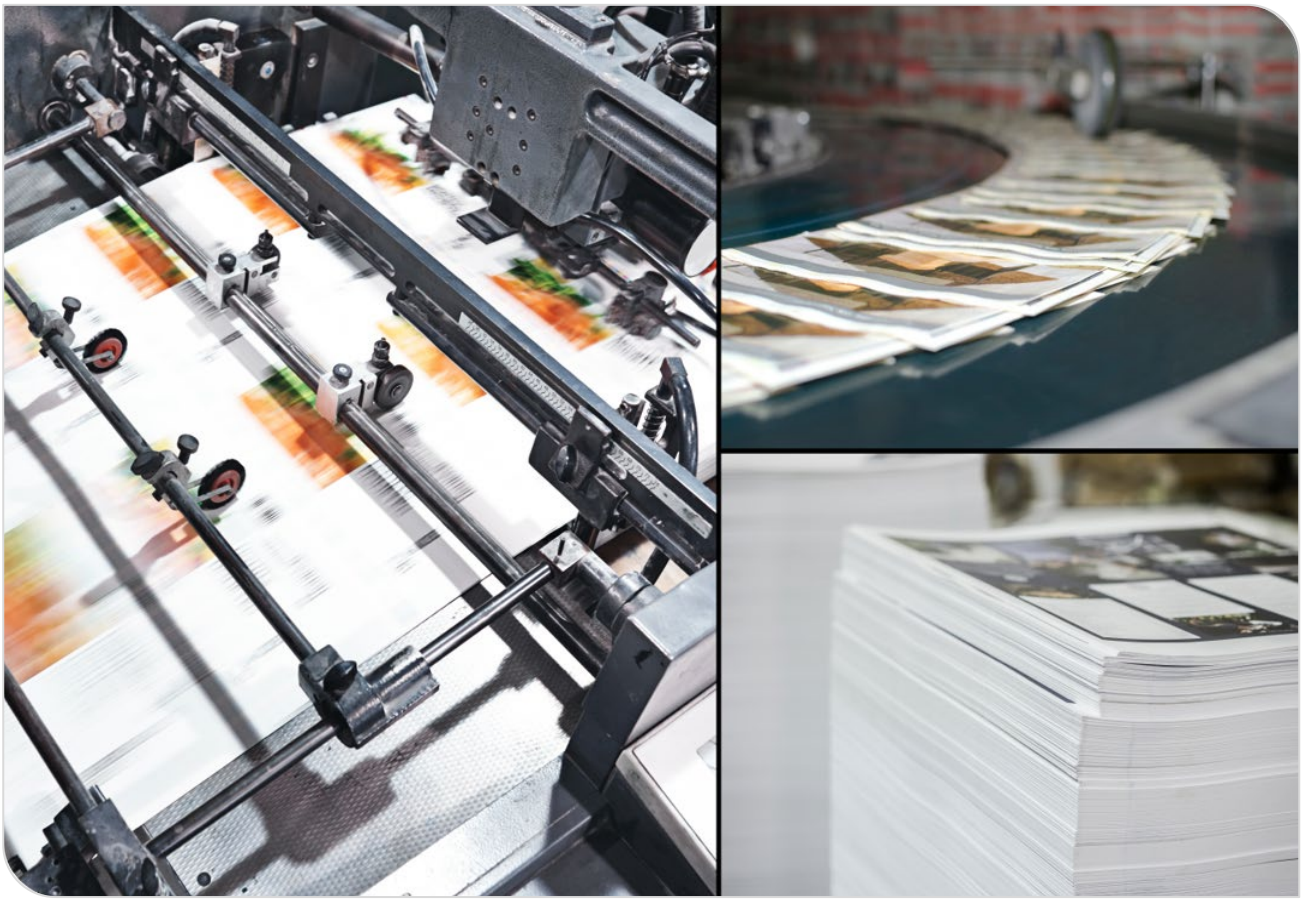
Nordic Ecolabelling for

Printing Companies and Printed Matter



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Nordic Ecolabelling

Content

Contact information

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

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What is a Nordic Swan Ecolabelled printing company and printed matter?

A Nordic Swan Ecolabelled printing company is a company that fulfils strict environmental requirements and has been granted a Nordic Swan Ecolabel licence to produce printed matter. Nordic Swan Ecolabelled printed matter is printed matter, such as brochure, books, newspaper, stationery and office supplies, envelopes, packaging, banners, and signs.

Nordic Swan Ecolabelled printing companies have reduced environmental and climate impact throughout the lifecycle through procurement of sustainably produced paper and reduced energy consumption. Environmental impact is also reduced by the use of chemicals that meet strict requirements and do not hinder the recycling process of the printed matter – this promotes circular economy.

Only Nordic Swan Ecolabelled printing companies can produce Nordic Swan Ecolabelled printed matter. Nordic Swan Ecolabelled printed matter contains 100% inspected- or ecolabelled paper, -board/corrugated board, solid board/panels, or textile. This ensures e.g. that all paper is produced energy-efficiently with low emissions to air and water and that the wood fibres originate from sustainable FSC or PEFC-managed forest.

The Nordic Ecolabelling requirements provide printing companies with guidelines on how to contribute to sustainable development.

Transport-/postal-/web shop packaging as a printed matter is not a traditional Nordic Swan Ecolabelled product, since here it is the actual packaging that is Nordic Swan Ecolabelled, and not the product inside the packaging. Nor is it the full packaging considering both the amount of packaging, nor the filling inside that is Nordic Swan Ecolabelled. To make this clear to the consumers, a special packaging mark for Nordic Swan Ecolabelled transport-/postal-/web shop packaging must be used. Guidelines for the use and placement of the mark have also been developed. Graphical guidelines for Nordic Swan Ecolabelled transport-/postal-/web shop packaging can be found at https://www.svanen.se/en/for-licensees/communicate-nordic-swan-ecolabel/

When the Nordic Swan Ecolabel is used the license number shall be included.

Nordic Swan Ecolabelled printing companies

Nordic Swan Ecolabelled printing companies have reduced environmental and climate impact throughout the lifecycle through procurement of sustainably produced paper and reduced energy consumption. Environmental impact is also reduced by the use of chemicals that meet strict requirements and do not hinder the recycling process of the printed matter – this promotes circular economy.

A Nordic Swan Ecolabelled printing company:

- Meets strict requirements for paper. At least 60% of the printing company's total annual consumption of paper is inspected or ecolabelled paper.

- Meets strict requirements for substrates such as textile, plastic, or aluminium/composite board material. At least 85% of the printing company's total annual consumption of substrates other than paper is inspected – this to ensure compliance with strict requirements for chemicals used in finishing of the substrates.
- Meets strict energy requirements and thereby contribute to a lower climate impact.
- Meets strict requirements for chemicals which are harmful to the environment and/or human health.
- Reduces of volatile of compounds (VOC).
- Promotes circular economy through strict requirements for waste management and through requirements for recycling of printed matters.

Nordic Swan Ecolabelled printed matter

Nordic Swan Ecolabelled printed matter has reduced environmental and climate impact throughout the lifecycle through sustainably produced paper and other substrates printed on, and reduced energy consumption. Environmental impact is also reduced by the use of chemicals with low environmental toxicity that do not hinder the recycling process of the printed matter – this promotes circular economy.

A Nordic Swan Ecolabelled printed matter:

- Meets strict environmental requirements and energy requirements to the substrate. The printed matter contains 100% Nordic Swan Ecolabelled, inspected or EU ecolabelled paper, board, textile or panel.
- Meets strict requirements for chemicals which are harmful to the environment and/or human health.
- Does not contain PVC, fragrance, or scent.
- Promotes circular economy through requirements for recycling of printed matters.

Why choose the Nordic Swan Ecolabel?

- The printing company may use the Nordic Swan Ecolabel trademark for marketing. The Nordic Swan Ecolabel is a very well-known and well-reputed trademark in the Nordic region.
- The Nordic Swan Ecolabel is a simple way of communicating environmental work and commitment to customers.
- The Nordic Swan Ecolabel clarifies the most important environmental impacts and thus shows how a company can cut emissions, resource consumption and waste management.
- Environmentally adapted operations prepare the printing company for future environmental legislation.
- Nordic Ecolabelling can be seen as providing a business with guidance on the work of environmental improvements.

- The Nordic Swan Ecolabel not only covers environmental issues but also quality requirements, since the environment and quality often go hand in hand. This means that a Nordic Swan Ecolabel licence can also be seen as a mark of quality.

What can carry the Nordic Swan Ecolabel?

The Nordic Swan Ecolabel applies to a **printing company's*** production of **printed matter** which also includes **conversion of printed matter.** Printing material used by the printing company must comprise **paper/paper-based substrates** or **substrates other than paper** in accordance with requirement O1. The **printing methods** must be one or several of the following: Conventional offset (sheet fed offset, heatset, coldset) water less offset, flexography and digital printing (incl. **digital wide format printing**).

Nordic Ecolabelling also includes:

- *the production process used by manufacturers of envelopes to produce paper envelopes. Envelopes with and without flexographic printing on the inside are covered by the printing method envelope flexography in this document. Envelopes with printing on the outside are encompassed by e.g. offset printing of envelopes or digital printing.*
- *the production process used by manufactures (converters) of paper board/corrugated board used as inspected printing material in Nordic Swan Ecolabelled printing companies.*

Other printed matter without printing (e.g. Post-it notes or note pads without printing) is encompassed by the same printing method as that used for printing the cover or another part of the printed matter.

Subject to agreement with Nordic Ecolabelling, printing companies may exempt the production of certain types of printed matter involving a specially demanding production process e.g. security printing and questionnaires of pharmaceutical industry. In this case, the printing company must have clearly divided production processes and marketing guidelines for what is Nordic Swan Ecolabelled and what is not.

All converting, printing, or finishing operations applied to the printed matter shall fulfil the respective requirements.

The following printing methods and types of printed and converted products are not eligible for a Nordic Swan Ecolabelling licence according to criteria for "Printing Companies and Printed Matter":

- No films may be used to illustrate the printing plates - repro.
- Printing companies using the following printing methods; letterpress printing, non-digital screen printing and 3D printing.
- Packaging printed on other substrates than paper.
- Printing companies printing on textiles produced for clothing and accessories or furnishing fabrics, i.e. textiles produced for use and interior decoration in the home or in cars/boats, such as towels, bedding, curtains, tablecloths, rugs, cushions, duvets and upholstery (both for private and public use). Separate ecolabelling criteria exist for these.

Printing on textile for advertising such as banners, roll ups and Point of Sale (POS) is however part of these criteria.

- Printing companies printing on tissue paper (serviettes, kitchen rolls, toilet paper and similar products). Separate ecolabelling criteria exist for these.
- Printing companies printing on packaging for liquid foods. Separate ecolabelling criteria exist for these.
- Printing companies printing on disposables for food. Separate ecolabelling criteria exist for these.

* **Bold** highlighting indicates that the term is explained in the section Terms and definitions.

Who may apply for a licence?

Printing companies of all types may apply for a licence if printing makes up a substantial part of the business. In this document, the concept of printing also covers manufacturers of envelopes. Other businesses which are not printing companies, and which want to obtain The Nordic Swan Ecolabel for their printed matter may apply for a licence for specific types of printed matter. This may be a newspaper, book, magazine, catalogue, envelope series or pads and booklets with a specific trademark. Even if the licence only applies to a specific item of printed matter, it must be printed at a Nordic Swan Ecolabelled printing company in accordance with requirement O30. Only these printing companies may market themselves as Nordic Swan Ecolabelled printing companies.

How to apply

Application and costs

For information about the application process and fees for this product group, please refer to the respective national web site. Find contact information first in this document.

What is required?

The application must consist of an application form/web form and documentation showing that the requirements are fulfilled.

The criteria for printing companies comprise a combination of obligatory requirements and point score requirements. The letter "O" and a number indicate obligatory requirements. These requirements must always be fulfilled. The letter "P" and a number distinguish point score requirements. Each requirement of this type gives a point score. These scores are then totalled. A minimum total score must be achieved to fulfil the licence constraints.

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

Upload

State data in the Nordic Ecolabelling Portal

Requirement checked on site

To be awarded a Nordic Swan Ecolabel licence:

- All obligatory requirements must be fulfilled.
- A minimum of points scores of 19 must be achieved. Use table 15 to calculate the points score.
- An on-site inspection must be performed by Nordic Ecolabelling.

All information submitted to Nordic Ecolabelling is treated confidentially. Suppliers can send documentation directly to Nordic Ecolabelling, and this will also be treated confidentially.

Licence validity

The Nordic Swan Ecolabel licence is valid providing the criteria are fulfilled and until the criteria expire. The validity period of the criteria may be extended, 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.

On-site inspection

In connection with handling of the application, Nordic Ecolabelling normally 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.

Queries

Please contact Nordic Ecolabelling if you have any queries or require further information. Find contact information first in this document. Further information and assistance (such as calculation sheets or electronic application help) may be available. Visit the relevant national website for further information.

Terms and definition

Advanced energy threshold value	The Energy threshold values is based on data from Nordic Swan Ecolabelling licensees. The advanced energy threshold value represents a value which is approx. 25% below the average energy data for total energy consumption for each printing method (kWh/tonne).
Algicides	Chemicals designed to prevent the growth of algae and the like in recirculating systems in print production.
Azo dyes	A large group of synthetic dyestuffs containing one or more nitrogen double bond (azo) groups as its chromophore.
Basic energy threshold value	The Energy threshold values is based on data from Nordic Swan Ecolabelling licensees. The basic energy threshold value represents a value which is approx. 25%-30% above the average energy data for total energy consumption for each printing method (kWh/tonne).
Brokers	Companies that primarily sell printed matter opposite to publishing houses and advertising agencies that usually do not provide printing services as a substantial part of their business.
Chemical products used in the finishing of substrates other than paper	Finishing means surface treatment of the substrate of which coating/varnishing/ adhesives is added to the surface of the substrate to improve printing properties. Requirements for chemical products used in finishing are set in requirement O6. The requirement does not apply to chemical products used in the actual manufacturing of substrates such as additives used in the manufacturing of foils or laminates or boards.
Chemicals used for coating used in the production of paper board/corrugated board	Chemical coating is a covering applied to the surface of the paper board/corrugated board such as colour, varnish or a coating to obtain waterproof or antistatic properties.
Converted printed matter	Converted printed matter means paper, board or non-paper substrates, either printed or unprinted, used, for example, to protect, handle or store items and/or notes, for which the converting process is an essential part of the production process, e.g. envelopes, stationery paper products, packaging containers or marketing displays, see also converting process.
Converting process	A process whereby a material is processed into a converted product. Conversion is a post-press activity that involves making a flat printed press sheet into a three-dimensional object, see also converted printed matter.
Corona treatment	Corona treatment (sometimes referred to as air plasma) is a surface modification technique that uses a low temperature plasma to impart changes in the properties of a surface. A corona treating system is designed to increase the surface energy of plastic films, foils and paper in order to allow improved wettability and adhesion of inks, coatings and adhesives. As a result, the materials treated will demonstrate improved printing and coating quality, and stronger lamination strength.
CRM substances	Carcinogenic, Germ cell mutagenicity, Reproductive toxicity category 1 A or B or category 2
Digital wide format printing	Wide format printers (large format printers) are generally accepted to be any computer-controlled printing machines (printers) that support a maximum print roll width of between 18" (inches) and 100". Printers with capacities over 100" wide are considered super wide or grand format. Wide format printers are used to print banners, posters, trade show graphics, wallpaper, murals, backlit film, vehicle image wraps, electronic circuit schematics, architectural drawings, construction plans, backdrops for theatrical and media sets, and any other large format artwork or signage. Wide format printers usually employ some variant of inkjet or toner-based technology to produce the printed image. See also Printed matter.
EDTA	Ethylenediaminetetraacetic acid
Energy consumption	Energy encompasses all the printing company’s purchases of electricity, district heating, fuel for stationary combustion plants etc., calculated as kWh of purchased energy on an annual basis per tonne of purchased substrate. This encompasses the entire production process in the form of pre-press, printing and finishing, as well as other subprocesses/functions at the printing company, such as chemical stores, paper and product stores, ventilation, lighting, internal treatment of water and emissions as well as support functions, such as offices, toilets, changing rooms and other common areas. This parameter does not include fuel, if any, used for the printer’s own vehicles. Energy produced in-house from e.g. sun, wind and thermal heating will not be included, since it has not been purchased.

Energy Management Systems	An energy management system (EnMS) defines energy policy, objectives, energy targets, action plans and processes. The EnMS supports the achievement of a company's overall goals providing an organisational basis for improved energy and carbon efficiency through the measurement, monitoring, control, and improvement activities.
Envelope	For the purposes of this document, a cover made of paper in which letters are sent. The paper is folded and glued along the sides or, on smaller envelopes, diagonally on the rear side. Many envelopes have printed areas on the inside surfaces in order to conceal the contents.
Foil for foil printing	Foil printing is a speciality printing process which uses heat, pressure and metallic paper (foil). The technique is an application of metallic or pigmented foil on to a solid surface by applying a heated die on to the foil.
Functional unit	The functional unit is defined as one tonne purchased/used substrate.
Halogenated organic solvent	Halogenated organic solvent means an organic solvent which contains at least one atom of bromine, chlorine, fluorine or iodine per molecule.
Inspected paper	Inspected printing paper is paper without a Nordic Swan Ecolabelled licence but fulfils certain criteria set by Nordic Ecolabelling. Paper is a registered item for a specific use that has been approved for use in Nordic Swan Ecolabelled printing companies and used in printing of Nordic Swan Ecolabelled printed matter. Requirements for inspected printing paper are set in the Appendix 1 in the Basic Module, version 3.
Inspected paper board/corrugated board	Inspected paper board/corrugated board applies to conversion of paper to packaging such as corrugated cardboard, cardboard, and solid board. The conversion process involves gluing together a minimum of 2 paper grades. Inspected paper board/corrugated board is board without a Nordic Swan Ecolabelled licence but fulfils certain criteria set by Nordic Ecolabelling. Paper board/corrugated board is a registered item for a specific use that has been approved for use in Nordic Swan Ecolabelled printing companies and used in printing of Nordic Swan Ecolabelled printed matter. Requirements for inspected paper board/corrugated board printing paper are set in Appendix 6.
Laminating	Lamination means adhering a layer of plastic (polyethylene, polymerized acrylics, vinyls, styrenes, among others) to a paper material mainly to increase product durability (i.e. barrier properties or mechanical resistance).
Mesh	A polyester material that allows the air to blow through. There are crisscrossed fibres that can been seen through to some extent, but it still has a printable surface. They are commonly displayed on construction fences or sports fences. Mesh can be coated with vinyl or PVC.
Mono substrate	Mono substrate (other than paper) consists of the same material such as PE- or PP foil, PC or PS board or polyester. A substrate containing PS homogeneous and PS foamed is not considered a mono substrate. Substrates containing adhesives (outer layer of adhesives) such as films/laminating films or substrates coated with another material (such as PVC) are not considered to be a mono substrate. Mono substrates coated with ink are how ever considered to be a mono substrate.
Orders produced	A production order is an order issued within a company to produce a specific quantity of material within a certain timeframe.
Paper/paper printed matter	A printing material assessed by Nordic Ecolabelling and the EU Ecolabel's criteria for graphic paper/printed paper, e.g. printing paper, copying paper, newspaper, cardboard, paper board etc. Also, paper board/corrugated board assessed by Nordic Ecolabelling.
PC	Polycarbonate.
Practising company	The business that performs the actual printing operation.
Printed matter	Printed matter is the result of the processing of a printing material. Printing includes pre-press, press, and postpress operations. The processing consists of an image, picture, pattern, text or the like being printed on paper or some other printing material. In addition to printing, the processing may include finishing, consisting of various forms of mechanical processing, such as folding, stamping and cutting or various forms of assembling, using glue, staples, stitches and the like. In the case of some printed matter, the processing is confined to finishing, i.e. it does not undergo a printing process (for example, some notepads and envelopes). Printed matter includes: - Newspapers, advertising matter, journals, catalogues, books, leaflets, brochures, pads, posters, loose-leafs, business cards, folders, ring binders with paper contents, labels and the like. - Envelopes and other converted printed matter. - Stationery and office supplies, such as notebooks, exercise books, notepads, etc. that are sold by wholesalers or via the retail trade, are also classed as printed matter. - Paper-based packaging made of paper/cardboard (wood pulp).

	- Banners, billboards, signs, posters, roll-ups, window/vehicle graphics and other point of sale (POS) material typically produced using wide-format digital printing techniques. In case of roll-up stands, printed canvas on a wooden frame and other similar products, only the material carrying the information is regarded as printed matter. Other parts such as the metal stand or wooden frame are not covered by requirements in the criteria.
Printing company/ Printing house/Printers	A business providing printing services, where printing constitutes a substantial part of its business. Printing is done by traditional printing companies, but also by photocopying centres and other businesses carrying out printing. There may also be printing companies that do not do the actual printing themselves (**brokers**). Typical printing companies are sheet fed offset printers, rotary printers, heatset printers, newspaper printers, magazine printers, packaging printers, envelope printers, board printers, label printers, flexographic printers and digital printers (including wide format printers), but also manufacturers of envelopes and packaging as well as manufacturers of other products encompassed by the term printed matter in this document. Printing may also include finishing. Publishing houses and advertising agencies are not regarded as printing companies as they do not provide printing services as a substantial part of their business.
Printing methods	Conventional offset (sheet fed offset, heatset, coldset,) water less offset, flexographic printing and digital printing. Digital printing is printing where print data is imaged directly on the printing system without an intermediary printing form. Examples of types of digital printers: - Laser printers (electrophotography). This includes monochrome copier/printers along with colour copier/printers from multiple sources, and some digital presses; - Inkjet printers. This includes desktop printers, addressing printers in-line with finishing operations, wide format printers and high-quality proofing printers, as well as some digital presses; - Thermal transfer and hot melt ink printers. This includes thermal wax and hot stick printers; - Dye sublimation printers. This includes some colour proofing devices and ‘photo quality’ continuous tone printers; - Nanography: new technology being developed by Landa, uses WB nanoink of 10nm (less pigment, better resolution)
Production chemicals	Collective term for chemical products used during production. It can refer to chemical additives, auxiliary chemicals and process chemicals. Production chemicals apply to the following chemical categories: - Chemicals for form production (repro); - Printing ink, toners and Inks; - Varnishes; - Adhesives; - Washing agents, incl. washing agents used for ordinary cleaning of printing machines; - Damping solutions additives (e.g. alcohol, IPA); - Algicides - Foil for foil printing and laminates applicable to printed paper used in production to printed matter. - Adhesives used in manufacturing of paper board/corrugated board. - Chemicals used for coating in manufacturing of paper board/corrugated board
PS	Polystyrene
Purchased substrates/ Consumption of substrates	The number of tonnes of substrates purchased by the printing company per year. Quantities of substrates not purchased by the printing company, but used in production, must be added. The printer may, by arrangement with Nordic Ecolabelling, omit substrates supplied by the customer where special circumstances apply. If consumption of substrates is assessed on an annual basis, storage differences must be corrected for.
Recycled material	Recycled material is defined in accordance with ISO 14021. “Pre-consumer”: Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it. Nordic Ecolabelling considers rework, regrind or scrap, which cannot be reused directly in the same process, but requires a reprocess (e.g., in the form of sorting, re-melting and granulation) before it can be reused, to be pre-consumer material. This is regardless of whether it is done in-house or externally. "Post-consumer/commercial" is defined as material created by households or commercial, industrial, or institutional facilities in the role of end users of a product which can no longer be used for the intended purpose. This includes return of material from the distribution chain.

Release papers/-liners	Release papers/-liners are papers or films coated with a release agent (silicone) and are used in a wide range of applications such as for protection of adhesive surfaces of various adhesive products and protecting of printing surface.
Repro chemical	Repro chemicals used for form production which could include process outside repro, e.g., developing of printing forms in the printing press. Examples on chemicals are algicides, plate developer, gumming agents for the production or protection of offset plates and chemicals to produce flexographic plates. Plate cleaners and other corresponding chemicals are regarded as washing agents and thus, not included in the category of chemicals for printing form production. Repair material is not included in this category of chemicals.
Rules of Rounding	General rule of rounding e.g. 0,5 go up, so 4,5 rounds up to 5.
Substrate	Any surface or material on which printing is done.
Substrates other than paper - used as printing substrate	Other substrates than paper is often divided into flexible and rigid substrates. Flexible substrates such as foils and laminates often consist of plastic such as PVC, vinyl, PP, PE and PET, while textiles and canvas most often are used for banners and posters. Typical rigid substrates are thick plastic, board, wood, metal or glass which is often used for signs. Rigid substrates may consist of one material but are often composed of several types of material forming a composite. Labels made from plastic or containing a release liner plastic-based film sheet also are considered to be substrate other than paper.
Supplier	Enterprise that supplies products (goods or services) to the printing company. The definition is based on the definition in ISO 9000:2000.
Total consumption of substrates	See Purchased substrates.
Wastepaper	All paper from production in the printing company that does not end up in the finished printed matter that the customer receives or that is supplied for temporary storage in a store (e.g. at the printing company). Wastepaper includes shavings or cutting waste, waste from starting runs in the print works and the bindery (e.g. running-in in connection with folding, gluing, stitching), wastepaper generated during printing and bookbinding operations, wastepaper from paper storage (discarded unprinted paper) and leftover paper in rolls or other unused paper for printing. Wastepaper does not include discarded and stored printed matter that The Nordic Swan Ecolabelled printing company has produced and received payment for. Packaging waste and used paper rolls are not classed as wastepaper. Sold newspapers, magazines etc. that are returned to the printing company from stores for recycling can be excluded if amounts are known or alternatively, can be estimated. Where the printing house carries out finishing processes on behalf of another printing house, the amount of wastepaper produced in those processes shall not be included in the calculation.
VOC	Volatile organic compounds (VOC) are defined in accordance with European Commission's Directive 2010/75/EC on the limitation of emissions of volatile organic compounds with vapor pressure > 0.01 kPa at 20°C. See also VOC consumption.
VOC consumption	Number of kilograms of VOC used on an annual basis based on the quantities purchased/received. Washing agents, dampening solution additives, printing inks and other chemicals may contain VOC. Some washing agents consist entirely of VOC. Storage differences can be corrected for. The Nordic Ecolabelling Portal shows how much VOC is present in the various chemicals. When calculating VOC emissions, printing companies disposing of this under controlled conditions may deduct the VOC disposed of from their VOC consumption in accordance with Appendix 5 in the criteria document. This, for instance, applies to printing companies that clean outgoing air for VOC (typically heatset printers). In the case of heatset the correction must take account of the result of measurements of point releases of VOC.
Wood-based panels/boards	Typical wood-based panels/boards are chipboard, fibreboard (including MDF and HDF panels), OSB (Oriented Strand Board), veneer plywood and veneer boards. The requirements also include corresponding products made of bamboo. Wood-based panels/boards does not include boards made of wood pulp (paper).

1 Description of the service

O1 Type of printing company

- The printing company must give a brief account of the number of printing machines, the type of machine or model (e.g. heat set press, flexography machine, flatbed), size (e.g. number of ink and varnish units), format (e.g. sheet size) and machines for prepress and potential finishing services.
- At least 50% of the printing company's turnover must originate from **paper printed matter**, printed Nordic Swan- or EU Ecolabelled textile or Nordic Swan Ecolabelled construction and facade panels manufactured using **printing methods** encompassed by the criteria.

Please be aware of the following possibilities:

The following applies to printing companies that use only one printing method:

- In cases where the printing company primarily prints on paper: If the consumption of substrate other than paper constitutes a maximum of 5% of the total paper consumption, these substrates other than paper is exempted from the criteria, However, chemicals used in printing on substrates other than paper must still comply with the requirements.

The following applies to printing companies that use multiple printing methods:

- In cases where a printing company only prints on paper: If the paper consumption for a single printing method constitutes a maximum of 5% of the total paper consumption, this method can be included as part of a larger method in the printing company.

*Example: If the printing company is using 50 tons of paper (sheet fed offset) and 2 tons of paper (digital printing) then the digital printing method can be included in the sheet fed offset method because (2/52) * 100= 3,8%.*

- In case where the printing company primarily prints on paper: If the turnover from printing on substrates other than paper constitutes a maximum of 5% of the printing companies' turnover for printing on paper (alternatively 5% of the total paper consumption), this printing method/substrates other than paper is exempted from the criteria. However, chemicals used in the exempted printing method must be includes as part of a larger method in the printing company.

*Example: If the printing companies' turnover for printing on paper constitutes 50.000 Euro and the turnover for printing on substrates other than paper constitutes 2000 Euro, this printing method/quantity of substrates other than paper is exempted from the criteria because (2000/50.000) * 100 = 4%.*

✉ A brief description of the number of printing machines, the type of machine or model (e.g. heat set press, flexography machine), size (e.g. number of ink and varnish units), format (e.g. sheet size), machines for pre-press and potential finishing services.

✉ Information on the printing company´s total turnover as well as turnover from paper printed matter, printed Nordic Swan- or EU Ecolabelled textile or Nordic Swan Ecolabelled construction and facade panels.

✉ If exemption for 5% paper consumption or 5% substrate other than paper is a used; documentation for the total consumption of tonnes of substrate (paper and substrates other than paper, respectively) for each individual printing method and information on turnover from paper- and substrate other than paper printed matter.

1.1 Suppliers

The applicant must document the supplier requirements for the printing company, i.e. not for each individual printing method.

O2 Suppliers of printing services

At least 75% by weight of all printing on substrates in-house by the **printing company** and printing of the printing company's printed matter externally by **suppliers**, must be by Nordic Swan Ecolabelled printing companies.

In case of **brokers** (printing companies that do not do the actual printing themselves), at least 95% by weight must be by Nordic Swan Ecolabelled printing companies.

The percentages must be calculated based on **total consumption of substrates (tonnes)** in-house and consumption of substrates (tonnes) by suppliers on an annual basis or based on an assessment using financial figures.

✉ List of external suppliers of printing services and a specification of the quantities (tonnes of paper annually) sent to print suppliers.

✉ Calculation showing compliance with the requirement.

O3 External chemical finishing services (book binding)

At least 90% by weight of the annual tonnes of substrates done by external chemical finishing services must be assessed by Nordic Ecolabelling. For an external chemical finishing service to be inspected and available for the printing company, the external chemical finishing service must document compliance with the requirement using Appendix 3.

Chemical finishing involves adhesives, varnishing, **foil printing** or laminating, as well as washing agents used for ordinary manual cleaning of print finishing machines used by the chemical finishing service. All chemicals must be assessed by Nordic Ecolabelling and must fulfil the requirements in Appendix 1.

The percentage share is calculated based on the total number of tonnes of substrates done by externally inspected finishing services/annual ton substrates done by external chemical finishing services.

Be aware of special requirements regarding out-of-house finishing of Nordic Swan Ecolabelled printed matter in requirement O30.

Suppliers of mechanical finishing services are not encompassed by this requirement.

✉ List of external chemical finishing services (book binders) and a specification of the quantities (tonnes of substrate annually) sent to print suppliers.

✉ Calculation showing compliance with the requirement.

1.2 Printing substrates

The requirements O4 to O8 apply to all printing substrates purchased annually by the printing company. The requirements for substrates are divided into requirements which include substrates of paper and requirements for substrates other than paper.

Table 1: Overview on printing substrates and specific requirements

O4 Printing Substrates - Applies to all annually purchased substrates		
P1 Printing substrates - The printing company can earn up to 5 points in P1 depending on the quantity of purchased paper		
		
O5 Inspected and Ecolabelled paper		**O6 Other substrates than paper (PVC-free)** - Applies to all substrates
The printing company can earn up to 10 points in P2, depending on the quantity of Inspected/ Ecolabelled paper used		
P2 Inspected and Ecolabelled paper		**O7 Textiles** - Only applies if printing on textiles
		O8 Panels/boards made of wood - Only applies if printing on panels/boards of wood
		The printing company can earn up to 10 points for P3, P4 and P5, based on the types of substrate used
		P3 Content of recycled materials
		P4 Mono materials
		P5 Recycled material and mono substrates

For a paper grade to be inspected and available for the printing company, the paper mill must document compliance with the requirements set for paper in the Appendix 1 in Paper Products - Basic Module. More information can be found from https://www.nordic-swan-ecolabel.org/pulp-paper-declaration-portal/

For at **paper board/corrugated board** to be inspected and available for the printing company, the manufacturer/converter must document compliance with the requirements using Appendix 6. Paper board/corrugated board applies to conversion of Inspected and Nordic Ecolabelled paper to packaging such as corrugated board/cardboard and solid paper boards.

For a printing substrate other than paper to be inspected and available for the printing company, the manufacturer/supplier must document compliance with the requirements using Appendix 2.

O4 Printing substrates

The printing company must state all printing substrates purchased annually including trade name, supplier, quantities, and grades.

The description shall include calculation of:

- the total number of tonnes of substrates purchased annually;
- the total number of purchased tonnes of substrates of paper and substrates other than paper respectively;

Substrates of paper also includes paper board/corrugated board.

- the total consumption of tonnes of substrate (paper and substrates other than paper, respectively) for each individual printing method.

Substrate weight given as grams per m² (g/m²) must be converted to tonnes in relation to total purchase/use of meter substrate annually.

If relevant, provide a description how potential adjustment of stock difference is carried out.

If a printing company uses a certain paper grade in several printing methods, the volumes for paper, may be estimated in relation to printing methods respectively.

If envelopes are printed on offset machines, envelopes shall be included as part of the sheet offset method (and not calculated as a separate method). If packaging is printed, then the packaging must be included as part of the printing method used.

✉ List of trade names, grades, suppliers, and amount of paper substrates purchased annually.
✉ List of trade names, type of substrates, suppliers, and amount of substrates other than paper purchased annually.
✉ Specify the total consumption of tonnes of substrate (paper and substrates other than paper, respectively) for each individual printing method.
✉ Upload reports/lists from suppliers of substrates detailing the quantities, type of substrate and grades purchased annually.

P1 Printing substrates

The printing company may be awarded points depending on the proportion of purchased paper in relation to the total purchase of tons substrates annually.

*Example: If the printing company purchase 40 tons of paper and 5 tons of substrates other than paper annually (total of 45 tons), the company achieves (40/45) * 100 = 89% = 3 points.*

Table 2: P1 Example of points

Proportion of purchased paper in relation to the total purchase of tons substrates annually	Points
0 - 50%	0
51 - 60%	1
61 - 70%	2
71 - 90%	3
91 - 99%	4
100%	5

✉ The documentation must consist of a calculation in accordance with the requirement above and reports/lists from the suppliers of substrates stating type/material/quantities purchased annually, see O4.

1.2.1 Paper

O5 Inspected and Ecolabelled paper

At least 60% of the printing company's total annual consumption of paper must be inspected or ecolabelled. In this calculation, Nordic Swan Ecolabelled paper has a weight of 1, inspected paper 0.9 and EU Ecolabelled paper 0.8.

*Example: If 60% inspected paper is used in addition to 10% Nordic Swan Ecolabelled paper and 5% EU Ecolabelled paper, the calculation will be as follows: 60*0.9 + 10*1.0 + 5*0.8 = 68%*

If only a single type of paper is used, 60% Nordic Swan Ecolabelled paper or 67% inspected paper or about 75% EU Ecolabelled paper will be required for the requirement to be fulfilled.

✉ List of trade names, indication of inspected or Ecolabelled paper, grades, suppliers, and amount of paper substrates purchased annually. See O4.
✉ The documentation must consist of a calculation in accordance with the requirement above and reports/lists from the suppliers of paper substrates

stating trade names, grades, suppliers, and amount of paper substrates purchased annually.

P2 Inspected/ecolabelled paper

The printing company may be awarded points depending on the quantity of inspected/ecolabelled paper purchased/used annually.

Use the formula below to calculate points for inspected/ecolabelled paper on an annual basis. The quantity of inspected/ecolabelled paper is weighted in such a way that Nordic Swan Ecolabelled paper has a weight of 1, inspected paper 0.9 and EU Ecolabelled paper 0.8.

A paper quality can only count once (the highest weighting applies if, for instance, the paper is both Nordic Swan Ecolabelled and EU Ecolabelled at the same time).

Use the following formula to calculate the percentage of the total paper consumption that is inspected/ecolabelled paper on an annual basis:

Score = (proportion of Nordic Swan Ecolabelled paper * 1) + (proportion of inspected paper * 0,9) + (proportion of EU Ecolabelled paper * 0,8)

*Example: If 60% inspected paper is used in addition to 10% Nordic Swan Ecolabelled paper and 5% EU Ecolabelled paper, the calculation will be as follows: (60*0.9+10*1.0+5*0.8) = 68% = 2 points*

Table 3: P2 Examples of points

Proportion of inspected/ecolabelled paper	Points
61 - 70	2
71 - 80	4
81 - 90	6
91 - 99	8
100	10

✉ The documentation must consist of a calculation in accordance with the requirement above and reports/lists from the suppliers of paper substrates stating trade names, grades, suppliers, and amount of paper substrates purchased annually.

1.2.2 Other substrates than paper

The requirement includes all **substrates other than paper**. Requirement O6 applies to all substrates (substrates of paper + other than paper), while requirements O7 to O8 are additional requirements to specific types of substrates.

O6 Other substrates than paper (PVC-free)

Up to 15% of the printing company's annual consumption of substates (substrates of **paper** + **substrates other than paper**) may contain PVC or PVC coating.

In 2026 up to 10% of the printing company's annual consumption of substrates may contain PVC or PVC coating. This is reported as the annual follow-up based on purchases in 2025.

For a printing substrate other than paper to be declared and available in the Nordic Ecolabelling Portal, the manufacturer/supplier must document compliance with the requirements using Appendix 2.

✉ List of trade names, type of substrates, suppliers, and amount of substrates other than paper purchased annually. See O4.
✉ The documentation must consist of a calculation in accordance with the requirement above and reports/lists from the suppliers of substrates stating type/material/quantities purchased annually.
✉ Declaration from the manufacturer/supplier of substrates other than paper. Appendix 2 may be used.

1.2.3 Fabrics/textiles

The requirement only applies to printing on fabrics/textiles used for advertising such as roll-ups, banners or signs. Printing on textiles produced for clothing and accessories or furnishing fabrics is not part of this ecolabelling criteria. See Product definition.

O7 Fabrics/textiles (e.g. polyester, canvas)

At least 50% of the printing company's total annual consumption of fabrics /textile substrates (e.g. polyester, canvas) must be Nordic Swan- or EU Ecolabelled, Oeko-TEX 100 certified or GOTS certified.

Mesh is not regarded as fabrics/textiles.

✉ List of fabrics/textiles, suppliers, and amount of fabrics/textiles purchased annually. See O4.
✉ The documentation must consist of a calculation in accordance with the requirement above and reports/lists from the suppliers of fabrics/textiles purchased annually.

1.2.4 Panels/boards made of wood

The requirement applies to **wood-based panels/boards** such as chipboard, fibreboard (including MDF and HDF panels), OSB (Oriented Strand Board) and veneer boards. The requirements also include corresponding products made of bamboo.

Nordic Ecolabelled panels/boards made of wood fulfil the requirement automatically. Only the manufacturer, licence number and product name must be stated.

O8 Panels/boards made of wood

At least 50% of the printing company's total annual consumption of panels/boards must be;

- Nordic Swan Ecolabelled or
- FSC- or PEFC certified.

Panels/boards must comply with Nordic Ecolabelling's list of prohibited and restricted tree species*.

** The list of prohibited and restricted tree species is located on the website: https://www.nordic-swan-ecolabel.org/pulp-paper-declaration-portal/*

✉ List of panels/boards made of wood, suppliers, their certification and amount of panels/boards made of wood purchased annually. See O4.
✉ The documentation must consist of a calculation in accordance with the requirement above and reports/lists from the suppliers of panels/boards of wood purchased annually.

1.2.5 Points for types of substrates other than paper

The printing company can earn up to 10 points for P3, P4 or P5, based on the types of substrate used. A substrate can only obtain points from either P3 or P4 or alternative P5.

P3 Content of recycled materials

The printing company may be awarded points depending on the annual consumption of substrates other than paper containing **recycled material**.

Substrates that can be awarded points must contain minimum 50 w% recycled material*.

Substrates containing recycled PVC cannot be awarded points.

** Recycled material is defined in accordance with ISO 14021:*

"Pre-consumer": Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it. Nordic Ecolabelling considers rework, regrind or scrap, which cannot be reused directly in the same process, but requires a reprocess (e.g. in the form of sorting, re-melting, and granulation) before it can be reused, to be pre-consumer material. This is regardless of whether it is done in-house or externally.

"Post-consumer/commercial" is defined as material created by households or commercial, industrial, or institutional facilities in the role of end users of a product which can no longer be used for the intended purpose. This includes return of material from the distribution chain.

*Example: If the printing company purchase 50 tonnes of substrates other than paper a year and 3 tonnes of the substrates meets requirements for recycled material, the company achieves (3/50) * 100 = 6% = 1 point.*

Table 4: P3 Example of points

Proportion of substrates containing recycled material / Substrates other than paper on an annual basis	Points
0 - 4%	0
5 - 10%	1
11 - 25%	2
26 - 50%	3
51 - 99%	4
100%	5

☒ The manufacturer of the substrate shall demonstrate compliance with the requirement by duly completing the declaration in Appendix 2.

☒ The manufacturer of the substrate shall enclose product data sheets or other documentation for content of pre- and post-consumer recycled material in the product.

☒ The documentation must consist of a calculation in accordance with the requirement above and reports/lists from the suppliers of substrates stating type/material/quantities purchased annually. See O4.

P4 Mono substrates

The printing company may be awarded points depending on the annual consumption of substrates other than paper consisting of only the same type of material and property (**mono substrate**).

Mono substrates made of PVC cannot be awarded points.

*Example: If the printing company purchases 50 tonnes of substrates other than paper a year and 3 tonnes of the substrates meet requirements for mono substrate, the company achieves (3/50) *100 = 6% = 1 point.*

Table 5: P4 Example of points

Proportion of substrates that consist of the same type of material on an annual basis	Points
0 - 4%	0
5 - 10%	1
11 - 25%	2
26 - 50%	3
51 - 99%	4
100%	5

☒ The manufacturer of the substrate shall demonstrate compliance with the requirement by duly completing the declaration in Appendix 2.
☒ The manufacturer of the substrate shall enclose product data sheets.
☒ The documentation must consist of a calculation in accordance with the requirement above and reports/lists from the suppliers of substrates stating type/material/quantities purchased annually. See O4.

P5 Recycled material and mono substrates

The printing company may be awarded points depending on the annual consumption of mono substrates other than paper containing recycled material e.g. a PE foil containing minimum 50 w% recycled material.

Definition of substrates containing recycled material, see P3.

Table 6: P5 Example of points

Proportion of substrates that consist of both recycled material and consist of the same type of material	Points
0 - 4%	0
5 - 10%	2
11 - 25%	4
26 - 50%	6
51 - 99%	8
100%	10

☒ The manufacturer of the substrate shall demonstrate compliance with the requirement by duly completing the declaration in Appendix 2.
☒ The manufacturer of the substrate shall enclose product data sheets.
☒ The documentation must consist of a calculation in accordance with the requirement above and reports/lists from the suppliers of substrates stating type/material/quantities purchased annually. See O4.

1.3 Requirement for paper-based packaging

The requirement only applies to paper-based packaging manufactured (as a whole) in the printing company.

O9 Requirement for paper-based packaging

The following applies to paper-based packaging manufactured (as a whole) in the printing company:

- The non-paper product parts of paper-based packaging such as metal clips, tape or plastic covers, shall be easily removable (according to CEPI/FEFCO

guidelines[1]) to ensure that those components will not hinder the recycling process.

- Avoid plastic labels if possible and use direct print or paper labels. If a window is needed, then provide clear instructions for consumers to remove window film before recycling.
- PVC used in tape, must not be used
- Paper or board laminated on both sides must not be used.
- Wax or latex coatings must not be used.

✉ The printing company shall demonstrate compliance with the requirement by duly completing the declaration in Appendix 4.

1.4 Chemical requirements

The chemical requirements apply to the following categories of production chemicals:

- Chemicals for form production (repro),
- Printing inks, toners, inks,
- Varnishes,
- Adhesives,
- Washing agents, including washing agents used for ordinary cleaning of printing machines.
- Dampening solution additives (e.g. alcohol),
- **Algicides**
- Foils for foil printing and laminates applicable to printed paper used in the production of printed matter.
- Adhesives used in manufacturing of paper board/corrugated board
- Chemicals used for coating in manufacturing of paper board/corrugated board

Production chemicals used by the printing company must be assessed by Nordic Ecolabelling and must fulfil the requirements in Appendix 1. The requirement also applies to production chemicals used in finishing by the printing company. The requirements are applied regardless of the type of printing method.

For a chemical to be assessed by Nordic Ecolabelling **the chemical manufacturer or supplier** must demonstrate compliance with the chemical requirements in Appendix 1.

O10 Chemicals

The printing company must report all **production chemicals** used annually in the production of printed matter (inclusive internal finishing), providing documentation regarding the product's trade name, function, supplier and the quantities purchased in kg.

All production chemicals used by the printing company must be assessed by Nordic Ecolabelling and must fulfil the requirements in Appendix 1.

Production chemicals that are purchased separately and added to production chemicals at the printers must also be included.

[1] https://www.cepi.org/wp-content/uploads/2020/10/Cepi_recyclability-guidelines.pdf

If a production chemical is used in relation to more than one printing method, the printing company may add up the quantities in the relevant category across the printing methods and on this basis calculate fulfilment of the triviality limits (e.g. adhesives).

Adjustments can be made for chemicals purchased/received during the course of the year, but which has not been used, by uploading stocktake figures at the end of the year for the individual chemical.

Exemptions applies to:

- Production chemicals classified as Repr. 1, H360 and/or Repr. 2, H361 and/or STOT RE 1 H372 due to the presence of photoinitiators and/or acrylates, may only be used in closed printing systems such as digital printing, where there is no direct contact/exposure between worker and the chemical. Traditional UV offset where the UV ink is transferred from open cans/pumped to an ink tray/application roller is considered an open system.
- Addressing with ink is exempted from the requirement. For addressing ink, a safety data sheet complying with the standards set out in Annex II of REACH (Regulation 1907/2006/EC) or other technical data sheet must be enclosed.

Trivial limits:

Up to 5% by weight of the quantity of production chemicals in each category and printing method purchased during the year can be exempted from the chemical requirements in Appendix 1. For printing inks, adhesives and varnishes an alternative triviality limit of 10 kg per annum and per category applies for which the requirements do not have to be met.

The trivial limits do however not apply to;

- washing agents classified as Aquatic Acute 1 H400, Aquatic Chronic 1-4 H410, H411, H412 or H413.
- printing inks, toners, ink, varnishes, and adhesives used in printed matter that will bear the Nordic Ecolabel logo, see requirement O27 and O31.

✉ Complete list of production chemicals, specifying trade name, function, supplier, and the quantities purchased annually in kg.

✉ Upload reports/lists from suppliers detailing trade names and the quantities purchased annually. Upload calculations to explain any adjustments based on stock counts.

✉ Exemption due to presence of photoinitiators and/or acrylates (UV): Description of the application system and how workers are protected from exposure.

✉ For addressing ink. enclose safety data sheet/product specification must comply with the standards set out in Annex II of REACH (Regulation 1907/2006/EC).

✉ Declaration from the chemical manufacturer/supplier. Appendix 1 must be used.

1.5 Emissions to air

The requirement for emissions to air only applies to emissions **of volatile organic compounds (VOC)** at the printing company. The requirement is based on the consumption of chemicals encompassed by O10 (washing agents, printing inks, alcohol, other dampening solution additives, etc.) depending on the content of VOC and depending on whether there are systems for the collection/destruction of VOC.

If the printing company sells recycled VOC or removes VOC from outgoing air with the aid of, for example, incineration (e.g. heatset) or removes or sells VOC by some other controlled means (e.g. condensation in connection with certain

digital printing facilities with wet toner), these quantities may be deducted from the quantities purchased/received.

See Appendix 5 for guidelines and examples on how to calculate emission of VOC.

O11 Consumption of VOC

The printing company's annual **VOC consumption** (kg VOC/tonne purchased substrate) must be less than or equal to the threshold value listed in table 7 below. The permitted VOC consumption varies depending on the **printing method**.

If the printing company uses multiple methods of printing, the threshold values is calculated as a weighted value which is defined according to the consumption of substrate in different printing methods.

*Example of calculation of the threshold value using multiple methods of printing. If a printing company is using 500 tons of substrate (sheet fed offset) and 300 tons of substrate (digital printing) the weighted threshold values are calculated as: Calculated threshold value: (500/800) * 7 + (300/800) * 5 = 6.25 kg/ton purchased substrate per year.*

Table 7: Threshold values - VOC consumption (kg/purchased substrate) for different printing methods

Printing method	Threshold value - VOC consumption (Kg/tonne purchased substrate)
Sheet fed offset	7
Digital printing	5
Coldset, newspapers	1
Coldset, forms	3.5
Coldset rotation (except newspaper and form printing)	1.5
Heatset rotation	3
Flexographic printing	1
Envelope production with flexography	1

See the special instructions for calculating VOC emissions for inter alia heatset printing in Appendix 5.

✉ Calculation showing that the requirement is met and reports/lists from the suppliers of substrates stating type/material/quantities purchased annually. See O10.

P6 Consumption of VOC

The printing company may be awarded points depending on the annual VOC consumption (kg VOC/tonne purchased substrate). The threshold values for each printing method are listed in O11.

If the printing company uses multiple methods of printing, the threshold values is calculated as a weighted value which is defined according to the consumption of substrate in different printing methods, see O11.

Calculate points = (1 - (VOC used/threshold value)) *100

*Example of calculation (sheet fed offset printing company): If the printing company uses 4 kg VOC/purchased substrate, the calculation will be as follows: (1 - (4/7)) *100 = 43% = 4 points*

Table 8: P6 Example of points

Proportion (%) of annual VOC consumption in relation to threshold value (VOC/tonne purchased substrate)	Points
0 - 4%	0
5 - 24%	2
25 - 49%	4
50 - 74%	6
75 - 99%	8
100% (no use of VOC)	10

✉ The documentation must consist of a calculation in accordance with the option for scoring points outlined above and reports/lists from the suppliers of substrates stating type/material/quantities purchased annually. See O10.

1.6 Energy

The requirement for **energy consumption** includes all the printing company's purchased energy in kWh per **tonne of purchased substrate per year**. The printing company must report purchased fuels for stationary combustion plant and purchased energy in the form of electricity, district heating/cooling etc.

The requirement for energy use is divided in two, part A and part B. All applicants must report the printing company´s total energy use per tonne purchased substrate per year according to part A. If the printing company does not comply with the energy requirement using the **advanced threshold value** in part A, but meets the requirement using the **basic threshold value** in part A, the printing company must comply with the requirement in part B, and thus meet the requirement for energy use.

O12 Energy use

The applicant shall state the printing company´s annual total energy consumption per tonne of purchased substrate.

Part A

The amount of energy consumed at the printing company must be less than or equal to the threshold value for the printing company's total energy use per tonne of purchased substrate. The permitted energy use varies depending on the printing method, and the use of either the advanced- or basic threshold value, see table 9 below. The printing company´s total energy use must be calculated on an annual basis.

Energy consumption is calculated using information in invoices received from suppliers of electricity, fuel, and heating to the practising company in relation to purchased substrate on an annual basis.

Printing companies that sell surplus energy, e.g. in the form of district heating, may deduct the quantity sold.

For heating of printing companies in Iceland, geothermal energy is not included in the energy consumed.

Printing companies that only carry out braille printing are exempt from the requirement. However, the printing companies shall state the printing company´s annual total energy consumption per tonne of purchased substrate. Braille printers receive data from computer devices and emboss that information in braille onto paper.

If the printing company uses multiple methods of printing, the threshold value is calculated as a weighted value which is defined according to the consumption of substrate in different printing methods. The calculation is done by using only the advanced- or basic threshold values.

Example of calculation of the threshold values using multiple methods of printing. If a printing company is using 500 tons of substrate (sheet fed offset) and 300 tons of substrate (digital printing) the weighted threshold value is calculated as:

*Calculated advanced threshold value: (500/800) * 900 + (300/800) * 2100 = 1350 kWh/ton purchased substrate per year.*

*Calculated basic threshold value: (500/800) * 1700 + (300/800) * 3700 = 2450 kWh/ton purchased substrate per year.*

If the printing company is unable to document their electricity consumption based on direct settlement with an electricity supplier (e.g. a printing companies who live in rented buildings), the printing company shall either;

a) install electricity meters and read off the total annual consumption of electricity or

b) use a competent energy specialist with relevant knowledge on energy savings in buildings and/or printing techniques to calculate/estimate/verify the printing company's annual consumption of electricity.

If the printing company is unable to document their heating/cooling use on the basis of direct settlement with a supplier (e.g. a printing companies who live in rented buildings), and the printing company does not use electricity for heating, the printing company must calculate their total energy consumption by calculating heat consumption on the basis of the heat consumption of the building and adding this to electricity consumption. The printing company's proportion of the total heat consumption of the building is calculated based on the floor space of the printing company relative to the heated area in the building.

Any floor space that is to be excluded from this calculation must be approved in advance by Nordic Ecolabelling.

*Example of calculation of heat consumption for a printing companies who live in rented buildings: If the printing company has a floor space of 2 000 m² and is located in a 50 000 m² building with a total heat consumption of 500 000 kWh per year, the heat consumption of the printer will be 500 000*2 000/50 000 =20 000 kWh per year.*

Table 9: Threshold values - average energy consumption (kWh/purchased substrate) for different printing methods

Printing method	Threshold value - Average energy consumption (kWh/purchased substrate)
Sheet fed offset	Advanced: 900 Basic: 1700
Digital printing	Advanced: 2100 Basic: 3700
Coldset, newspapers	Advanced: 400 Basic: 800
Coldset, forms	Advanced: 700 Basic: 1300
Coldset rotation (except newspaper)	Advanced: 500 Basic: 850
Heatset rotation	Advanced: 600 Basic: 1100

Flexographic printing (except envelope production)	Advanced: 250 Basic: 350
Envelope production with flexography	Advanced: 500 Basic: 800

The energy content of various fuels and district heating is specified in Appendix 5.

Part B

Printing companies who own its buildings (this also incl. internal printing companies located in the same building as the main company):

- The printing company must have an energy action plan for complying with reducing the energy consumption by a minimum of 50% (in relation to the difference between the energy consumption kWh/ton at the time of application and the threshold value for advanced energy consumption) no later than 3 years after the date the Nordic Ecolabel license is issued. Printing companies failing to meet the requirement lose their license.

  The plan shall be conducted by a competent energy specialist with relevant knowledge on energy savings in buildings and/or printing techniques.

Printing companies who live in rented buildings e.g., copy and print shops located in shopping centres:

- The printing company must have an energy action plan for complying with reducing the energy consumption by a minimum of 25% (in relation to the difference between the energy consumption kWh/ton at the time of application and the threshold value for advanced energy consumption) no later than 3 years after the date the Nordic Ecolabel license is issued. Printing companies failing to meet the requirement lose their license.

  The plan shall be conducted by a competent energy specialist with relevant knowledge on energy savings in buildings and/or printing techniques.

*Example of how to calculate the 50% energy reduction requirement. If the energy consumption is 1100 kWh/ton, at the time of application, and the advanced threshold value is 900 kWh/ton, the energy consumption must be reduced by minimum 100 kWh/ton i.e., 1000 kWh/ton, no later than 3 years after the date the Nordic Ecolabel license is issued. Difference between energy consumption and is calculated (1100-900) = 200 kWh/ton. (200 * 50% = 100 kWh/ton).*

Companies using part B are subjected to the requirement; O22 annual follow-up of licence. The continuous improvement objectives and targets relating to the reduction of energy consumption shall be reported on yearly basis even after the requirement is met.

☒ Part A: Calculation and documentation (invoices from suppliers of electricity, fuel and heating) showing compliance with the requirement.

☒ Part A: In case of no individual energy measurement (e.g. a printing companies who live in rented buildings): Calculation and documentation from a competent energy specialist with relevant knowledge on energy savings in buildings and/or printing techniques verifying the printing companies' annual consumption of electricity.

☒ Part B (Printing companies who own its buildings): Copy of the energy action plan for complying with reducing the energy consumption by a minimum of 50% (in relation to the difference between the energy consumption kWh/ton at the time of application and the threshold value for advanced energy consumption) no later than 3 years after the date the Nordic Ecolabel license is issued.
Part B (Printing companies who live in rented buildings): Copy of the energy action plan for complying with reducing the energy consumption by a minimum of 25% (in relation to the difference between the energy consumption kWh/ton at the time of application and the threshold value for advanced energy

consumption) no later than 3 years after the date the Nordic Ecolabel license is issued.

Certified energy management systems according to ISO 50001 or EN 16247-1 can serve as a basis for the specific goals and action plans.

✉ Part B: Documentation that the energy action plan is conducted by a competent energy specialist with relevant knowledge on energy savings in buildings and/or printing techniques.

P7 CO_2 calculation

The printing company may be awarded 1 point if it is certified to calculate the climate impact of the printing company or individual graphic products under the following conditions:

- The CO_2 calculation tool is in compliance with ISO 16759 and the GHG Protocol[2], such as ClimateCalc[3]. Prerequisites and boundaries underlaying the CO_2 calculation tool must be described.
- The calculation/calculation tool must be certified and verified by independent third-party.
- If the printing company intends to communicate its CO_2 calculations, it must be made clear which emissions sources, CO_2 factors, prerequisites and boundaries have been used in the calculation.

✉ Description of the CO_2 calculation tool in accordance with the requirement.

✉ Valid certificate from ClimateCalc or similar system/tool.

✉ Example on how the printing company communicate its CO_2 calculations on printed matter.

1.7 Plastic packaging used for protection of printed matter

O13 Plastic packaging used for protection of printed matter

Plastic packaging must not contain PVC.

By plastic packaging is meant packaging that is used for protection and collation of individual/units of printed matter during storage, transport, and distribution.

✉ Declaration from the printing company that the requirement is met. Appendix 4 may be used.

1.8 Waste

The requirement for waste applies to the printing company. The requirement consists of a mandatory requirement for a waste management system and the possibilities for the printing company to be awarded points depending on amount of wastepaper and waste sorting.

O14 Waste management system

The printing company shall have in place a system for handling waste which addresses and documents the measures taken to reduce the amount of solid and liquid waste, including wastepaper, waste from substrates other than paper, ink waste, cleaning agent solution and dampening solution waste as defined by local or national regulatory authorities.

[2] https://ghgprotocol.org, visited November 2020
[3] https://eu.climatecalc.eu/ (visited 7/6-2019)

The system shall be documented and shall include information on at least the following procedures:

- handling, collection, separation, and use of recyclable materials from the waste stream.
- handling, collection, separation, and disposal of hazardous waste, as defined by the relevant local and national regulatory authorities.
- how the individual fractions are handled (internal or external reuse, recycling, energy use, landfilling or other).

✉ The printing company shall provide a waste minimization and management plan. If the printing company is environmentally certified (ISO 14001, EMAS) or has an environmental licence from the authorities, it will be sufficient for the waste plan to be uploaded from the system together with the environmental management certificate/environmental licence.

✉ Documentation of waste disposal, e.g. invoices or an annual statement from the waste disposal operator.

P8 Wastepaper

The printing company may be awarded up to 10 points depending on the quantity of wastepaper. The threshold values for each individual printing method are listed in table 10 below.

Calculate the wastepaper percentage for the printing method based on the weight specified on the invoice from the recipient of wastepaper, or by weighing the wastepaper at the printing company in relation to paper consumption on an annual basis. Wastepaper generated in connection with external finishing must also be included in the calculation.

Wastepaper from external finishing covers wastepaper from finishers encompassed by O3 as well as wastepaper from finishers that only perform mechanical finishing treatment.

If all finishing is performed externally, the wastepaper of the printing company must be multiplied by 2 in order to produce a figure for total wastepaper, unless the printer can show that some other figure applies for wastepaper generated by external bookbinders.

If the printing company uses multiple methods of printing the threshold values is calculated as a weighted value which is defined according to quantity of wastepaper.

*Example of calculation of the threshold value using multiple methods of printing. If a printing company is using 500 tons of paper substrate (sheet fed offset) and 300 tons of paper substrate (digital printing) the weighted threshold value is calculated as: Calculated threshold value: (500/800) * 25 + (300/800) * 18 = 22,7%.*

Table 10: Threshold values - Average wastepaper %

Printing method	Threshold value - wastepaper (%)
Sheet fed offset	25
Digital printing	18
Coldset, newspapers	10
Coldset, forms	17
Coldset rotation (except newspaper and form printing)	18
Heatset rotation	21
Flexographic printing	11
Envelope production with flexography	15

Calculate points = (1 - (quantity of wastepaper / threshold value)) * 100

*Example of point calculation (sheet fed offset printing company): If the printing company´s quantity of wastepaper is calculated at 18%, the calculation will be as follows: (1 - (18/25)) *100 = 28% = 6 points*

Table 11: P8 example of points

Proportion of wastepaper (%) in relation to threshold value for wastepaper (%)	Points
0	0
1 - 10%	2
11 - 20%	4
21 - 40%	6
41 - 60%	8
61 - 100%	10

✉ The printing company shall provide a description of the calculation in accordance with the option for scoring points outlined above as well as an annual specification or the like from the recipient documenting the quantity of wastepaper disposed of, or details of how the wastepaper was weighed.

✉ A copy of invoices or annual report from the recipient documenting the quantity of wastepaper disposed, or details on how the wastepaper was weighed.

P9 Unsorted waste

The printing company may be awarded up to 5 points depending on the quantity of mixed waste in kg per tonne substrate (unsorted/unsuitable for recycling solid waste that is incinerated or goes to land fill).

If household waste can be separated, it can be excluded from the calculation.

Table 12: P9 example of points

Mixed waste (kg/tonne purchased substrates)	Points
0	5
1 - 5	4
6 - 10	3
11 - 15	2
16 - 20	1
Above 20	0

✉ The printing company shall provide a description of the calculation in accordance with the option for scoring points outlined above as well as an annual specification or the like from the recipient documenting the quantity of mixed waste (kg).

1.9 Ecolabelled products and services

The requirement rewards the printing company's purchase of ecolabelled products and services This requirement has been included in order to increase awareness of green purchasing policies.

P10 Purchase of ecolabelled products and services

The printing company may be awarded up to 3 points depending on the annual use of ecolabelled products and services. The products or services are listed in table 13 below:

Table 13: P10 example of possible points

Ecolabelled products or services	Points
100% by weight of used rags or 90% by weight of used work clothes is cleaned/laundered at a Nordic Swan Ecolabelled textile service	1
At least 90% by weight of the work clothes used in production are Nordic Swan Ecolabelled or EU Ecolabelled	1
100% use of Nordic Swan Ecolabelled cleaning service	1
100% by weight of industrial tissue paper used in the printing process (does not include for example hand drying in toilets and the like) is Nordic Swan- or EU Ecolabelled	1
100% use of Nordic Swan Ecolabelled industrial cleaning and degreasing agents	1
100% of the purchased electricity is ecolabelled according to Bra Miljöval, EKO Energy or similar*	1

** Ecolabels for electricity are assessed according to the guidelines which are located here (link). Bra Miljöval and EKOEnergy are assessed and approved.*

✉ The printing company shall provide a description of the calculation in accordance with the option for scoring points outlined above.

✉ Documentation for use/purchase of ecolabelled products and services.

1.10 Use of Nordic Swan logo on printed matter

The requirement rewards the printing company's use of the Nordic Swan logo on printed matter. This requirement has been included in order to increase awareness at the printing company, and among the printing industry's customers of using, the logo on printed matter.

P11 Use of Nordic Swan logo on printed matter

The printing company may be awarded up to 5 points depending on either a) the annual number of **orders produced** using the Nordic Swan logo on printed matter or b) share (tons) of printed matter using the Nordic Swan logo in relation to total tons of printed matter.

*Example using alternative a): If the printing company manufactures 150 production orders a year and 12 of the production orders are Nordic Swan Ecolabelled printed matter, the printing company is awarded: (12/150) * 100 =8% = 1 points.*

Table 14: P11 Example of points

Annual number of manufactured Nordic Ecolabelled orders in relation to the total number of orders produced (which can be labelled) or share (tons) of printed matter using the nordic Swan logo in relation to total tons of printed matter.	Points
0 - 4%	0
5 - 10%	1
11 - 15%	2
16 - 25%	3
26 - 49%	4
Above 50%	5

✉ The printing company shall provide a description of the calculation in accordance with the option for scoring points outlined above as well as an annual specification of orders produced.

2 Quality and regulatory requirements

To ensure that the Nordic Ecolabelling requirements are met, a documented management system must be in place, and it must include the following implemented procedures.

If printing company has a quality system that is certified to ISO 9001, or an environmental management system certified under ISO 14 001 or EMAS, and the following procedures are applied, it is sufficient for the certification body's auditor to certify compliance with the requirements.

O15 Organisation and responsibility

An organizational chart shall be drawn up. Responsibility and authority for central environmental functions shall be defined. Responsibility for the Nordic Swan Ecolabel licence, marketing, training, and purchasing shall be specified, and the contact person for Nordic Ecolabelling named.

✉ Copy of organizational chart.

O16 Documentation

The licensee must archive the documentation that is sent in with the application, or in a similar way maintain information in the Nordic Ecolabelling data system, as long as the Nordic Swan Ecolabel licence remains valid. All the documents regarding the licence must be easily available at the premises of the licensee.

This includes documents on internal checks and measurement reports, for example. The contact person for communication with Nordic Ecolabelling is responsible for ensuring that the documentation is updated and available.

🔍 This is checked on site as necessary.

O17 Procedures in the event of changes, self-assessment, and non-conformities

The printing company must ensure via procedures or instructions that:

- In the event of planned changes that affect the requirements of the Nordic Swan Ecolabel, the contact person must notify Nordic Ecolabelling before the changes are implemented. This may relate, for example, to a change of chemicals or printing technologies. The printing company may only use chemicals assessed by Nordic Ecolabelling.
- In the event of unforeseen non-conformities that affect how the ecolabelling requirements are fulfilled, the contact person must immediately notify Nordic Ecolabelling in writing.
- There is a system for handling claims and complaints

✉ Copy of procedures in the event of planned changes, self-assessment, unforeseen non-conformities and claims.

O18 Training

All employees and contractors that are part of daily operations must have the know-how to ensure fulfilment of the Nordic Ecolabelling requirements.

Employees must receive regular training in general environmental matters and environmental issues specific to their field of work that have a bearing on the fulfilling of Nordic Ecolabelling requirements.

Participation in training shall be documented. Subcontractors participating in the daily business shall participate in the printing company's training or certify that they have received equivalent training.

🔍 Lists of participants after completion of training.

O19 Customer information

Customers must be informed that they are using a Nordic Swan Ecolabelled printing company and what this means.

✉ Copy of the customer information procedure.

O20 Legislation and regulations

The business must ensure compliance with the applicable legislation regarding the working environment, the external environment, finances, hygiene and health.

The business must not have any form of negative criticism from an authority or agency which has not been rectified within the deadline set by the supervisory authority or agency. If this requirement is not met, Nordic Ecolabelling may revoke the licence.

✉ Duly signed application form.

O21 Strategic goals to reduce environmental impact

The printing company shall have procedures showing how it works with strategic goals to reduce environmental impact in the production of printed matter such as; mapping energy efficiency measures, focus on production chemicals (content of VOC, reduction of VOC), design of printed matter in order to minimize waste or dialogue with suppliers regarding use/selection of substrates with low environmental impact.

The goals shall be quantitative and time-based, and they shall be determined by the management. The strategic goals must be assessed at least once a year by management.

✉ Enclose procedures for policy or equivalent documentation of the manufacturer's work with environmental goals, showing fulfilment of the requirement. Minutes from the management's annual assessment on complying with strategic goals.

O22 Follow-up of licence

The printing company shall ensure that the requirements of the criteria are met during the validity period of the licence. At least once a year (within 6 months of closing the books) a review of operations shall be made covering at least the following areas:

- Substrates, requirements O4, O5, O6, O7 and O8.
- Chemicals, requirement O10.
- VOC, requirements O11.
- Energy (if using part B), requirement O12.

The printing company who owns its buildings must comply with reducing the energy consumption by a minimum of 50% (in relation to the difference between the energy consumption kWh/ton at the time of application and the threshold value for advanced energy consumption) no later than 3 years after the date the Nordic Ecolabel license is issued.

The printing company who lives in rented buildings must comply with reducing the energy consumption by a minimum of 25% (in relation to the difference between the energy consumption kWh/ton at the time of application and the threshold value for advanced energy consumption) no later than 3 years after the date the Nordic Ecolabel license is issued.

The continuous improvement objectives and targets relating to the reduction of energy consumption shall be reported on yearly basis even after the requirement is met.

- Follow up on strategic goals to reduce environmental impact O21.

Nordic Ecolabelling may request reports from the internal review and examine a selection, or all, of the requirements. Information on a compliance check is given in advance.

✉ Routine for monitoring licence.

3 Summary of points

O23 Obligatory requirement points scored

The printing company must score at least 19 points.

The table below summarises the point score requirements and how many points can be earned for each requirement.

Table 15: Points total

Point score requirements	Points achieved	Maximum number of points	
P1 Printing substrates		5	
P2 Controlled and Ecolabelled paper		10	
P3 Content of recycled material		10	5
P4 Mono substrates			5
P5 Recycled material and mono substrates			10
P6 VOC		10	
P7 CO_2 calculation		1	
P8 Wastepaper		10	
P9 Unsorted waste		5	
P10 Ecolabelled products and services		3	
P11 Use of the Nordic Swan Ecolabel logo on printed matter		5	
Total		59	

✉ Summary of points in line with the table above.

4 Special requirements concerning the use of the Nordic Swan Ecolabel logo on printed matter

The following requirements apply to printed matter that will bear the ecolabel. Inserts in magazines and daily papers, for example, need only meet the requirements if the Nordic Swan Ecolabel logo also appears on the insert.

Please be aware that a special packaging mark for Nordic Swan Ecolabelled transport-/postal-/web shop packaging must be used. Guidelines for the use and placement of the mark have also been developed. Graphical guidelines for Nordic Swan Ecolabelled transport-/postal-/web shop packaging can be found at: https://www.svanen.se/en/for-licensees/communicate-nordic-swan-ecolabel/

O24 Paper

The paper substrate used in the Nordic Ecolabelled printed matter must consist of inspected or Nordic Swan Ecolabelled paper.

Other non-paper parts such as metal bars and -clips or plastic covers must not exceed 10% of the total weight of the Nordic Swan Ecolabelled printed matter.

In the case of stationery and office supplies such as books, folders, ring binders, notepads and forms, other non-paper parts must not exceed 20% of the total weight of the Nordic Swan Ecolabelled printed matter.

The non-paper product parts of stationary paper product such as metal bars or plastic covers shall be easily removable to ensure that those components will not hinder the recycling process.

Inserts that are fixed are considered part of the printed matter.

✉ Upload a copy of the duly completed and signed Appendix 4.

O25 Board/corrugated board for packaging

It is only possible to use the Nordic Swan Ecolabel logo on packaging

defined as transport-/postal-/web shop packaging* produced from paper substrate.

The packaging must be commercial/product-neutral in terms of the product(s) inside the packaging e.g. no print/pictures showing/describing the actual product in the packaging. However, company brand/logo/name may be displayed on the packaging.

The requirement does not include food/beverage packaging.

- The paper substrate used in the Nordic Swan Ecolabelled printed transport-/postal-/web shop packaging must consist of inspected or Nordic Swan Ecolabelled paper or **inspected board/corrugated board**.
- Other non-paper parts such as tape or metal clips must not exceed 5% of the total weight of the Nordic Swan Ecolabelled printed transport-/postal-/web shop packaging.
- The non-paper product parts such as tape or metal clips shall be easily removable (according to CEPI/FEFCO guidelines [4]) to ensure that those components will not hinder the recycling process.
- Labels must not be used.
- PVC used in tape, must not be used.
- Wax, latex coatings or lamination must not be used.

Inserts that are fixed and made of the same inspected board, are considered part of the printed packaging. Packaging fillers or non-fixed insets is however not part of the Nordic Swan Ecolabelled product.

** Tertiary packaging/transport packaging facilitates the protection, handling, and transportation of a series of sales units or secondary packaging in order to group everything into unit loads during transit. This type of packaging is rarely seen by the consumer.*

Postal- and web shop packaging: postal packaging is a form of single trip packaging used for shipping products, goods or orders from B2B or B2C whereas web shop packaging often are returnable.

✉ Upload a copy of the duly completed and signed Appendix 4.

O26 Textile and panels

The **textile** used in the Nordic Ecolabelled printed matter must consist of either:

- Nordic Swan- or EU-Ecolabelled textiles.
- OEKO-TEX 100 certified textile made from 100% Post-Consumer Recycled polyester (rPET).

[4] https://www.cepi.org/wp-content/uploads/2020/10/Cepi_recyclability-guidelines.pdf

The recycled polyester must be certified according to Recycled Claim Standard (RCS), Global recycled standard or equivalent certification standard.

The **panel** used in the Nordic Ecolabelled printed matter must consist of:

- Nordic Swan Ecolabelled panels for interior- or exterior use

Other materials such as metal clips or plastic covers must not exceed 10% of the total weight of the Nordic Swan Ecolabelled printed matter.

If case of printing on Nordic Swan Ecolabelled acoustic panels, or if the acoustic panels is used as a basis for a printed textile matter, the printing must not have a negative effect on the primary function of absorbing sound waves.

In case of roll-up stands, printed canvas on a wooden frame and other similar products, only the material carrying the information is regarded as printed matter.

✉ Upload a copy of the duly completed and signed Appendix 4, see O24.

O27 Printing inks, toners, inks, varnishes, and adhesives

All printing inks, toners, inks, varnishes, and adhesives used in the Nordic Swan Ecolabelled printed matter must be assessed by Nordic Ecolabelling and must fulfil the requirements in Appendix 1.

The printing company must ensure that any printing inks, toners, inks, varnishes and adhesives which are exempt from requirement O10 are not used in the Nordic Swan Ecolabelled printed matter.

✉ Upload a copy of the duly completed and signed Appendix 4, see O24.

O28 Lamination and PVC

Nordic Swan Ecolabelled printed matter must not contain PVC.

Lamination shall only be used to increase the durability of products with a life span of at least 1 year, for example, books, binders, folders, exercise books, calendars, notebooks, and diaries.

Lamination shall not be used in magazines.

Double lamination shall not be used in any product.

✉ Upload a copy of the duly completed and signed Appendix 4, see O24.

O29 Fragrance

Fragrance/scent must not be added to Nordic Swan Ecolabelled printed matter (e.g. scented varnish). Packaged product samples with fragrance, attached to an item of printed matter, or removable scratch samples, are not encompassed by this.

✉ Upload a copy of the duly completed and signed Appendix 4, see O24.

O30 Printing suppliers and finishers (book binders)

All printer suppliers used in the production of printed matter that is to bear the Nordic Swan Ecolabel must be licensed to use the Nordic Swan Ecolabel. All external finishers encompassed by O3 must have been inspected.

✉ Upload a copy of the duly completed and signed Appendix 4, see O24.

O31 Traceability

If only part of the output of the printing company is Nordic Swan Ecolabelled, orders bearing the Nordic Swan Ecolabel must be marked clearly to enable them to be separated from other orders. Information must also be displayed disclosing:

- name of paper and paper grades, board or corrugated board, textile or panels;
- names on printing inks, toners, inks, varnishes or adhesives;
- subcontractors used;
- how the Nordic Swan Ecolabel logo is reproduced on the items of printed matter (e.g. with the aid of order notes or order bags).

✉ Upload a copy of the duly completed and signed Appendix 4, see O24.

Regulations for the Nordic Ecolabelling of services

To easily identify Nordic Swan Ecolabelled services, the licence number and a descriptive sub text shall always accompany the Nordic Swan Ecolabel.

The descriptive sub text for 041 Printing companies and printed matter is as follows:

- For a printing house as a whole: **Printing house**
- For ecolabelled printed matter produced at an ecolabelled printing house: **Printed matter**

More information on graphical guidelines, regulations and fees can be found at http://www.nordic-swan-ecolabel.org/regulations

Nordic Swan Ecolabelled printed matter

If the printing company or the printing company's customers want to indicate that the printed matter is Nordic Swan Ecolabelled, the ecolabel must appear on the printed matter. Alternatively, it may be indicated that the printed matter is Nordic Swan Ecolabelled without use of the logo, provided that the licence number is stated.

Please note that special requirements apply to all printed matter that is to be ecolabelled (see section 4). The explanatory text must be one or more of the following:

Danish: Tryksag
Swedish: Trycksak
Finnish: Painotuote
Norwegian: Tryksak
Icelandic: Prentgripur
English: Printed matter

In the case of envelopes, the explanatory text must be "Envelope" in English and the equivalent of this in the other languages.

If the licence holder wishes to use a different designation than printed matter as explanatory test, or a different language than the ones mentioned, this is subject to prior approval by Nordic Ecolabelling.

Envelopes and other printed matter that are marketed by several printing companies/producers, may be marketed as Nordic Swan Ecolabelled if all printing companies/producers involved are Nordic Swan Ecolabelled. Correspondingly, same printing matter with exact same trade name cannot be marketed in the Nordic countries with the use of logo and without the logo.

Packaging: Only produced packaging defined as transport-/postal-/web shop packaging can use the Nordic Swan Ecolabel logo.

Graphical guidelines for Nordic Swan Ecolabelled transport-/postal-/web shop packaging can be found at: https://www.svanen.se/en/for-licensees/communicate-nordic-swan-ecolabel/

Follow-up inspections

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

The licence may be revoked if it is evident that the printing company does not meet the requirements.

Criteria version history

Nordic Ecolabelling adopted version 6.0 of the criteria for Printing companies and printed matter on 17th March 2021. The criteria are valid until 31st December 2026.

On 17 August 2021, Nordic Ecolabelling decided to adjust appendix 1, classification of production chemicals regarding dampening solution additives and furthermore appendix 1 and 2, prohibited substances in chemical products regarding substances on EU member state initiative "Endocrine Disruptor Lists", List II. The new version is called 6.1.

On 8 March 2022, Nordic Ecolabelling decided to adjust appendix 1, prohibited substances in chemical products regarding halogenated pigments and BHT in offset printing inks. The new version is called 6.2.

On 7 June 2022, Nordic Ecolabelling decided to adjust appendix 1, prohibited substances in chemical products regarding isothiazoliones and bronopol. The new version is called 6.3.

On 25 October 2022 Nordic Ecolabelling decided to adjust requirement O6, Other substrates than paper regarding the trivial limit for share of substrates exempted from the requirement from 15% to 25% (a time-limited adjustment). Furthermore, printing companies only carrying out braille printing are exempted the requirement O12, energy use. The new version is called 6.4.

On 14 February 2023 Nordic Ecolabelling decided to adjust requirement 01, type of printing company, regarding printing companies with multiple printing methods, of which one of the methods constitutes a maximum of 5% of the total consumption. The new version is called 6.5.

On 23 May 2023 Nordic Ecolabelling decided to adjust appendix 1, classification of production chemicals regarding production chemicals classified Skin Sens 1, H327 or Resp. Sens 1 H334 used in closed systems and furthermore appendix 1 part 2, prohibited substances in chemical products regarding chlorinated phenols in sublimation dye inks. The new version is called 6.6.

On 27 June 2023 Nordic Ecolabelling decided to adjust requirement O6, Other substrates than paper, to only included PVC and PVC coating. The calculation method has been changed from total consumption of substrates other than paper to total consumption of substrates (paper + substrates other than paper). Furthermore, production chemicals classified as Repr. 1, H360 due to the

presents of acrylates (used in a closed printing system), are exempted the requirement O10 Chemicals. The new version is called 6.7.

On 26 September 2023 Nordic Ecolabelling decided to adjust appendix 1, part 2, prohibited substances in chemical products regarding per- and polyfluorinated alkylated compounds in latex ink, dry- and wet toner. The new version is called 6.8.

On 21 November 2023 Nordic Ecolabelling decided to prolong the criteria document with 12 months till 31 December 2027. The new version is called 6.9.

On 19 December 2023 Nordic Ecolabelling decided to adjust appendix 1, part 2, prohibited substances in chemical products regarding Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide (TPO)" listed on the SVHC Candicate list and Trimethylolpropane triacrylate (TMPTA) with CAS 15625-89-5 classified as Carc 2, H351. The exemption for dry toner containing per- and polyfluorinated alkylated compounds has been prolonged for 3 months to 30 June. The new version is called 6.10.

On 2 April 2024 Nordic Ecolabelling decided to adjust appendix 1, part 2, prohibited substances in chemical products regarding contents of isothiazolinones. The 500 ppm limit does not apply to production chemicals classified as Skin Sens 1, H317 and/or Resp. Sens. 1, H334 due to the presence of isothiazolinones, designed to be used in closed printing systems. The new version is called 6.11.

On 28 May 2024 Nordic Ecolabelling decided to prolong the exemption for dry toner containing per- and polyfluorinated alkylated compounds for 6 months to 31 December 2024 (appendix 1, part 2, prohibited substances in chemical products). The new version is called 6.12.

On 19 November 2024 Nordic Ecolabelling decided to adjust requirement P11 accepting volume as an alternative to orders produced in the calculation. Furthermore, OEKO-TEX 100 certified textile made from 100% Post-Consumer Recycled polyester (rPET) can also be used to produce printed matter using the Nordic Swan logo. The exemption for latex ink, dry- and wet toner containing per- and polyfluorinated alkylated compounds has been prolonged for 6 months to 30 June 2025 (appendix 1, part 2, prohibited substances in chemical products). The new version is called 6.13.

New criteria

As part of any future evaluation of the criteria, it will be relevant to consider the following:

- Product definition - new types of printing technologies and types of printed matter such as packaging.
- Printing substrates - further analysis of the environmental impact of substrates other than paper.
- Energy use - energy savings at the printing company.
- Use of chemicals
- Recyclability of the printed matter

Appendix 1 Chemicals and foils for foil printing and laminates

This declaration is used by suppliers of chemical products, foils for foil printing and laminate used in Nordic Swan Ecolabelled printing companies. The declaration must be completed in the Supply Chain Declaration Portal.

Note that the content of VOC together with item name (product name) and distributor/supplier will be published for printing companies, - either all of them if no confidentiality restriction is chosen and if confidentiality restriction only the companies with special permission.

Please complete the declaration for identification of the material(s)/chemical(s):

This declaration is based on the knowledge we have at the time of the application, based on tests and/or declarations from raw material manufacturers, bearing in mind new advances and new knowledge may emerge. Should such new knowledge arise that affects Nordic Ecolabelling's requirements, the undersigned is obliged to submit an updated declaration to Nordic Ecolabelling.

Nordic Ecolabelling is entitled to seek information on the full chemical composition of the product from the chemical manufacturer/supplier in order, where necessary, to check the content of the product.

Country	Distributor/supplier	Trade name*	Product number, where applicable
Internationally			
Sweden			
Norway			
Iceland			
Finland			
Denmark			

** The trade name may, for example, be a series of inks or some other designation comprising a number of trade names. For example, "Printing ink series xxxx", where xxxx represents a number of variants in the series of printing inks. Information about toner and ink must – in addition to the name of the toner/ink – include details of the machine for which it is used, e.g., Toner xxx for yyy (where yyy is the name of the printing machine).*

☒ Enclose safety data sheets in accordance with the current statutory requirement in the country of application, e.g., Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

Type of product:

☐ Printing ink and additives:

Printing ink used in offset and flexo printing. Printing ink also includes metallic ink and ink additives that are mixed into the printing ink. Production aids such as anti-drying agents that are designed to prevent the ink vessel drying

☐ Dampening solution additive

out overnight, or spraying powder, are not regarded as ink additives.

☐ Toner:

Toner powder (e.g. used in laser printing, photocopying), dry toner, wet/liquid toner also known as ready-to-use electroInk/liquid electrophotography (LEP). Imaging-oil/-agent, recycle agent, electroInk/primer shall be declared separately.

☐ Ink:

Ink used in digital printing, e.g. Inkjet printing.

☐ Varnish

☐ Washing agent

☐ Laminate applicable for paper/printed paper

☐ Chemicals used for coating in manufacturing of paper board/corrugated board:

Chemical coating is a covering applied to the surface of the paper board/corrugated board such as colour, varnish or a coating to obtain waterproof or antistatic properties.

☐ Algicide

☐ Adhesive

☐ Repro-chemical

☐ Foil for foil printing

☐ Adhesive used in manufacturing of paper board/corrugated board

Printing method in which the product is used:

☐ Sheet fed offset (not envelopes)

☐ Heatset rotation

☐ Flexographic printing (not envelopes)

☐ Coldset rotation (not forms/newspapers)

☐ Coldset, newspapers

☐ Digital printing/photocopying

☐ Coldset, forms

☐ Envelope production with flexographic printing

1 General requirements for chemicals

According to Nordic Ecolabelling's overall principles, the Nordic Swan Ecolabel must be a powerful tool that works to phase out substances that are hazardous for the environment and health. Official regulations (classification, labelling, official lists, and regulation) are used to exclude substances and products that are hazardous for the environment and health. As the Nordic Swan Ecolabel is an ecolabel, the requirements in the criteria are more stringent than legislation.

This entails that the chemical may be prohibited from Nordic Swan Ecolabelled services and products, even though it is permitted under the authorities' regulations. The precautionary principle is the starting point when substances are suspected of having serious environmental and health impacts.

Requirements in the Nordic Ecolabelling criteria are set e.g., for the classification of chemical products as well as ingoing substances in the chemical product.

Ingoing substances and impurities are defined below, unless stated otherwise in the requirements.

- **Ingoing substances:** All substances in the chemical product, including additives (e.g., preservatives and stabilisers) in the raw materials. Substances known to be released from ingoing substances (e.g., formaldehyde and arylamine) are also regarded as ingoing substances.
- **Impurities:** Residuals, pollutants, contaminants etc. from production, including production of raw materials that remain in the chemical product in concentrations less than 1000 ppm (0.100 w-%, 1000 mg/kg).

Examples of impurities are residues of the following: residues or reagents including residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.

1.1 Classification of production chemicals

Production chemicals classified according to the risk phrases indicated in the table below must not be used in the production of printed matter.

Foil for foil printing *shall only meet the following areas for declaration: 1.2 Prohibited substances, 2.1 Residues of heavy metals and 2.2 Azo dyes.*

Laminates applicable for printed matter *out of paper shall only meet the following areas for declaration: 1.2 Prohibited substances (incl. adhesive and/or coating part of the foil) and 2.3 laminates used to enhance and protect the printed matter.*

Is the production chemical classified in accordance with the table below?

Yes ☐ No ☐ If Yes, please specify:

_____

Classification under CLP Regulation (EC) No 1272/2008		
Classification	**Hazard Class and Category Code**	**Hazard statement**
Hazardous to the aquatic environment	Aquatic Acute 1 Aquatic Chronic 1-4	H400 H410, H411, H412, H413
Hazardous to the ozone layer	Ozone	H420
Acute toxicity	Acute Tox. 1 or 2 Acute Tox. 3	H330, H310, H300 H331, H301, H311
Specific target organ toxicity	STOT SE 1 STOT RE 1	H370 H372
Respiratory or skin sensitisation	Resp. Sens. 1 Skin Sens 1	H334 H317
Carcinogenic*	Carc. 1A or 1B	H350

	Carc. 2	H351
Germ cell mutagenicity*	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity*	Repr. 1A or 1B Repr. 2 Lact	H360 H361 H362

** The classifications concern all classification variants. For example, H350 also covers classification H350i.*

Note that the manufacturer of the chemical product is responsible for its classification.

Exemptions:

- Repro chemicals (repro) classified as Aquatic Chronic 2-3 H411 or H412 or Skin Sens 1 H317.
- UV-curing printing inks, UV inkjet inks, UV inkjet varnishes, UV varnishes, UV adhesives and UV primers classified as: Aquatic Acute 1 H400, Aquatic Chronic 1-4 H410, H411, H412 or H413 or Resp. Sens 1 H334 or Skin Sens 1 H317.
- Production chemicals classified as Carc 2, H351 if the classification is due to the presence of titanium dioxide (CAS No. 13464-67-7).
- Production chemicals classified as Repr. 1, H360 and/or Repr. 2, H361 and/or STOT RE 1 H372 are exempted if the classification is due to the presence of photoinitiators and/or acrylates.

The exemption only applies if the classified production chemical is used/designed to be used in a closed printing system such as digital printing, where there is no direct contact/exposure between worker and the chemical. Traditional UV offset where the UV ink is transferred from open cans/pumped to an ink tray/application roller is considered an open system.

- Production chemicals classified as Skin Sens 1, H317 or Resp. Sens 1, H334 are exempted if used in closed printing systems*
- Flexographic printing ink classified as Skin Sens 1, H317 if the classification is due to the presence of isothiazolinones.
- **Algicides** classified as Aquatic Acute 1 H400, Aquatic Chronic 1-4 H410, H411, H412, H413.
- Dampening solution additives classified as Resp. Sens 1 H334 or Skin Sens 1 H317 or classified as Aquatic Chronic 2-3 H411 or H412 due to the presence of isothiazolinones or Iodopropynyl Butyl Carbamate (IPBC), if diluted according to the manufacturer's recommended dosage making the solution not classifiable.
- 2-component adhesives classified as Resp. Sens 1 H334 or Skin Sens 1 H317.

** Closed systems include: washing agents, algicides and ink, toner, varnishes used in digital printing.*

☒ Enclose safety data sheets in accordance with the current statutory requirement in the country of application, e.g., Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

1.2 Prohibited substances

The following substances must not be ingoing substances in chemical products used in the production of printed matter:

Does the production chemical contain the following ingoing substances?

Yes ☐ No ☐ If Yes, please specify:

_____

- EDTA (Ethylenediaminetetraacetic acid) and its salts
    - An exemption is made for EDTA and its salts if the proportion of EDTA and its salts does not exceed 1% (percentage by weight) in the chemical product.
- Sodium and calcium hypochlorite
- Perfluorinated and polyfluorinated alkylated compounds
    - An exemption is made for non-declared dry toner used in the printing company. However, the exemption does not apply for Nordic Swan Ecolabelled printed matter. The exemption applies until 30. June 2025.
    - An exemption is made for non-declared wet toner and latex ink. However, the exemption does not apply for Nordic Swan Ecolabelled printed matter. The exemption applies until 30. June 2025.
- Halogenated organic substances
    - Isothiazolinones may be present in the chemical product at a total level of not more than 500 ppm (0.05% by weight)****.
    - Iodopropynyl Butyl Carbamate (IPBC) may be present in the chemical product at a total level of not more than 2000 ppm (0.2% by weight).
    - Acid products (pH<6) may contain bronopol if the content of bronopol in the final product does not exceed 2500 ppm (0,25% by weight).
    - Halogenated pigments may be used provided the total extractable level of polychlorinated biphenyls (PCB's) does not exceed 50 ppm.
    - Chlorinated phenols may be present in sublimation dye inks if the following threshold values are fulfilled (mg/kg)***:
        - Pentachlorophenol (PCP): 0,05
        - Terachlorophenols (TeCP):0,05
        - Trichlorophenols (TrCP): 0,2
        - Dichlorophenols (DCP): 0,5
        - Monochorlphenols (MCP): 0,5
- Isothiazolinones
    - The chemical product must not contain more than 500 ppm (0.05% by weight) isothiazolinones.
- APEO – alkylphenol ethoxylates and alkylphenol derivatives (substances that release alkylphenols on degradation)
- BHT - butylhydroxytoluene
    - An exemption is made for BHT in UV-curing printing inks, UV inkjet inks, UV inkjet varnishes, UV varnishes and UV primers if the proportion of BHT does not exceed 0.3% (3000 ppm) in the chemical product. If BHT is given a harmonized classification which means that the substance does not meet the requirements of the criteria document, the exception will be waived.
    - An exemption is made for BHT in offset printing inks if the proportion of BHT does not exceed 0.2% (2000 ppm) in the chemical product. If BHT is given a harmonized classification

which means that the substance does not meet the requirements of the criteria document, the exception will be waived.

- Substances on the Candidate List*
    - An exemption is made for Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide (TPO)" with CAS 75980-60-8.
- CMR substances - Carcinogenic, Germ cell mutagenicity, Reproductive toxicity category 1 A or B or category 2
    - An exemption is made for titanium dioxide (CAS no. 13463-67-7) classified as Carc 2, H351 and Trimethylolpropane (TMP, CAS no. 77-99-6) classified as Repr. 2, H361.
    - An exemption is made for acrylates, classified as Repr. 1, H360 and/or photoinitiators classified as Repr. 2, H361. (The exemption only applies if the classified production chemical is used/designed to be used in a closed printing system such as digital printing, where there is no direct contact/exposure between worker and the chemical. Traditional UV offset where the UV ink is transferred from open cans to an ink tray/application roller is considered an open system).
    - An exemption is made for methylene diphenyl diisocyanate (MDI) in polyurethane glue (PUR) classified as Carc 2, H351.
    - An exemption is made for Trimethylolpropane triacrylate (TMPTA) with CAS 15625-89-5 classified as Carc 2, H351.
- Substances that have been judged in the EU to be PBT (Persistent, Bioaccumulative and Toxic) or vPvB (very Persistent and very Bioaccumulative)**.
- Substances on the EU member state initiative ”Endocrine Disruptor Lists”, List I, List II and List III. See the following links:

List I: https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu

List II: https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption

List III: https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities

Regarding List I, II and III: a substance which is transferred to one of the corresponding sublists called “Substances no longer on list”, and no longer appears on any of List I-III, is no longer excluded. The exception is those substances on sublist II which were evaluated under a regulation or directive which doesn’t have provisions for identifying EDs (e.g., the Cosmetics Regulation, etc.). For those substances, ED properties may still have been confirmed or suspected. Nordic Ecolabelling will evaluate the circumstances case-by-case, based on the background information indicated on sublist II.

** The Candidate List can be found on the ECHA website: http://echa.europa.eu/candidate-list-table*
*** PBT and vPvB in accordance with the criteria in Annex XIII of REACH*

****Documentation: valid Oeco Tex - Eco Passport certificate*

***** The 500 ppm limit does not apply to production chemicals classified as:*

a) Repr. 1, H360 and/or Repr. 2, H361 and/or STOT RE1 H372 due to the presence of photoinitiators designed to be used in closed printing systems such as digital printing and

b) Skin Sens 1, H317 and/or Resp. Sens. 1, H334 due to the presence of isothiazoliones, designed to be used in closed printing systems such as digital printing.

1.3 Volatile organic compounds VOC

The printing company is awarded points depending on the purchased quantity of chemicals consisting of or containing volatile organic compounds (VOC).

Organic compounds are defined in accordance with European Commission´s Directive 2010/775/EC: “volatile organic compound" means any organic compound as well as the fraction of creosote, having at 293,15 K a vapour pressure of 0,01 kPa (at 20ºC) or more, or having a corresponding volatility under the particular conditions of use”. This is verified from the safety/technical data sheet from the manufacturer.

If a chemical only partially contains VOC, the weight percentage of the VOC components is indicated as the VOC content. If a washing agent for example contains two VOC components, A and B, and the rest is water: 20% A and 45% B, the VOC content will be 65%.

In the case of wet toner, the manufacturer or supplier must, in order to simplify the VOC calculation, declare two versions of the same toner using fixed values of 15% and 30%. The lower value (15 %) is applied to digital printing machines with condensation followed by recycling. The higher value (30 %) is applied when the equivalent recycling technique is missing. The following should be stated when declaring the wet toner series or a single wet toner e.g.: " Wet toner trade name CMYK version i.ii, Light Magenta, Light Cyan for series X, Y and Z ". The word "series" in this example refers to the make of the printing press.

In the case of heatset inks, the manufacturer or supplier must as standard assume that the heatset ink contains 0% VOCs due to heating kiln treatment at the printing company or external incineration under controlled conditions. In the case of other production chemicals, information verified from safety data sheets must be used (highest value if a range is shown).

Does the chemical contain VOC? Yes ☐ No ☐

If yes, specify percentage by weight of VOC in the chemical:_____

2 Specific requirements for printing inks, toners, inks, varnishes, foil for foil printing and laminated applicable for printed matter

2.1 Residues of heavy metals

Dyes or pigments based on antimony, arsenic, barium, cadmium, chromium VI, cobalt, copper, lead, mercury, nickel, or selenium shall not be intentionally used in printing inks, toners, inks, varnishes, foils for foil printing and laminates applicable to printed matter.

Copper in phthalocyanine pigment is exempted from this requirement.

The levels of ionic impurities in the dyes or pigments used must not exceed the following limits:

- Antimony: 50 ppm
- Arsenic: 50 ppm
- Barium: 100 ppm

- Cadmium: 20 ppm
- Chromium VI: 100 ppm
- Cobalt: 500 ppm
- Copper: 100 ppm
- Lead: 100 ppm
- Mercury: 4 ppm
- Nickel: 100 ppm
- Selenium: 20 ppm

Do the printing inks, toners, inks, varnishes, foils for foil printing or laminates applicable to printed matter comply with the requirement?

Yes ☐ No ☐ If No, please specify:

2.2 Dye products, Amines

Azo dyes, which by reductive cleavage of one or more azo groups may release one or more of the aromatic amines listed in Regulation (EC) No 1907/2006 Annex XVII, Appendix 8, must not be used.

Do the printing inks, toners, inks, varnishes, foils for foil printing or laminates applicable to printed matter comply with the requirement?

Yes ☐ No ☐ If No, please specify:

2.3 Laminates used to enhance and protect the printed paper matter

Laminates/film lamination used to enhance and protect the printed matter must not contain:

- PVC
- Coatings which can have an antiviral-/antibacterial effect

Silver compounds, nano silver and nano gold are also considered antibacterial/-viral substances.

Does the laminate used to enhance and protect printed matter contain PVC or coatings which can have an antiviral-/antibacterial effect?

Yes ☐ No ☐ If Yes, please specify:

2.4 Recyclability and deinkability - Printing inks, toners, inks, varnishes and adhesives

This requirement only applies to printing inks, toners, inks, varnishes, and adhesives designed and intended to use on paper/paper-based substrates.

Printing inks, -toners, -ink and varnishes:

Oil/solvent based (hydrophobic) printing inks, -toners, -inks and varnishes (e.g., standard offset inks, inks for rotogravure and dry toners) are exempted from this requirement.

Water based (hydrophilic) and crosslinked printing inks, -wet toners, -inks and -varnishes (e.g., flexo, inkjet, liquid toner, UV curable, Liquid electrophotography (LEP) must:

- be tested in accordance with INGEDE's test method no. 11 and obtain a result of above 0 points in accordance with EPRC's points system for all tested paper types. This corresponds to "Tolerable deinkability" or
- prove repulpable according to PTS method PTS-RH 021/97 or Aticelca 501:2019 evaluation system or
- prove repulpable without any reservations according to a deinking mill or paper recycling plant/mill evaluation system.

Adhesives:

Water based adhesives, non-soluble hot melt adhesives and non-redispersible hot melt adhesives are exempted from this requirement.

Adhesives must

- be tested in accordance with INGEDE's test method no. 12 and obtain a result of above 0 points in accordance with EPRC's points system for all tested paper types. This corresponds to "Tolerable deinkability/removability" or
- prove repulpable without any reservations according to a deinking mill or paper recycling plant/mill evaluation system

The requirements concerning test laboratories and test instructions, INGEDE testing are stated in section 3 below.

☒ Water based (hydrophilic) and crosslinked printing inks printing inks, wet toners, inks, and varnishes: The chemical manufacturer/supplier shall provide:
- the test result of INGEDE test method no. 11 and the point score in accordance with EPRC's points system for all tested paper types or
- the result(s) of test report(s) proving repulpability according to the PTS method PTS-RH: 021 or ATICELCA 501:2019 evaluation system or
- declaration from a deinking mill or paper recycling plant/mill proving repulpability without any reservations according to their evaluation system.

☒ Adhesives: The chemical manufacturer/supplier shall provide the test result of INGEDE test method no. 12 and the point score in accordance with EPRC's points system for all tested paper types or

☒ Adhesives: declaration from a deinking mill or paper recycling plant/mill proving repulpability without any reservations according to their evaluation system.

3 Analyses and test methods

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

The chemical manufacturer's analysis laboratory/test procedure may be approved for analysis and testing if:

- Sampling and analysis are monitored by the authorities; or

- The manufacturer's quality assurance system covers analyses and sampling and is certified to ISO 9001; or
- The manufacturer can demonstrate agreement between a first-time test conducted at the manufacturer's own laboratory, and testing carried out in parallel at an independent test institute, and the manufacturer takes samples in accordance with a fixed sampling schedule

3.1 Test methods for deinkability and recyclability

Printing inks, -toners, -inks, varnishes, and adhesives

DEINKABILITY:
Water based (hydrophilic) and crosslinked printing inks, -wet toners, -inks and -varnishes (e.g., flexo, ink-jet, liquid toner, UV curable, Liquid electrophotography (LEP) must be tested in accordance with INGEDE's test method no. 11, and obtain a result of above 0 points in accordance with ERPC's points system for all tested paper types. This corresponds to "Tolerable deinkability".
Testing must be performed on two types of paper: uncoated and coated paper. If a type of printing ink is only sold for one or two specific types of paper, it is sufficient to only test the paper type(s) in question.

Adhesives must be tested in accordance with INGEDE's test method no. 12 and obtain a result of above 0 points in accordance with ERPC's points system for all tested paper types. This corresponds to "Tolerable" removability.

Water based adhesives, non-soluble hot melt adhesives and non-redispersible hot melt adhesives are not to be tested (exempted from this requirement).

Testing must be performed on a type of printed matter that is representative of the adhesive in question.

REPULPABILITY:
Water based (hydrophilic) and crosslinked printing inks, wet toners, -inks and -varnishes (e.g., flexo, inkjet, liquid toner, UV curable, Liquid electrophotography (LEP) must prove repulpable according to PTC method PTS-RH 021/97 or Aticelca 501:2019 evaluation system.
Testing must be performed on two types of paper: uncoated and coated paper. It must be stated if the paper is suitable for graphic- or packaging grade.

The test results/declaration may include a specific series of ink toners, -inks, -varnishes and adhesives (e.g., different colours) if the basic chemical property is the same.

Signature

We declare that the requirements have been met and that the information provided is correct. In the event of any change to the composition of the product, that impacts the product's fulfilment of the requirements, a new declaration of fulfilment of the requirements is to be submitted to Nordic Ecolabelling.

We understand that Nordic Ecolabelling will not be responsible for any data that is incorrectly recorded in the Nordic print database as a result of our failure to provide correct information:

Company name:	
Address:	
Telephone:	Date:
E-mail:	
Signature:	
Name in block letters:	

Please note that the signatory company will appear in the Nordic Ecolabelling Portal unless otherwise stated under distributor/supplier at the top of the form.

E-mail

Ecolabelling Denmark	info@ecolabel.dk
Ympäristömerkintä Suomi Oy (Finland)	joutsen@ecolabel.fi
Norræn Umhverfísmerking (Iceland)	svanurinn@ust.is
Stiftelsen Miljømerking (Norway)	info@svanenmerket.no
Miljömärkning Sverige AB (Sweden)	info@svanen.se

Appendix 2 Substrates other than paper

This declaration is used by manufactures/suppliers of substrates other than paper used in Nordic Swan Ecolabelled printing companies. The declaration must be completed in the Supply Chain Declaration Portal.

Note that the item name (product name) and distributor/supplier will be published for printing companies, - either all of them if no confidentiality restriction is chosen and if confidentiality restriction only the companies with special permission.

Definition of substrates other than paper:
Substrates other than paper are often divided into flexible and rigid substrates. Flexible substrates such as foils and laminates often consist of plastic such as PVC, vinyl, PP, PE and PET, while textiles and canvas most often are used for banners and posters. Typical rigid substrates are thick plastic, board, wood, metal or glass which are often used for signs or Point of Sale (POS) material. Rigid substrates may consist of one material but are often composed of several types of material forming a composite.

Complete the declaration for identification of the substrate:
This declaration is based on the knowledge we have at the time of the application, based on declarations from raw material manufacturers or safety data sheet, with reservations for new advances and new knowledge. Should such new knowledge arise that affects Nordic Ecolabelling's requirements, the undersigned is obliged to submit an updated declaration to Nordic Ecolabelling.

Country	Distributor/supplier	Trade name	Product number, where applicable
Internationally			
Sweden			
Norway			
Iceland			
Finland			
Denmark			

⇪ Enclose product data sheet and /technical data sheet.

Specify the type of product:

☐ Film/foil ☐ Laminate

☐ Board/panel made of wood ☐ Textile

☐ Mesh ☐ Other

If other type of product, specify the product:

_____

1 Description of the substrate

Describe type of substrate (e.g. material, composition of materials including any release paper/liner):

_____

1.1 PVC and PVC coating (O6)

Substrate, including release paper/liner, must not contain PVC or PVC coating.

Does the substrate, including release paper/liner, contain halogenated organic compounds?

Yes ☐ No ☐

2 Recycled material and mono substrates

The printing company may be awarded points based on the types of substrate used (substrate containing recycled material (P3), mono substrates (P4) or mono substrates containing recycled material (P5)).

2.1 Recycled material (P3)

Does the substrate contain minimum 50 w% recycled material*?

Substrates containing recycled PVC cannot be awarded points.

**Recycled material is defined in accordance with ISO 14021:*
"Pre-consumer": Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it. Nordic Ecolabelling considers rework, regrind or scrap, which cannot be reused directly in the same process, but requires a reprocess (e.g. in the form of sorting, re-melting, and granulation) before it can be reused, to be pre-consumer material. This is regardless of whether it is done in-house or externally. "Post-consumer/commercial" is defined as material created by households or commercial, industrial, or institutional facilities in the role of end users of a product that can no longer be used for the intended purpose. This includes return of material from the distribution chain.

Yes ☐ No ☐

Description and quantity of the recycled material:

_____

⇪ Metal:

1. The percentage of recycled metal in the metal part shall be indicated.
2. Declaration from the smelter about the proportion of recycled metal in production (on an annual basis)
3. The traceability of the supply chain must be documented, e.g. in the form of a flow chart. The proportion of recycled metal in the supply chain must be documented, e.g. by information on invoice or declaration from supplier. For

aluminium (Al), the percentage recovered can be documented with the Hydro Circal certification.

⇪ Plastic:

1. The percentage of recycled plastic in the plastic part shall be indicated
2. Manufacturer of recycled raw materials shall be stated
3. Documentation from the manufacturer of recycled raw material showing that the plastic has been recycled according to the ISO 14021.
   or
4. Certificates in accordance with the Global Recycled Standard, EuCertPlast or other equivalent certification approved by Nordic Ecolabelling which shows that the raw material has been recycled.

⇪ Other recycled materials:

1. Documentation of that recycled material is in accordance with ISO 14021.

2.2 Mono substrate (P4)

Does the substrate only consist of the same material and property (mono substrate)? Mono substrates made of PVC cannot be awarded points.

Mono substrate (other than paper) consists of the same material such as PE- or PP foil, PC or PS board or polyester. A substrate containing PS homogeneous and PS foamed is not considered a mono substrate. Substrates containing adhesives (outer layer of adhesives) such as films/laminating films or substrates coated with another material (such as PVC) are not considered to be a mono substrate. Mono substrates coated with ink are how ever considered to be a mono substrate.

Yes ☐ No ☐

2.3 Mono substrates containing recycled material (P5)

Does the mono substrate contain minimum 50 w% recycled material?
(Comply with the two above paragraphs for Recycled material (P3) and Mono substrates (P4).

Yes ☐ No ☐

3 Fabric/textile and panels/boards made of wood

Applies to substrates of fabric/textile and to substrates of wood-based panels/boards such as chipboard, fibreboard (including MDF and HDF panels), OSB (Oriented Strand Board) and veneer boards. Wood-based also includes corresponding products made of bamboo.

3.1 Substrates of fabrics/textiles

Is the substrate of fabric/textile certified with one of the following label schemes?

- Nordic Swan Ecolabel
- EU ecolabel
- GOTS
- Oeko-Tex 100

Yes ☐ No ☐ If Yes, please specify:

_____

⇪ Valid Nordic Swan Ecolabel, -EU Ecolabel, GOTS or Oeko-Tex 100 certificate or license number and product name.

3.2 Panels/boards made of wood

Applies to **wood-based panels/boards** such as chipboard, fibreboard (including MDF and HDF panels), OSB (Oriented Strand Board) and veneer boards. Wood-based also includes corresponding products made of bamboo.

Name/trade name and type of panel/board:

_____

Is the panel/board certified with Nordic Swan Ecolabel? Yes ☐ No ☐

⇪ Valid certificate or license number and product name.

Is the panel/board FSC- or PEFC certified? Yes ☐ No ☐

⇪ Valid FSC/PEFC Chain of Custody certificate from the manufacturer/supplier of FSC or PEFC certified panels/boards or link to valid certificate in FSC/PEFC certificate database.
⇪ Documentation showing that the panels/boards is FSC- or PEFC certified.

Does the panel/board contain tree species listed on Nordic Ecolabelling's list of prohibited and restricted tree-species*.

* *The list of prohibited and restricted tree species is located on the website: https://www.nordic-swan-ecolabel.org/pulp-paper-declaration-portal/*

Yes ☐ No ☐

Nordic Ecolabelling's list of restricted tree species consists of virgin tree species listed on:

a) CITES (Appendices I, II and III)
b) IUCN red list, categorized as CR, EN and VU
c) Rainforest Foundation Norway´s tree list
d) Siberian larch (originated in forests outside the EU)

Tree species listed on a) CITES (Appendices I, II and III) **are not permitted** to be used.

Tree species listed on either b), c) or d) **may be used** if it meets all of the following requirements:

- the tree species does not originate from an area/region where it is IUCN red listed, categorized as CR, EN or VU.

- the tree species does not originate from Intact Forest Landscape (IFL), defined in 2000 http://www.intactforests.org/world.map.html.
- the tree species shall originate from FSC or PEFC certified forest/plantation and shall be covered by a valid FSC/PEFC chain of custody certificates documented/controlled as FSC or PEFC 100% through the FSC transfer method or PEFC physical separation method.
- Tree species grown in plantation shall in addition originate from FSC or PEFC certified forest/plantation, established before 1994.

✉ Declaration from the manufacturer of the panel/board of wood that tree species listed on a-d) are not used in the panel/board made of wood.

If species from the lists b), c) or d) is used:

⇪ The manufacturer of the panel/board of wood are required to present a valid FSC/PEFC Chain of Custody certificate that covers the specific tree species and demonstrate that the tree is controlled as FSC or PEFC 100% through the FSC transfer method or PEFC physical separation method.

⇪ The manufacturer of the panel/board of wood are required to document full traceability back to the forest/certified forest unit thereby demonstrating that;

- the tree does not originate from an area/region where it is IUCN red listed, categorized as CR, EN or VU;
- the tree species does not originate from Intact Forest Landscape (IFL), defined in 2000 http://www.intactforests.org/world.webmap.html;
- For plantations the applicant/manufacturer/supplier are required to document that the tree species does not originate from FSC or PEFC certified plantations established after 1994.

Signature

We declare that the requirements have been met and that the information provided is correct.

We understand that Nordic Ecolabelling will not be responsible for any data that is incorrectly recorded in the Nordic print database as a result of our failure to provide correct information:

Company name:	Date:
Address:	
Telephone:	E-mail:
Signature:	Name in block letters:

Please note that the signatory company will appear in the Nordic Ecolabelling Portal unless otherwise stated under distributor/supplier at the head of the form.

E-mail

Ecolabelling Denmark	info@ecolabel.dk
Ympäristömerkintä Suomi Oy (Finland)	joutsen@ecolabel.fi
Norræn Umhverfísmerking (Iceland)	svanurinn@ust.is
Stiftelsen Miljømerking (Norway)	info@svanenmerket.no
Miljömärkning Sverige AB (Sweden)	info@svanen.se

Appendix 3 Declaration from finishing suppliers (O3)

This declaration is used by chemical finishing suppliers used by Nordic Swan Ecolabelled printing companies. Chemical finishing involves adhesives, varnishing, **foil printing** or laminating, as well as washing agents used for ordinary manual cleaning of print finishing machines used by the chemical finishing service. Suppliers of mechanical finishing services are not encompassed by this requirement. The declaration must be completed in the Supply Chain Declaration Portal.

Note that the item name (name of the chemical finishing supplier) will be published for printing companies, - either all of them if no confidentiality restriction is chosen and if confidentiality restriction only the companies with special permission.

Company name:	
Address:	
Tel:	E-mail:
Name of contact person:	

Chemicals and materials
The finishing supplier must maintain a list of adhesives, varnishing, **foil printing** or laminating, as well as washing agents used for ordinary manual cleaning of print finishing machines used by the chemical finishing service.
All chemicals must be assessed by Nordic Ecolabelling and must fulfil the requirements provided for in Appendix 1 in the Criteria document for printing companies, generation 6.

Addressing with ink is exempted from the requirement. For addressing ink, a safety data sheet complying with the standards set out in Annex II of REACH (Regulation 1907/2006/EC) or other technical data sheet must be enclosed.

List name/trade name of chemical(s): adhesives, varnishing, **foil printing** or laminating, as well as washing agents used for ordinary manual cleaning of print finishing machines used by the chemical finishing service:

_____

☒ Demonstrate compliance with the requirement by fulfilling the requirements provided for in Appendix 1 for all chemicals.
☒ Enclose safety data sheets in accordance with the current statutory requirement in the country of application, e.g., Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

We also confirm that the attached list of chemicals and materials are those used in the business and that we will notify Nordic Ecolabelling in the event of any changes. We confirm that materials containing PVC are not used in paper-based packaging (O9), plastic packaging used for protection of printed matter (013) and

that PVC materials (requirement 028) are not used for printed matter to be labelled with The Nordic Swan Ecolabel.

Signature

We declare that the requirements have been met and that the information provided is correct.

We understand that Nordic Ecolabelling will not be responsible for any data that is incorrectly recorded in the Nordic print database as a result of our failure to provide correct information:

Company name:	Date:
Address:	
Telephone:	E-mail:
Signature:	Name in block letters:

Please note that the signatory company will appear in the Nordic Ecolabelling Portal unless otherwise stated under distributor/supplier at the top of the form.

E-mail

Ecolabelling Denmark	info@ecolabel.dk
Ympäristömerkintä Suomi Oy (Finland)	joutsen@ecolabel.fi
Norræn Umhverfísmerking (Iceland)	svanurinn@ust.is
Stiftelsen Miljømerking (Norway)	info@svanenmerket.no
Miljömärkning Sverige AB (Sweden)	info@svanen.se

Appendix 4 Declaration by the printing company

We hereby confirm that we are in compliance with the following requirements:

Requirement as to paper-based packaging manufactured (as a whole) in the printing company (O9):

- The non-paper product parts of paper-based packaging such as metal clips, tape, or plastic covers, shall be easily removable (according to CEPI/FEFCO guidelines[5]) to ensure that those components will not hinder the recycling process.
- Avoid plastic labels if possible and use direct print or paper labels. If a window is needed, then provide clear instructions for consumers to remove window film before recycling.
- PVC used in tape, must not be used
- Paper or board laminated on both sides must not be used.
- Wax or latex coatings must not be used.

Requirement as to plastic packaging used to protect the printed matter (O13):

- Plastic packaging must not contain PVC.
  By plastic packaging is meant packaging that is used for protection and collation of individual/units of printed matter during storage, transport, and distribution.

Requirements as to the use of the Nordic Swan Ecolabel logo on printed matter (O24 - O31):

Print on paper:

- The paper substrate used in the Nordic Ecolabelled printed matter must consist of inspected or Nordic Swan Ecolabelled paper.
- Other non-paper parts such as metal bars and -clips or plastic covers must not exceed 10% of the total weight of the Nordic Swan Ecolabelled printed matter.
- In the case of stationery and office supplies such as books, folders, ring binders, notepads and forms, other non-paper parts must not exceed 20% of the total weight of the Nordic Swan Ecolabelled printed matter.
- The non-paper product parts of stationary paper product such as metal bars or plastic covers shall be easily removable to ensure that those components will not hinder the recycling process.
  Inserts that are fixed are considered part of the printed matter

Print on board/corrugated board:

Only produced packaging defined as transport-/postal-/web shop packaging* can use the Nordic Swan Ecolabel logo.
The packaging must be commercial/product-neutral in terms of the product(s) inside the packaging e.g. no print/pictures showing/describing the actual product in the packaging. However, company brand/logo/name may be displayed on the packaging.

[5] https://www.cepi.org/wp-content/uploads/2020/10/Cepi_recyclability-guidelines.pdf

The requirement does not include food/beverage packaging.

- The paper substrate used in the Nordic Ecolabelled printed transport-/postal-/web shop packaging must consist of inspected or Nordic Swan Ecolabelled paper or **inspected board/corrugated board**.
- Other non-paper parts such as tape or metal clips must not exceed 5% of the total weight of the Nordic Swan Ecolabelled printed transport-/postal-/web shop packaging.
- The non-paper product parts such as tape or metal clips shall be easily removable (according to CEPI/FEFCO guidelines[6]) to ensure that those components will not hinder the recycling process.
- Labels must not be used.
- PVC used in tape, must not be used.
- Wax, latex coatings or lamination must not be used.

Inserts that are fixed and made of the same inspected board, are considered part of the printed packaging. Packaging fillers or non-fixed insets is, however, not part of the Nordic Swan Ecolabelled product.

** Tertiary packaging/transport packaging facilitates the protection, handling, and transportation of a series of sales units or secondary packaging in order to group everything into unit loads during transit. This type of packaging is rarely seen by the consumer.*

Postal- and web shop packaging: postal packaging is a form of single trip packaging used for shipping products, goods, or orders from B2B or B2C whereas web shop packaging are returnable. The packaging is usually manufactured from corrugated cardboard.

Please be aware that a special label for Nordic Ecolabelled transport-/postal-/web shop packaging must be used. Guidelines for the use and placement of the label have also been developed. Graphical guidelines for Nordic Swan Ecolabelled transport-/postal-/web shop packaging can be found at: https://www.svanen.se/en/for-licensees/communicate-nordic-swan-ecolabel/

Print on textiles and panels:

- The textile or panel used in the Nordic Ecolabelled printed matter must consist of Nordic Swan- or EU-Ecolabelled textiles, OEKO-TEX 100 certified textile made from 100% Post-Consumer Recycled polyester (rPET) or Nordic Swan Ecolabelled panels for interior- or exterior use. The rPET must in addition be certified according to Recycled Claim Standard (RCS), Global recycled standard or equivalent certification standard to verify the origin of the yarn/fibers.

Please be aware of the definition of the product group. The following printing methods and types of printed and converted products are not eligible for a Nordic Swan Ecolabelling licence according to criteria for "Printing Companies and Printed Matter":

> *Printing companies printing on textiles produced for clothing and accessories or furnishing fabrics, i.e., textiles produced for use and interior decoration in the home or in cars/boats, such as towels, bedding, curtains, tablecloths, rugs,*

[6] https://www.cepi.org/wp-content/uploads/2020/10/Cepi_recyclability-guidelines.pdf

cushions, duvets, and upholstery (both for private and public use). Separate Ecolabelling criteria exist for these.

- Other materials such as metal clips or plastic covers must not exceed 10% of the total weight of the Nordic Swan Ecolabelled printed matter.
- If case of printing on Nordic Swan Ecolabelled acoustic panels, or if the acoustic panels is used as a basis for a printed textile matter, the printing must not have a negative effect on the primary function of absorbing sound waves.

In case of roll-up stands, printed canvas on a wooden frame and other similar products, only the material carrying the information is regarded as printed matter.

Printing inks, toners, inks, varnishes, and adhesives:

- All printing inks, toners, inks, varnishes, and adhesives used in the Nordic Swan Ecolabelled printed matter must be assessed by Nordic Ecolabelling and must fulfil the requirements in Appendix 1.
  The printing company must ensure that any printing inks, toners, inks, varnishes, and adhesives which are exempt from requirement O10 are not used in the Nordic Swan Ecolabelled printed matter.

Lamination and PVC:

- Nordic Swan Ecolabelled printed matter must not contain PVC.
- Lamination shall only be used to increase the durability of products with a life span of at least 1 year, for example, books, binders, folders, exercise books, calendars, notebooks, and diaries.
- Lamination shall not be used in magazines.
- Double lamination shall not be used in any product.

Fragrance:

- Fragrance/scent must not be added to Nordic Swan Ecolabelled printed matter (e.g. scented varnish). Packaged product samples with fragrance, attached to an item of printed matter, or removable scratch samples, are not encompassed by this.

Printing suppliers and finishers (book binders):

- All printer suppliers used in the production of printed matter that is to bear the Nordic Swan Ecolabel must be licensed to use the Nordic Swan Ecolabel O2. All external finishers encompassed by O3 must have been inspected.

Traceability:

- If only part of the output of the printing company is Nordic Swan Ecolabelled, orders bearing the Nordic Swan Ecolabel must be marked clearly to enable them to be separated from other orders. Information must also be displayed disclosing:
  - name of paper and paper grades, textile or panels;
  - names on printing inks, toners, inks, varnishes or adhesives;
  - subcontractors used;

- how the Nordic Swan Ecolabel logo is reproduced on the items of printed matter (e.g. with the aid of order notes or order bags).

Signature

We declare that the requirements have been met and that the information provided is correct.

Company name:	Date:
Address:	
Telephone:	E-mail:
Signature:	Name in block letters:
Person in charge of marketing:	Date:
Telephone:	E-mail:
Signature	

In the event of personnel changes, a new confirmation must be submitted to the ecolabelling organisation.

Appendix 5 VOC and energy factors

1 Calculation of volatile organic compound (VOC) emissions:

If the printing company sells recycled VOC or removes VOC from outgoing air with the aid of, for example, incineration (e.g. heatset) or removes or sells VOC by some other controlled means (e.g. condensation in connection with certain digital printing facilities with wet toner or inkjet inks), these quantities may be deducted from the quantities purchased/received.

Below is a general specification of the calculation method for selected printing techniques, but other printing techniques may also be deducted on the said assumption. As an example, certain heatset printing companies collect ink waste and send it for incineration under controlled conditions. Consequently, the quantity of VOC in the ink waste may be deducted if this quantity can be documented. Heatset printing companies must measure emissions of VOC.

Measurements of VOC at heatset printing companies
Measurements of VOC quantities at local emission points must be based on:

- measurements of Non-Methane Volatile Organic Compounds (NMVOV) in mg C/Nm^3 flue-gas after each treatment unit - as required by the authorities for heatset printing companies of a certain size.
  information on annual gas flow with the gas flow during operations (in Nm^3/h) and the annual number of hours of operations for each treatment unit.

If measurements of NMVOC are not performed, the European threshold value of 20 mg C/Nm^3 may be used as a standard value. To simplify conversion to VOC the printing company must assume that it is oil consisting of hydrocarbons with a typical chain length of C9 - C20. This means that 1 g of VOC will on average correspond to 0.85 g of C.

Heatset with afterburning or flue gas treatment
If a heatset printing company has an integrated afterburner or flue gas treatment, the company may assume as a standard value that 100% of the substances in the printing inks are converted to VOC. Other production chemicals containing VOC must be calculated in accordance with the instructions found here and the results must be added to the VOC consumption.

Digital printing machines and recycling
For digital printing machines with e.g. wet toner or inkjet inks, can weight information be used on the basis of e.g. invoices for sold VOC. The quantity documented by means of e.g. invoices, may be deducted and this applies to all product chemicals excluding wet toner.

For wet toner, two values (VOC) are used in calculation in the Nordic Ecolabelling Portal. The lower value (15%) is applied to digital printing machines having condensation followed by recycling. The higher value (30%) is applied when the equivalent recycling technique is missing.

Example on how to calculate VOC (kg VOC/ton substrate)

Description of parameters (A-G) applicable for the calculation of VOC:

A) Total VOC consumption (Kg)	Value calculated automatically in the Nordic Ecolabelling Portal from consumption of chemicals. Production chemicals (VOC) related to the printing method applicable. Calculation is based on the consumption of production chemical and related to the weight-% VOC in each chemical. Example: 1200 Kg VOC calculated consumption in total from printing method.
B) Total weight (Kg) of chemical waste fraction containing VOC (Kg)	Total amount (Kg) chemical waste related to VOC and printing method if applicable. If not applicable with waste fraction see parameter F (consumption of substrate). Total weight could have components containing 0 weight-% VOC. Example: 40 Kg (Total chemical waste related to printing method).
C) Weight of waste component/ components not containing VOC (Kg)	Example: 10 Kg (waste-) water consumption for printing method.
D) Calculation of VOC remaining in waste fraction	Example: 40 Kg (B) – 10 Kg (C) = 30 Kg (D).
E) Sum VOC (Kg)	VOC waste withdrawn from total VOC. Calculation example: 1200 Kg (A) – 30 Kg (D) = (E) 1170 Kg VOC.
F) Consumption of substrate for printing method (Ton)	Example: Printing method has 400 Ton (F) consumption of substrate.
G) Calculation of VOC value for the printing method (Kg VOC/Ton substrate)	Example: 1170 Kg VOC (A or E applicable) / 400 Ton (F) = 2,93 Kg VOC/Ton substrate (G).

2 Energy content of fuels and district heating

The table below shows the values for the energy content that must be applied when calculating energy consumption based on purchased/received fuels and district heating. In the case of fuels not included in the table, data provided by the supplier may be used (lower calorific value).

Fuel	Energy content	Unit
Light heating oil	36.0	GJ/m3
Heavy heating oil	38.7	GJ/m3
LPG (gasol)	46.1	MJ/kg
Natural gas	38.9	MJ/m3
Biogas	6.4	kWh/m3
Pellets	10.0	GJ/m3
Woodchips	3.5	GJ/m3
Briquettes	10.0	GJ/m3
Coal	26.5	MJ/kg
District heating		
Water based, 35°C cooling	40.8	kWh/m3
Steam based, condensate at 100°C and normal air pressure	627	kWh/m3

If more specific values are available from the supplier of fuel, e.g. own measured values, these values may be applied instead. The following values may be used as standard values for density if the supplier has not provided the data:

Natural gas: 0.85 kg/m3N
Light heating oil: 0.89 kg/liter
Heavy heating oil: 0.98 kg/liter
District heating water: 1.00 kg/liter

Appendix 6 Inspected paper board/corrugated board

This declaration is used by manufactures of paper board/corrugated board used as inspected printing material in Nordic Swan Ecolabelled printing companies. The declaration must be completed in the Supply Chain Declaration Portal.

Only paper board/corrugated board, which is registered item for a specific use, that meets the requirements for inspected paper board/corrugated board may be used in Nordic Swan Ecolabelled printed matter.

Note that the item name (product name) and manufacturer/supplier together with type of paper board/corrugated board and grammage (g/m^2) will be published for printing companies,- either all of them if no confidentiality restriction is chosen and if confidentiality restriction only the companies with special permission.

Definition of inspected paper board/corrugated board
Inspected paper board/corrugated board applies to conversion of paper to paper board and corrugated cardboard. The conversion process involves gluing together a minimum of 2 paper grades (such as gluing together liner and fluting) and e.g. also a process of cutting, trimming, and bending the board.

Name/trade name:	
Manufacturer/supplier:	
Type of paper board/corrugated board:	Board grammage (g/m^2):

Requirements for inspected paper board/corrugated board
Inspected paper board/corrugated board must meet the following requirements:

Does the paper board/corrugated board comply with the following requirements?

Yes ☐ No ☐ If No, please specify:

- The manufacture of paper board/corrugated board must have a quality system that is certified to ISO 9001 or similar quality system.
- The paper/board used in the inspected paper board/corrugated board must be inspected or Nordic Swan Ecolabelled.

  A list of inspected paper grades is published on Nordic Ecolabelling's publicly available web portal https://www.nordic-swan-ecolabel.org/pulp-paper-declaration-portal/

  List of inspected paper or Nordic Swan Ecolabelled paper used in paper board/corrugated board:

- Wax, latex coatings or lamination must not be used.
- Labels must not be used.
- PVC must not be used in tape.
- Adhesives and **chemicals used for coating** must be assessed by Nordic Ecolabelling and must fulfil the requirements provided for in Appendix 1 in the Criteria document for printing companies, generation 6.

  Appendix 1 must be fill in/declared by the manufacturer of the chemicals.

  List name/trade name of adhesives and chemicals used for coating in the manufacturing of paper board/corrugated board:

  _____

☒ Demonstrate compliance with the requirement by fulfilling the requirements provided for in Appendix 1 for all chemicals.
☒ Enclose safety data sheets in accordance with the current statutory requirement in the country of application, e.g., Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.
☒ Valid ISO 9001 certificate or similar

We declare that the requirements have been met and that the information provided is correct.

Company name:	Date:
Address:	
Telephone:	E-mail:
Signature:	Name in block letters:
Person in charge of marketing:	Date:
Telephone:	E-mail:
Signature	

In the event of personnel changes, a new confirmation must be submitted to the ecolabelling organisation.