performance must be in accordance with the Directive.

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

M2 Responsibility for the Nordic Ecolabel

Yes No

One person in the company must be allocated responsibility for fulfilment of the Nordic Ecolabel requirements and one person must be allocated responsibility for contact with Nordic Ecolabelling.

- Organisational structure showing responsibility for the above.

Appendix no. _____

M3 Documentation

Yes No

The licenceholder must be able to present a copy of the application and the basis for calculation and data (including test reports, documents from subcontractors and the like) for the documentation submitted in connection with the application.

- On-site inspection.

- M4 The quality of the sanitary product** Yes No
 The licenceholder must guarantee that the quality of the Nordic Ecolabelled sanitary products will not deteriorate during the period of validity of the licence. This also applies to the production of the raw materials used in the products.
-  Procedures for summarising and, where necessary, reporting on complaints received concerning the quality of the Nordic Ecolabelled sanitary products. Appendix no. _____
- M5 Planned changes** Yes No
 Planned changes affecting the Nordic Ecolabel requirements must be reported in writing to Nordic Ecolabelling.
-  Procedures showing how planned changes are handled. Appendix no. _____
- M6 Unforeseen deviations** Yes No
 Unforeseen deviations that impact on the Nordic Ecolabel requirements must be reported in writing to Nordic Ecolabelling and recorded in a journal.
-  Procedures showing how unforeseen deviations are handled. Appendix no. _____
- M7 Traceability** Yes No
 The licenceholder must safeguard the traceability of the Nordic Ecolabelled sanitary products in the production process in order to ensure that the Nordic Ecolabelled product is not mixed with products that are not Nordic Ecolabelled.
-  Descriptions/procedures of fulfilment of the requirement. Appendix no. _____
- M8 Recycling system** Yes No
 The relevant national rules, laws and/or industry-wide agreements on recycling schemes for products and packaging must be fulfilled in the Nordic countries in which the sanitary products are sold.
-  Declaration from the applicants stating the recycling scheme under which the company has agreements on recycling/processing of waste. Appendix no. _____
- M9 Marketing** Yes No
 Marketing of the Nordic Ecolabelled sanitary products shall be in accordance with "Rules on Nordic Ecolabelling" of 12 December 2001 or subsequent versions. The Nordic Ecolabel must not reduce the visibility or readability of any CE Label attached to products encompassed by the Directive for Medical Equipment, 93/42/EU.
-  Completed Appendix 8. Sketch showing how and where the Nordic Ecolabel and, if applicable, CE Label, are attached. Appendix no. _____

Marketing

The Nordic Ecolabel, the Swan, is a trademark that is familiar and respected in the Nordic countries. The Nordic Ecolabelled product may be marketed using the Nordic Ecolabel for as long as the licence remains in force.

The label must be positioned in such a way that no doubt exists about the meaning of the label and that makes it clear that the sanitary product is ecolabelled.

Further information on marketing can be found in the “Rules on Nordic Ecolabelling” 12 December 2001 or subsequent versions.

The design of the Nordic Ecolabel

The design of the Nordic Ecolabel is as follows:



Licence number

Each licence has a unique licence number for use in combination with the label.

Further information on the design of the label can be found in “Rules on Nordic Ecolabelling” 12 December 2001, or subsequent versions.

Follow-up inspections

Nordic Ecolabelling may check to ensure that the sanitary products continue to fulfil the Nordic Ecolabel requirements after a licence has been granted. This may take the form of, for example, on-site inspections or random sampling.

If it transpires that the sanitary products no longer fulfil the requirements, the licence may be revoked.

Random samples may also be taken at points of sale and analysed by an impartial laboratory. If this process reveals that the requirements are not fulfilled, Nordic Ecolabelling will require the licenceholder to pay the costs of analysis.

How long is a licence valid?

Nordic Ecolabelling adopted the criteria for sanitary products, version 5, on 5 March 2008 and they will remain in force through 30 June 2012.

At the Nordic Ecolabelling Board meeting on 15 April 2009 it was decided to change the requirement for fluff pulp (R8, AOX). The proposed amendment was adopted after a renewed consideration of the subject as agreed on NMN on 17 March 2009. This change has resulted in criteria version 5.1.

At the Nordic Ecolabelling Board meeting on 16 March 2010 it was decided to include requirements to paper and include necessary adjustments of the document. This change has resulted in criteria version 5.2.

At the Nordic Ecolabelling Board meeting on 22 June 2011 it was decided to prolong the criteria with two years. The new version is 5.3 and it is valid until 30 June 2014.

The ecolabelling licence will apply for as long as the criteria are fulfilled and for as long as the criteria remain valid. The criteria may be extended or adjusted. If so, the licence will be extended automatically and the licence holder will be notified.

One year (at the latest) before the expiry date the licence holder will be informed of the criteria that will apply thereafter. The licence holder will then be given the opportunity to renew the licence.

New criteria

Future criteria will focus particular attention on:

- extending the product group to include other disposable sanitary products.
- increasing the proportion of plastic produced using renewable raw materials.
- increasing the stringency of the requirement applicable to the product's contribution to global warming. Consider a more precise calculation which also takes in the contributions from incineration, landfill dumping and composting in the GWP values for the materials.
- determining whether a requirement should be included that a certain proportion of the product must be compostable.
- whether additional requirements can be imposed as to the processes used in the production of the materials and chemicals in the product.
- considering whether additional requirements should be imposed with regard to packaging.

Abbreviations/definitions

Chemical products:	Chemical products added during the production of sanitary products include glue, odour control substances (incontinence care products only), silicon, inks/dyes etc.
COD:	Chemical oxygen demand: The quantity of chemical oxygen consuming substances in a fluid.
Components:	Components are inputs in production that are neither raw material nor chemicals. A component might for example be a ready-made part used in assembling the product, such as coated tape, release paper bearing print etc.
EVA:	Ethyl vinyl acetate.
Non-woven:	Material based on fibers that are bound together by mechanical, chemical or thermal bonding. Non-woven materials in sanitary products can e.g. be non-woven based on polypropylene, polyester/copolyester, fluff pulp (air-laid).
NOx:	Nitrogen oxides: The quantity of nitrogen oxides in flue gases. Nitrogen oxides may consist of compounds with various degrees of oxidation, but are often specified as NO ₂ .
Primary packaging:	Both the packaging around individual products in a packet and the packaging around the packet as sold in retail outlets or directly to the customer. Primary packaging does not include transport packaging.
Renewable resources:	Renewable resources are defined as raw materials taken from biological materials that are continuously regenerated within a short space of years, such as corn and trees.
Residual monomers in SAP:	Inert acrylic acid monomers and cross linkers in SAP.
SAP:	(Super Absorbent Polymer): Homopolymers of acrylic acid. Substances in powder form that in diapers are mixed with cellulose-based pulp to increase absorption. SAP works by forming a gel with the fluid.
Sustainable forestry	Is forestry which is managed with the aim of securing the biodiversity of the forest, new growth and other ecological processes securing the basis for a financial return on the resources of the forest but not at the expense of the forest's resources that takes long-term social responsibility at both local and global level.
TOC:	Total organic carbon: The total quantity of organic carbon in a fluid.
Water-soluble extracts in SAP:	Monomers and oligomers of acrylic acid with lower molecular weight than SAP polymers and salts.

Appendix 1 Forestry requirements for the Nordic Ecolabel

Forestry standard requirements

Nordic Ecolabelling specifies requirements on the standards to which forestry management is certified. The requirements are described below. Every individual national forestry management standard and certification system will be checked by Nordic Ecolabelling to ensure fulfilment of all requirements. When the forestry management standard is revised, the standard is checked again.

Requirements regarding standards

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

The requirement on forestry standards is formulated as a process requirement, where the point of reference is that if economic, social and environmental interests in a process are in agreement as to a forestry standard, an acceptable level can be assured for the standard.

If a forestry standard is developed or accepted with regard to economic, ecological and social interests, it assures that the standard maintains a suitable level of requirements. That is why requirements are specified that the standard must take all three interests into consideration and that all stakeholders must have been invited to participate in the development of the forestry standard.

The standard must contain absolute requirements which must be met before the forest can be certified. This ensures that the forest complies with an acceptable level of environmental work. When Nordic Ecolabelling requires that the standard shall encourage and promote sustainable forestry management, it further requires that the standard must be evaluated and revised regularly so that the process moves forward and the environmental impact reduces successively.

Requirements regarding certification systems and certification bodies

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

Requirements regarding certification bodies

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

The purpose of certification is to quality assure that the requirements in the forest standard are met. Nordic Ecolabelling has neither the skills nor the resources to check how forests are managed themselves or verify a forest standard and has therefore chosen to specify requirements for independent third-party certification.

The certification system must be able to verify that requirements in the forestry standard are met. The method used in the certification process must be repeatable and applicable to forestry, and certification must take place in accordance with one specific forest standard. There must be a check on the standards in the forest before a certificate is issued.

Appendix 2 Test methods and analysis laboratory

1 Sampling

Testing must be performed in a competent manner.

2 Testing

To demonstrate compliance with the criteria in this document, data must be submitted deriving from the specified test methods or equivalent tests assessed by an impartial and competent organization to be equivalent.

Aerobic micro-organisms

The number of aerobic micro-organisms must be tested in accordance with AS 2869-2008 or equivalent methods (e.g. EP 6.2m chapter 2.6.12).

Residual monomers in SAP

As a test method could Ert 410.2-02 Residual monomers, EDANA Recommended Test method, be used.

Water-soluble extracts in SAP

As a test method could EDANA Ert 470.1-99 be used with an extraction time of 1 or 16 hours.

COD/TOC

TOC: ISO 8245 Water quality. Guidelines for the determination of total organic carbon (TOC).

COD: ISO 6060 Water quality. Determination of the chemical oxygen demand.

Determination of chemical oxygen demand is calculated as an annual average and based on at least one representative 24-hour sample per week unless the emission permit of the authorities prescribes some other means of calculation.

Zinc

Analysis of the zinc content of waste water: SS 02 81 52, DS 263, NS 4773, SFS 3047 or ISO 17294 (2007). Analysis may be performed regularly using photometric or similar methods, provided that the analysis results are checked regularly and comply with the above methods of analysis.

Emissions of zinc to water are calculated as an annual average and based on at least one representative 24-hour sample per week unless the emission permit of the authorities prescribes some other method of calculation.

Documentation

Description of the methods of analysis used and the results achieved.

Formaldehyde

The content of formaldehyde in adhesives can be determined with an appropriate method, e.g. derivatisation and analysis with GC-MSD or HPLC with UV detection. A relevant standard method could be ISO EN 16000-10:2006, which is used e.g. for formaldehyde in building products (adhesives included).

3 Choice of analysis laboratory

Testing must be performed in a competent manner. The test laboratory must be impartial and competent.

The ecolabelling organization will ensure that the test laboratory fulfils the general requirements in the standard EN 45001 or ISO-IEC Guide 25 or has official GLP approval. The applicant is responsible for documentation and analysis fees.

The manufacturer's own laboratory may be approved for analysis and testing if the authorities check or monitor the sampling and analysis process or if the manufacturer has a quality assurance system in place that encompasses sampling and analysis and is certified to ISO 9001.

In the case of chemicals, scientifically tested literature references or a product safety data sheet containing data on ecotoxicity and the test method used may be used to verify that the chemicals fulfil the requirements.

Documentation

Information on which laboratory analyses the emissions.

Declaration stating that the analyses used are encompassed by an accreditation or other quality assurance system or a description of the quality assurance system.

Appendix 3 Declaration – polymer manufacturers

Product name: _____

Manufacturer: _____

Polymer type:

PE PP PET PS SAP Biopolymer other _____

Halogen based polymers (R22)

Sanitary products and their packaging must not contain halogen based polymers, e.g. PVC.

Is the product a halogen based polymer? Yes No

Constituent substances in polymers (R23)

Does the polymer contain halogenated organic compounds or phthalates or organotin compounds (impurities not included)? Yes No

The limit for organotin compounds in the product is 10 ppb.

Impurities are traces from raw material production present in concentrations of less than 100 ppm, but not substances added to the raw material or the product deliberately and with a purpose, irrespective of quantity.

For polyester: is antimony contained in concentrations > 200 ppm? Yes No

The global warming potential (GWP) (R26)

If available, what is the GWP value for the polymer: _____ kg CO₂ eq/kg

The GWP of a material must be calculated on the basis of factory-specific data. Other figures, such as average figures for multiple production sites, must not be used. Contribution from the waste phase is not included. For the purpose of calculating GWP values electricity must be converted to primary energy by multiplying by 2,5 and then by 400 CO₂/kWh (400 is used as the European mean value for electricity production).

Signature of manufacturer:

Date	Company
Phone	Fax
Authorized signatory, name in block capitals:	Authorized signatory, signature

Appendix 4 Calculation of GWP

The following applies to R26 B):

The global warming potential (GWP) of the materials used in the sanitary product must be less than or equal to 2.10 kg CO₂ eq/kg sanitary product. The requirement applies to the product including packaging/material around the individual product in a pack.

Global warming potential (GWP) is calculated as the weighted total of the contributions made by the individual primary materials such as SAP, PE, PP, PET, polymers based on renewable raw materials, fluff, paper and viscose. For main individual materials which contain < 25% other components (e.g. EVA or CaCO₃ in non-woven materials) the GWP is calculated only for the main material. For other complex materials which contain more than 25% other components a weight based calculation is used. Other materials that may be present in a total quantity of less than 5% by weight according to requirement R2 and materials specified in Chapter 2.2 (such as adhesive, silicone etc.) need not be included in the total GWP-value, but are included in the products total weight. In the case of the materials the entire production process must be included. For example, in the case of polymers, the contribution made by monomer and polymer production and the processing of the polymer must be included.

$$\text{GWP/product} = \sum m_i * P_i / m_{\text{total}} \leq 2.10 \text{ kg CO}_2 \text{ eq/kg sanitary product}$$

P_i =GWP of material stated in kg CO₂ equivalents/kg material

m_i = the weight of the individual material, m_{total} = total weight of the product

The GWP of a material must be calculated on the basis of factory-specific data or values given in the table below. Other figures, such as average figures for multiple production sites, must not be used. Contribution from the waste phase are not included. For the purposes of calculating GWP values electricity must be multiplied by 400 g CO₂/kWh. (400 is used as the European mean value for electricity production.)

A polymer is classified as renewable if it consists of more than 75% renewable raw materials. Cellulose and viscose are not counted as polymers in this context.

Table B1. Values for GWP100* for production of selected materials

Polymer	GWP kg CO ₂ eq/kg polymer*
SAP	3.70
PE	2.60
PP	3.90
PET	6.50
PS	2.80
Fluff	0.90
Bio-polymers	1.20
Paper/viscose	1.20

* Global warming potential, GWP, is expressed with a time scale of 100 years and stated as kilo of CO₂ equivalents per kilo of material from cradle to gate. The background to the values is described in the Background document.

Example of calculation for diapers:

Table B2 Calculated values for GWP100* for two different products:

	Product 1		Product 2	
	Weight, g	g * GWP	Weight, g	g * GWP
SAP	12.00	44.40	10.00	37.00
PE	6.00	15.60	2.50	6.50
PP	8.00	31.20	9.00	35.10
PET	1.00	6.50	0.00	0.00
Fluff	12.00	10.80	22.00	19.80
Biopolymers	2.00	2.40	2.00	2.40
Paper/viscose	0.00	0.00	4.90	5.88
Other, glue etc.	3.00	0.00	4.00	0.00
Total	44.00	110.90	54.40	106.68
A. Per cent renewable polymers of the total content of polymers	-	6.90	-	8.51
B. GWP kg CO ₂ eq/kg product	-	2.58	-	1.96
C. Per cent renewable materials	-	32.56	-	53.13

Diaper 2 fulfils the requirements, but not diaper 1.

Appendix 5 Additives declaration (chapter 2.2)

Product name: _____

Supplier/manufacturer: _____

Silicon treatment

State which method that has been used for silicon treatment:

Does the silicon product contain octamethyl-cyclotetrasiloxane, D4, (CAS 556-67-2) and/or decamethyl cyclopentasiloxane, D5, (CAS 541-02-6)? Yes No

Does the silicon product contain pollutants (traces from raw material production) of D4 and/or D5 in concentrations > 100 ppm? Yes No

Glue

Does the glue contain phthalates or colophony resin? Yes No

Does the glue contain more than 250 ppm free formaldehyde measured on newly produced polymer dispersion and more than max. 10 ppm free formaldehyde measured on hardened adhesive (hotmelt adhesives exempted)? Yes No

Is chemical analysis of the content of formaldehyde available (for the newly produced polymer dispersion and for hardened adhesive, respectively)? Yes No

Result from chemical analysis: _____

Fragrance, scent and flavour

Does the sanitary product contain perfume, other fragrances (e.g. essential oils or plant extracts) or flavour? Yes No

Lotion and skin care preparations

Does the sanitary product contain lotion, skin care and/or moisturising preparations? Yes No

Odour control substances

Does the sanitary product contain odour control substances? Yes No

Medicaments

Does the sanitary product contain chemical substances designed to prevent, alleviate or cure illness, sickness symptoms and pain or to alter bodily functions? Yes No

Nanomaterials/particles

Have nanomaterials/particles been added to the sanitary product? Yes No

Flame retardants

Have flame retardants been added to the sanitary product? Yes No

Signature of manufacturer/supplier:

Date	Company
Phone	Fax
Authorized signatory, signature	Authorized signatory, name in block capitals

Appendix 6 Declaration for inks/dyestuffs

Product name:
Function:
Manufacturer/Supplier:

Classification

Are material safety data sheets forwarded for all used pigments/colours?

Yes No

Does the dye formulation contain any substances classified according to requirement R3?

Yes No

If yes, please specify (unambiguous chemical name and CAS no.), inc. quantity:

_____ %

_____ %

_____ %

Are any of the pigments based on heavy metals, aluminium or copper?

Yes No

If yes, please specify the metal:

In case of presence of copper in the pigment, it is confirmed that copper is only present as ptalocyanin pigment.

Yes No

Impurities

We hereby declare that total lead, cadmium, mercury and chromium impurities do not exceed 100 ppm in the dye or pigment.

Yes No

- Direct colours (dying of fibermaterials)

We hereby declare that the lead content does not exceed 100 ppm, mercury 4 ppm, cadmium 20 ppm and chromium 100 ppm in direct dyes.

Yes No

- Pigment colours (for printing)

We hereby declare that the lead content does not exceed 100 ppm, mercury 25 ppm, cadmium 50 ppm, chromium 100 ppm in the pigment dyes.

Yes No

Phthalates

Have phthalates been used in the dye formulations contained in the product?

Yes No

Amines

Does the dye formulation contain dyes that can decompose to form any of the amines listed in R14 (table 1) of the Chemical Modul ("Nordic Ecolabelling of Paper Products – Chemical Module, Version 1 or later")?

Yes No

We hereby certify that all changes that are made in the product composition until next revision of the criteria document will immediately be notified to Nordic Ecolabelling.

Signature of supplier/manufacturer

Date	Company
Phone	Fax
Authorized signatory, signature	Authorized signatory, name in block capitals

Nordic Ecolabelling will notify the supplier of the chemical product about any changes in the Chemical Module.

Appendix 7 Consumer test – framework conditions

These framework conditions may be used as documentation of the performance of the product. They are meant solely as guidelines and suggestions and the applicant's own tests will be accepted.

Consumer test

A consumer test should include at least 10 test persons. Consumers are asked about their satisfaction with the product when compared with the product they normally use. The questions put to the test subjects might be worded as follows:

- How do you rate the performance of the product compared to the product you normally use?
- How do you rate the absorption capacity of the product compared to the product you normally use?
- How do you rate the surface dryness of the product compared to the product you normally use?

At least eight of the test persons must be as satisfied with the project as they are with the product they normally use.

Appendix 8 The marketing of Nordic Ecolabelled sanitary products

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

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

We undertake to advise those individuals within the company involved in marketing the Nordic Ecolabelled products of the criteria for the Nordic Ecolabelling of sanitary products and "Regulations for Nordic Ecolabelling" 12 December 2001 or later versions.

Date and place

Company

Signature, contact person

Name in capital letters

Phone

Signature, marketing director

Name in capital letters

Phone

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