

ANNEX

EU Ecolabel criteria for awarding the EU Ecolabel for printed paper, stationery paper and paper carrier bag products

FRAMEWORK

Aims of the criteria

The EU Ecolabel criteria target the best environmental performing printed paper, stationery paper, and paper carrier bag products on the market. Whilst the use of chemical products and the release of pollutants is an inevitable part of the production process, a product that bears the EU Ecolabel guarantees to the consumer that the use of such chemicals and associated emissions of pollutants have been restricted to the extent technically possible without prejudice to the fitness for use of the final product.

As part of the promotion of circular economy aspects, the criteria particularly aim to promote printed paper, stationery paper and paper carrier bag products that comply with minimum recyclability requirements in order to improve yields from paper mills that accept these products in recycled paper deliveries at their end of life.

The criteria also focus on the reduction of VOC emissions and help guarantee associated benefits for worker health and for reductions in local and regional atmospheric pollution.

The criteria for awarding the EU Ecolabel to 'printed paper, stationery paper, and paper carrier bag products' are as follows:

1. Substrate;
2. Hazardous substance restrictions;
3. Recyclability;
4. Emissions;
5. Waste;
6. Energy;
7. Training;
8. Fitness for use;
9. Information on the product
10. Information appearing on the EU Ecolabel.

The ecological criteria cover the manufacturing of printed paper, stationery paper, and paper carrier bag products, including constituent sub-processes from the paper production to the site(s) and dedicated production lines where the printed paper, stationery paper and paper carrier bag products are printed and/or converted.

The ecological criteria do not cover the transport and packaging. Adhesive labels that consist of 0.50 % w/w or more of the final product shall meet adhesives removability requirement specified in Criterion 3(c). Non-adhesive labels are exempted from fulfilling the criteria.

All printing or converting on the printed paper, stationery paper and paper carrier bag products shall fulfil the respective requirements. Parts of the final product that are printed or converted by a sub-contractor shall therefore also fulfil the related requirements. The application shall include a list of all the printing houses and subcontractors involved in the production of the product, and their geographic locations.

An application can be submitted for a product line of specified type such as e.g. glued brochure of 2-30 pages. In this case, the sample product that represents product line needs to fulfil the criteria. The sample product must be analysed in reference to all materials and chemicals used, types of paper, the maximum number of pages, the maximum format, all possible types of binding. The EU Ecolabel can be used for all subsequent products that comply with the defined criteria for the sample product. Any change in the production process that is addressed by the criteria should be notified to the competent body being a subject of the further evaluation.

For a product type manufactured on a recurring basis or a product type that will only be manufactured once, the application should address a specific product.

Assessment and verification: *The specific assessment and verification requirements are indicated within each criterion.*

Where the applicant is required to provide declarations, documentation, analyses, test reports or other evidence to show compliance with the criteria, these may originate from the applicant and/or his supplier(s) and/or their supplier(s), etc. as appropriate.

Competent bodies shall preferentially recognise attestations and verifications that are issued by bodies accredited according to the relevant harmonised standard for testing and calibration laboratories, and verifications issued by bodies that are accredited according to the relevant harmonised standard for bodies certifying products, processes and services.

Where appropriate, test methods other than those indicated for each criterion may be used if the competent body assessing the application accepts their equivalence.

Where appropriate, competent bodies may require supporting documentation and may carry out independent verifications or on-site inspections to check compliance with these criteria.

The printed paper, stationery paper and paper carrier bag products need to meet all respective requirements of the country where it is placed on the market. The applicant shall declare the product's compliance with this requirement.

The following definitions shall apply:

- (1) 'Adhesive application' refers to processed adhesives used in finished paper products (typically applied as films). The physicochemical properties responsible for the behaviour of the "adhesive applications" during the paper recycling process depend on the composition of the adhesive, the setting mechanism and the geometry (mainly thickness) of the application;
- (2) 'Cleaning agents' (also sometimes known as washing agents or cleaners) means the following: (a) liquid chemicals used to wash printing forms, both separate

(off-press) and integrated (in-press), and printing presses to remove printing inks, paper dust and similar products; (b) cleaners for finishing machines and printing machines, such as cleaners to remove adhesive and varnish residues; (c) printing inks removers used in washing off dried printing inks. Washing agents do not include cleaning agents for cleaning other parts of the printing machine or for cleaning other machines than printing machines and finishing machines;

- (3) 'Converting process' means a process whereby a material is processed into a converted paper product. This process can include a printing process (pre-press, press, and post-press operations);
- (4) 'Converted paper product' is a paper, board or paper based substrates, either printed or unprinted, generally used to protect, handle or store items and/or notes, for which the converting process is an essential part of the production process, comprising three main categories of products: envelopes, paper carrier bags and stationery paper products;
- (5) 'Flexography' means a printing activity using an image carrier of rubber or elastic photopolymers on which the printing areas are above the non-printing areas, using liquid inks which dry through evaporation;
- (6) 'Fugitive emissions' means any emissions not in waste gases of volatile organic compounds into air, soil and water as well as solvents contained in any products, unless otherwise stated in Part 2 of Annex VII of 2010/75/EU¹;
- (7) 'Halogenated organic solvent' means an organic solvent which contains at least one atom of bromine, chlorine, fluorine or iodine per molecule;
- (8) 'Heatset web offset' means a web-fed printing activity using an image carrier in which the printing and non-printing area are in the same plane, where web-fed means that the material to be printed is fed to the machine from a reel as distinct from separate sheets. The non-printing area is treated to attract water and thus reject ink. The printing area is treated to receive and transmit ink to the surface to be printed. Evaporation takes place in an oven where hot air is used to heat the printed material;
- (9) 'Laminating' means adhering together of two or more flexible materials to produce laminates;
- (10) 'Pressure-sensitive adhesive coatings' (PSA): means adhesives with still mobile molecules on their surfaces, even after setting, can produce sufficient adhesion by pressing their cohesive films (coating) against the surface to be bonded. Since they can be "activated" by pressure, they are also called "pressure-sensitive adhesives / PSA"(i.e. labels or tapes). PSAs can be formulated to feature a wide variety of physicochemical properties. Since, in paper recycling, the separation of non-paper components is mainly achieved by mechanical sorting, it is desirable for the PSA coatings to have a "minimum size", a sufficient thickness;

¹ OJ L 334, 17.12.2010, p. 17–119

- (11) 'Publication rotogravure' means a rotogravure printing activity used for printing paper for magazines, brochures, catalogues or similar products, using toluene-based inks;
- (12) 'Repulping' means conversion of paper back into pulp;
- (13) 'Rotary screen printing' means a web-fed printing activity in which the ink is passed onto the surface to be printed by forcing it through a porous image carrier, in which the printing area is open and the non-printing area is sealed off, using liquid inks which dry only through evaporation. Web-fed means that the material to be printed is fed into the machine from a reel as distinct from separate sheets;
- (14) 'Rotogravure' means a printing activity using a cylindrical image carrier in which the printing area is below the non-printing area, using liquid inks which dry through evaporation. The recesses are filled with ink and the surplus is cleaned off the non-printing area before the surface to be printed contacts the cylinder and lifts the ink from the recesses;
- (15) 'TVOC' means total volatile organic carbon, expressed as C (in air).
- (16) 'Varnishing' means an activity by which a varnish or an adhesive coating for the purpose of later sealing the packaging material is applied to a flexible material;
- (17) 'Volatile Organic Compounds' (VOC) means any organic compounds having an initial boiling point less than or equal to 250°C measured at a standard pressure of 101,3 kPa as defined in Directive 2004/42/EC² and which, in a capillary column, are eluting up to and including n-Tetradecane (C₁₄H₃₀);
- (18) 'Paper for recycling' means paper waste stream generated during the production of finished product.

² OJ L 143, 30.4.2004, p. 87–96

EU ECOLABEL CRITERIA

Criterion 1 — Substrate

The paper substrate, including board and cardboard, used in a final product shall bear the EU Ecolabel for “Graphic paper, tissue paper and tissue products” in accordance with Commission Decision (EU) 2019/70³.

Assessment and verification: the applicant shall provide the specifications of the products concerned, including the trade names and amounts of paper used. The list shall also include the names of the suppliers of the papers used.

The applicant shall provide a copy of a valid EU Ecolabel certificate for each paper substrate used in a final product according to Annex I to Commission Decision (EU) 2019/70.

Criterion 2 — Hazardous substance restrictions

The basis for demonstrating compliance with each of the sub-criteria under criterion 2 shall be the applicant providing a list of all the relevant chemicals used together with appropriate documentation (safety data sheet and/or a declaration from the chemical supplier). All process chemicals used in the relevant printing or converting processes must be screened. Criterion 2(b) does not apply to chemicals used for wastewater treatment unless the treated wastewater is recirculated back into the printing or conversion process.

2(a) Restrictions on Substances of Very High Concern (SVHCs)

All ingoing chemicals used in the production process by the applicant and any supplied materials that form part of the final product shall be covered by declarations from suppliers that they do not contain, in concentrations greater than 0.10 % (weight by weight), substances meeting the criteria referred to in Article 57 of Regulation (EC) No 1907/2006⁴ that have been identified according to the procedure described in Article 59 of this Regulation and included in the candidate list for substances of very high concern for authorisation. No derogation from this requirement shall be granted.

Assessment and verification: The applicant shall provide a declaration that the product has been produced using supplied chemicals or materials that do not contain any SVHC in concentrations greater than 0.10 % (weight by weight). The declaration shall be supported by safety data sheets of process chemicals used or appropriate declarations from chemical or material suppliers.

The list of substances identified as SVHCs and included in the candidate list in accordance with Article 59(1) of Regulation (EC) No 1907/2006 can be found here:

http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp.

Reference to the list shall be made on the date of application.

2(b) Restrictions on substances classified under the Classification, Labelling and Packaging (CLP) Regulation

³ Decision of 11 January 2019 on establishing the EU Ecolabel criteria for graphic paper (OJ L15, 17.1.2019, p.27)

⁴ OJ L 396, 30.12.2006, p. 1

Unless derogated in Table X, the product, and any component articles therein, shall not contain substances or mixtures in concentrations greater than 0.10 % (weight by weight) that are assigned any of the following hazard classes, categories and associated hazard statement codes, in accordance with Regulation (EC) No 1272/2008⁵:

Group 1 hazards: Category 1A or 1B carcinogenic, mutagenic and/or toxic for reproduction (CMR): H340, H350, H350i, H360, H360F, H360D, H360FD, H360Fd, H360Df.

Group 2 hazards: Category 2 CMR: H341, H351, H361, H361f, H361d, H361fd, H362; Category 1 aquatic toxicity: H400, H410; Category 1 and 2 acute toxicity: H300, H310, H330; Category 1 aspiration toxicity: H304; Category 1 specific target organ toxicity (STOT): H370, H372; Category 1 skin sensitizer: H317*.

*only applies to dye formulations, colourants, surface finishing agents and coating materials used.

Group 3 hazards: Category 2, 3 and 4 aquatic toxicity: H411, H412, H413; Category 3 acute toxicity: H301, H311, H331; Category 2 STOT: H371, H373.

The use of substances or mixtures that are chemically modified during the production process, so that any relevant hazard for which the substance or mixture has been classified under CLP no longer applies, shall be exempted from the above requirement.

Table 1. Derogations to restrictions on substances classified under the CLP Regulation and applicable conditions.

Substance / mixture type	Applicability	Derogated hazard class, category and hazard statement code	Derogation conditions
Mineral oils and distillates	Heatset, coldset or digitally printed paper products	Aspiration hazard, category 1, H304	The applicant shall demonstrate to the Competent Body that all relevant instructions included in the safety data sheet regarding safe handling and storage and suitable exposure controls and personal protection are in place and declare that these are being complied with.
Nickel	Metal components	Skin sensitization, category 1, H317, Carcinogenicity, category 2, H351,	The applicant must provide information to the consumer regarding the use of nickel for metal electroplating,

⁵ OJ L 353, 31.12.2008, p. 1-1355

Specific Organ repeated category 1,	Target Toxicity, exposure, H372	coating or alloying.
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Assessment and verification: the applicant shall provide a list of all relevant chemicals used in their production process together with the relevant safety data sheet or chemical supplier declaration and any relevant declarations from component article suppliers.

Any chemicals containing substances or mixtures with restricted CLP classifications shall be highlighted. The approximate dosing rate of the chemical, together with the concentration of the restricted substance or mixture in that chemical (as provided in the safety data sheet or supplier declaration) and an assumed retention factor of 100 %, shall be used to estimate the quantity of the restricted substance or mixture remaining in the final product.

Since multiple products or potential products using the same process chemicals may be covered by one license, the calculation only needs to be presented for the worst-case product covered by the EU Ecolabel license (e.g. the most heavily printed product).

Justifications for any deviation from retention factor of 100% (e.g. solvent evaporation) or for chemical modification of a restricted hazardous substance or mixture must be provided in writing to the competent body.

For any restricted substances or mixtures that exceed 0.10% (weight by weight) of the final printed paper, stationery paper or paper bag product, or of relevant component articles therein, a relevant derogation must be in place and proof of compliance with any relevant derogation conditions must be provided

2(c) Biocidal products and biocidal active substances

Printed paper, stationery paper and paper carrier bag products shall not be treated with any biocidal products, including those of type 7 (film preservatives) and of type 9 (fibre, leather, rubber and polymerised materials preservatives).

Only in-can preservatives (i.e. biocidal product type 6: preservatives for products during storage) present in printing inks, varnishes, lacquers and any other formulations used during the production processes and preservatives used for liquid cooling and processing systems (i.e. biocidal product type 11) may be permitted, subject to their:

- having been approved by Regulation (EC) No 528/2012 for product type 6 or product type 11 uses, as appropriate, or
- being under examination pending a decision on approval by Regulation (EC) No 528/2012 for product type 6 or product type 11 uses, as appropriate;

If any biocidal active substance meeting the above condition(s) is assigned the hazard statement code H410 or H411 (hazardous to the aquatic environment, chronic hazards, category 1 or 2), its use shall only be permitted if the bioaccumulation potential (log Pow octanol/water partition coefficient) is < 3.0 or if the bioconcentration factor (BCF) is ≤ 100.

Assessment and verification: the applicant shall provide a declaration of compliance, supported by copies of safety data sheets for all biocidal products used during the production process, **the nature of the use (i.e. product type 6 or 11)** and any relevant declarations and test reports from the manufacturer of the biocidal products.

2(d) Cleaning agents

Cleaning agents used for routine cleaning operations in printing processes and/or sub-processes shall:

- not contain solvents with a flashpoint < 60°C.
- not contain benzene in concentrations > 0.10% (by weight).
- not contain toluene or xylene in concentrations > 1.0% (by weight).
- not contain aromatic hydrocarbons ($\geq C_9$) in concentrations > 0.1% (by weight)
- not contain any ingredients based on halogenated hydrocarbons, terpenes, n-hexane, nonylphenols, N-methyl-2-pyrrolidone or 2-butoxyethanol.

These restrictions do not apply to cleaning agents used in special formulations that are only occasionally used such as dried ink removers and blanket revivers.

The restriction on toluene does not apply to cleaning agents used in rotogravure processes.

Assessment and verification: the applicant shall declare the different cleaning agents that are used and whether they are used for routine cleaning procedures or for special procedures such as dried ink removal or blanket revival. A Safety Data Sheet shall be provided for each cleaning agent used. For the routinely used cleaning agents, the Safety Data Sheets shall be supported by a declaration of compliance with the relevant restrictions listed above from the supplier of the cleaning agent.

2(e) Alkyl phenol ethoxylates, halogenated solvents and phthalates

The following substances or preparations shall not be added to inks, **eyes**, toners, adhesives, or cleaning agents used for in the printing process or sub-processes used to produce the printed paper, paper stationery or paper carrier bag product:

- Alkyl phenol ethoxylates and their derivatives that may produce alkyl phenols by degradation.
- Halogenated solvents that at the time of application are classified with any of the hazard classes listed in point 2(b).
- Phthalates that at the time of application have been assigned **reproductive toxicity hazard classes (category 1A, 1B or 2) and one or more of the following associated hazard statement codes:** H360F, H360D, H360FD, H360Fd, H360Df, H361, H361f, H361d, H361fd or H362 in accordance with Regulation (EC) No 1272/2008.

Assessment and verification: the applicant shall provide a declaration of compliance with this criterion.

2(f) Further restrictions applying to printing inks, toners and varnishes

The following restrictions shall apply to all substances or mixtures used in printing inks, toners and varnishes for use in the printing process or sub-processes used to produce EU Ecolabel printed paper, paper stationery or paper carrier bag products:

- no substances or mixtures with assigned carcinogenic, mutagenic and/or reproductive toxicity hazard classes (category 1A, 1B or 2) and one or more of the following hazard statement codes: H340, H350, H350i, H360, H360F, H360D, H360FD, H360Fd, H360Df, shall be used.
- no substances or mixtures with assigned acute toxicity (oral, dermal, inhalation) hazard classes (category 1 or 2) and one or more of the following hazard statement codes: H300, H310, H330, shall be used.
- no substances or mixtures with assigned acute toxicity (oral, dermal) hazard classes (category 3) and one or more of the following hazard statement codes: H301, H311, shall be used.
- no substances or mixtures with assigned specific target organ toxicity (single or repeated exposure) hazard classes (category 1) and one or more of the following hazard statement codes: H370, H372, shall be used.
- no pigments or additives based on antimony, arsenic, cadmium, chromium (VI), lead, mercury or selenium or any compounds thereof shall be used. Cobalt can only be used up to 0.10% (w/w).
- no azo dyes, which by reductive cleavage of one or more azo groups may release one or more of the aromatic amines listed in Appendix 8 of entry 43 of Annex XVII to REACH, shall be used (see indicative list in Appendix I).
- the following solvents: 2-Methoxyethanol, 2-Ethoxyethanol, 2-Methoxyethyl acetate, 2-Ethoxyethyl acetate, 2-Nitropropane and Methanol shall not be used.
- the following plasticisers: chlorinated naphthalenes, chlorinated paraffins, monocresyl phosphate, tricresyl phosphate and monocresyl diphenyl phosphate shall not be used.
- diaminostilbene and its derivatives, 2,4-Dimethyl-6-tertiary-butylphenol, 4,4'-Bis(dimethylamino)benzophenone (Michler's Ketone) and Hexachlorocyclohexane shall not be used.

Assessment and verification: the applicant shall provide a list of all the printing inks and related products used in the production of EU Ecolabel printer paper, paper stationery or paper carrier bag products, together with a safety data sheets and declaration of compliance with this criterion for each printing ink and related product from the supplier/producer of each product.

2(g) Toluene recovery from rotogravure printing

Any rotogravure printing processes used to produce EU Ecolabel printed paper, paper stationery or paper carrier bag products must have a solvent recovery system in place and be able to demonstrate a toluene recovery efficiency of at least 97%.

Assessment and verification: the applicant shall provide a declaration of compliance with this criterion supported by a description of the solvent recovery system and a mass balance of toluene that demonstrates a recovery of at least 97% during the most recent completed calendar year.

Criterion 3 — Recyclability

3(a) Removability of non-paper parts

The non-paper product parts of stationery paper product such as metal bars or plastic covers shall be easily removable to ensure that those components will not hinder the recycling process. Small non-paper elements such as staples or envelope windows are exempted from this requirement.

Assessment and verification: the applicant shall provide a declaration of compliance supported by a declaration of product manufacturer or designer, paper collecting company, the recycling company or an equivalent organization. The declaration shall be supported by a list of non-paper materials used in a product.

3(b) Repulpability

The product shall be suitable for repulping

Wet strength agents shall not be used excepted for paper carrier bags and wrapping paper products, where they can be used only if their recyclability can be proven. Printed matter is exempted from the requirement.

Lamination, including polyethene and/or polypropylene, shall only be used to increase the durability of products with a life span of at least 1 year. This includes books, binders, folders, exercise books, calendars, notebooks and diaries. Lamination shall not be used in magazines, paper carrier bags, or wrapping paper. Double lamination shall not be used in any product.

Assessment and verification: the applicant shall provide a declaration of compliance supported by the following documentation.

For printed paper products and stationery paper products the applicant shall declare the non-use of wet strength agents.

For paper carrier bags and wrapping paper products the applicant shall provide the result of test report proving repulpability according to the PTS method PTS-RH 021/97, the ATICELCA 501:2019 evaluation system or equivalent standard methods that are accepted by the competent body as providing data of equivalent scientific quality.

The applicant shall provide a declaration of non-use of lamination for newspapers, magazines, paper carrier bags, wrapping paper, or stationery paper products. Otherwise the applicant shall provide the result(s) of test report(s) proving repulpability according to the PTS method PTS-RH 021/97 or ATICELCA 501:2019 evaluation system or equivalent standard methods that are accepted by the competent body.

For laminated products, the applicant shall provide a declaration of non-use of double lamination.

Where a part of a converted paper product is easily removable (for example a metal bar in a suspension file, a magazine insert or a plastic cover or a reusable exercise book cover), the repulpability test may be made without this component.

3(c) Adhesives removability

This criterion applies to printed paper, stationery paper, paper carrier bag products, and adhesive labels used on the final product.

Unless otherwise specified, adhesives may be used only if their removability can be proven with a score of at least 71 on the EPRC Adhesive Removal Scorecard.

Pressure sensitive adhesive coatings shall be used only if their removability can be proven with at least a positive removability score on the EPRC Adhesive Removal Scorecard.

Adhesive labels that consist of 0.50 % w/w or more of the final product shall prove the compliance with this requirement. Non-adhesive labels are exempted from fulfilling the criteria.

Water based adhesives are exempted from this requirement.

***Assessment and verification:** the applicant shall provide a declaration of compliance with the adhesive removal scorecard according to the guidelines of the European Paper Recycling Council (EPRC). The declaration shall be supported by adhesive removability test results according to INGEDE Method 12, or equivalent standard methods that are accepted by the competent body as providing data of equivalent scientific quality.*

For water based adhesives, a declaration of the water-based nature of the adhesive shall be provided by the adhesive manufacturer. Safety data sheet of adhesive shall be accepted as prove of compliance only if it indicates that the water –based adhesive is used.

Adhesive applications listed in the Annex of the “Assessment of Printed Product Recyclability, Scorecard for Removability of Adhesive Applications”, are considered compliant with the requirement.

3(d) Deinkability

This criterion applies to printed paper products and envelopes based on white paper.

The deinkability shall be proven

The printed product is considered compliant with the requirement if all individual parameters analyzed have a positive score and the final score is at least 51 on the EPRC Deinkability Scorecard, or equivalent. Envelopes shall be exempted from performing deinkability test.

For envelopes, internal printing shall only be used for the privacy reasons in envelopes made up of paper with a grammage of less than 135 g/m² or opacity level lower than 98%. The internal printed surface shall be less than 80% of the total interior surface minus the glued area and shall be printed with light colour shades.

Assessment and verification: the applicant or ink manufacturer shall provide a declaration of compliance with deinkability scores according to the guidelines of the European Paper Recycling Council (EPRC). The declaration shall be supported by deinking test results according to INGEDE Method 11, or equivalent standard methods that are accepted by the competent body as providing data of equivalent scientific quality.

For envelopes, the applicant shall provide a declaration of compliance with the requirement, supported by specifications of the weight/m² of the paper used according to UNE-EN ISO 536:2013 or opacity according to ISO 2471, colour of printing ink, and % coverage of any internal printing pattern.

Printing technologies and material combinations listed in the Annex of the “Assessment of Printed Product Recyclability, Deinkability Score” shall be considered compliant with the requirements.

Testing of printing technologies or inks must be performed on the paper type(s) that is used in a product. The test certificate can be used for prints with the same ink on the same type of substrate if the ink coverage is equal or lower than on the tested product.

Criterion 4 — Emission

4(a) Emissions to water from rotogravure printing

The specific amount of Cr and Cu at the point of discharge must not exceed, respectively, 20 mg per m² and 200 mg per m² of printing cylinder surface area used in the press.

Assessment and verification: discharges of Cr and Cu shall be checked at rotogravure printing plants after treatment and immediately prior to discharge. A representative composite sample of Cr and Cu discharges shall be collected at least every 3 months. At least one annual analytical test shall be carried out by an accredited laboratory to determine the content of Cr and Cu from the composite sample according to EN ISO 11885 or equivalent standard methods that are accepted by the competent body as providing data of equivalent scientific quality.

Compliance with this criterion shall be assessed by dividing the content of Cr and Cu, as determined by the annual analytical test, by the cylinder surface used in the press during the printing. The cylinder surface used in the press during printing is calculated by multiplying the cylinder surface ($= 2\pi rL$, where r is the radius and L the length of the cylinder) by the number of printing productions during a year (= number of different printing jobs).

4(b) VOCs emission from installations covered by the Industrial Emission Directive 2010/75/EU

The following requirements shall apply to printing processes covered by Annex I and VII of Directive 2010/75/EU

4 b(i) Volatile Organic Compounds (VOCs) emission from publication rotogravure printing

Fugitive VOC emissions, as calculated by the solvent mass balance, should be lower or equal to 2.0% of the solvent input, as calculated by the solvent mass balance, and TVOC⁶⁶ in waste gases shall be lower or equal to 16.0 mg C/Nm³.

Emissions of Cr(VI) to air shall not exceed 15.0 mg/tonne paper. Abatement equipment for reduction of emission to air shall be installed

4(b)ii Volatile Organic Compounds (VOCs) emission from heatset web offset printing

Total VOC emissions as calculated by the solvent mass balance should be lower or equal to 0.03 kg VOCs per kg of ink input; alternatively fugitive VOC emissions as calculated by the solvent mass balance should be lower or equal to 8% of the solvent input and TVOC emissions in waste gases should be lower or equal to 12.0 mg C/Nm³.

4(b)iii Volatile Organic Compounds (VOCs) emission from flexo and non – publication rotogravure printing

Total VOC emissions as calculated by the solvent mass balance should be lower or equal to 0.24 kg VOCs per kg of ink input; alternatively fugitive VOC emissions as calculated by the solvent mass balance should be lower or equal to 9.6% of the solvent input and TVOC emissions in waste gases should be lower or equal to 16.0 mg C/Nm³.

Assessment and verification: *the applicant shall provide detailed calculations and test data showing compliance with this criterion, together with related supporting documentation.*

For total or fugitive VOC emissions, as applicable, solvent mass balance calculation shall be based on the production during 12 months of operation. The solvent mass balance shall be in line with the definition laid down in Part 7(2) of Annex VII to Directive 2010/75/EU. In case of a new or a rebuilt production plant, the calculations shall be based on at least three months of representative running of the plant.

For the monitoring of total TVOC emissions to air in waste gases, any stack with a TVOC load less than 10 kg C/h should be performed at least once a year according to EN 12619, or equivalent. In the case of a TVOC load less than 0.1 kg C/h (as an annual average), or in the case of an unabated and stable TVOC load of less than 0.3 kg C/h, the monitoring frequency may be reduced to once every three years or the monitoring may be replaced by calculation provided that it ensures the provision of data of an equivalent scientific quality.

For any stack with a TVOC load higher or equal to 10 kg C/h the monitoring shall be continuous according to EN15267-1, EN15267-2, EN15267-3 and EN 14181. For continuous measurement the data shall represent daily average over the period of one day based on valid hourly or half-hourly averages.

⁶⁶ Total volatile organic carbon, expressed as C (in air).

The VOC destruction in the abatement system (e.g. thermal oxidation, adsorption to activated carbon) shall be determined, with a frequency of at least every three years, by combined measurements of VOC concentration in raw gas and clean gas.

A declaration of the VOC content in, inks, washing agents, damping solutions or other corresponding chemical products shall be provided by the applicant or a chemical supplier.

The applicant shall provide a description of the system in place, together with a documentation related to the control and the monitoring of Cr(VI) emissions. The documentation shall include the test results related to the reduction of Cr(VI) emissions to the air.

4(c) VOCs emissions from printing processes not covered by the Industrial Emission Directive 2010/75/EU

The following requirements shall apply to printing processes not covered by Annex I or by Annex VII Part 2 of Directive 2010/75/EU

Total VOC emissions as calculated by the solvent mass balance should be lower or equal to:

4.5 kg VOC/tonnes of paper for sheet fed offset printing;

1.0 kg VOC/tonnes of paper for digital printing;

2.0 kg VOC/tonnes of paper for heat set web offset printing;

2.5 kg VOC/tonne of paper for cold set web offset printing;

3.0 kg VOC/ tonne of paper for other rotogravure, flexography, rotary screen printing, laminating or varnishing units.

Alternatively, where off- gas treatment is applied fugitive VOC emissions as calculated by the solvent mass balance should be lower or equal to 10% of the solvent input and TVOC emission in waste gases should be lower or equal to 20 mg C/Nm³.

Volatile solvents from the drying process of heat-set offset, rotogravure and and flexography printing shall be managed by means of solvent recovery or thermal treatment or any equivalent system, i.e. substitution by the use of water based inks.

Assessment and verification: *the applicant shall provide a description of the system in place together with documentation and test results related to the control and the monitoring of emissions to air.*

For total or fugitive VOC emissions, as applicable, solvent mass balance shall be calculated on the production during 12 months of operation. The solvent mass balance shall be in line with the definition laid down in Part 7(2) of Annex VII to Directive 2010/75/EU. For the allocation of VOCs emission into mass of paper all printed surfaces shall be calculated. In case of a new or a rebuilt production plant, the calculations shall be based on at least three months of representative running of the plant.

For the monitoring of total VOC (TVOC) emissions to air in waste gases, any stack with a TVOC load less than 10 kg C/h monitoring should be performed at least once a year according to EN 12619, or equivalent. In the case of a TVOC load less than 0.1 kg C/h (as an annual average), or in the case of an unabated and stable TVOC load of less than 0.3 kg C/h, the monitoring frequency may be reduced to once every three

years or the monitoring may be replaced by calculation provided that it ensures the provision of data of an equivalent scientific quality.

A declaration of the VOC content in inks, washing agents, damping solutions or other corresponding chemical products shall be provided by the applicant or a chemical supplier.

Criterion 5 – Waste

5(a) Waste management system

The facility where the product is manufactured 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 waste paper, ink waste, cleaning agent solution and dampening solution waste as defined by local or national regulatory authorities.

The waste management system shall be documented or explained and shall include information on at least the following procedures:

- (i) handling, collection, separation and use of recyclable materials from the waste stream;
- (ii) recovery of materials for other uses, such as incineration for raising process steam or heating, or agricultural use;
- (iii) handling, collection, separation and disposal of hazardous waste, as defined by the relevant local and national regulatory authorities.

(iv) continuous improvement objectives and targets relating to the reduction of waste generation and the increase of reuse and recycling rates.

***Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, together with a description of the procedures adopted for waste management. The applicant shall provide a waste management plan for each of the sites concerned. Where the waste management is outsourced, the sub-contractor shall provide a declaration of compliance with this criterion as well.*

Applicants registered with EU Eco-Management and Audit Scheme (EMAS) and/or certified according to ISO 14001 shall be considered as having fulfilled this criterion if:

- 1) the inclusion of waste management is documented in the EMAS environmental statement for the production site(s), or*
- 2) the inclusion of waste management is sufficiently addressed by the ISO 14001 certification for the production site(s).*

5(b) Paper for recycling from printing facilities

This criterion applies to printed paper products. The amount of waste paper ‘X’ produced shall not exceed the values reported in the following table

Printing method	Maximum waste paper (%)
Sheet offset	23
Cold-set, newspaper	10
Cold-set, form printing	18
Cold-set rotation (except newspapers)	19
Heat-set rotation	21
Rotogravure printing	15
Flexography printing	17
Digital printing	10
Screen printing	23

Where:

X = annual tonnes of waste paper produced during the printing (including finishing processes) of the eco-labelled printed paper product, divided by annual tonnes of paper purchased and used for the production of eco-labelled printed paper product.

Where the printing house carries out finishing processes on behalf of another printing house, the amount of waste paper produced in those processes shall not be included in the calculation of 'X'.

Where the finishing processes are outsourced to another company, the amount of waste paper resulting from the outsourced work shall be calculated and declared in the calculation of 'X'.

Assessment and verification: *the applicant shall provide a description of the calculation of the amount of waste paper, together with a declaration from the contractor collecting the waste paper from the printing house. The outsourcing terms and calculations on the amount of paper waste involved in the finishing processes shall be provided.*

The period for the calculations shall be based on the production during 12 months. In case of a new or a rebuilt production plant, the calculations shall be based on at least 45 subsequent days of stable running of the plant.

If the calculation of annual tonnes of waste paper produced during the printing of the eco-labelled printed paper product is not technically feasible, the applicant may

provide calculations regarding the total amount of paper for recycling produced annually in the printing house.

5(c) Paper for recycling from stationery paper product and carrier bags production sites

The criterion refers to stationery paper products and paper carrier bag products. The amount of waste paper 'X' shall not exceed:

— 19 % for envelopes

— 15 % for writing stationery products, excluding diaries;

— 20 % for diaries and filing stationery products printed on one side;

— 30 % for filing stationery products printed on both sides

— 11 % for paper bags and wrapping paper

where, X = annual kilos of waste paper produced during the stationery paper products and carrier bags manufacturing (including finishing processes) of the eco-labelled paper product, divided by annual tonnes of paper purchased and used for the production of eco-labelled converted paper product.

Where the printing house carries out finishing processes on behalf of another printing house, the amount of waste paper produced in those processes shall not be included in the calculation of 'X'.

Where the finishing processes are outsourced to another company, the amount of waste paper resulting from the outsourced work shall be calculated and declared in the calculation of 'X'.

***Assessment and verification:** the applicant shall provide a description of the calculation of the amount of waste paper, together with a declaration from the contractor collecting the waste paper from the printing house. The outsourcing terms and calculations on the amount of paper waste involved in the finishing processes shall be provided.*

The period for the calculations shall be based on the production during 12 months. In case of a new or a rebuilt production plant, the calculations shall be based on at least 45 subsequent days of stable running of the plant.

If the calculation of annual tonnes of waste paper produced during the stationery paper products and carrier bags manufacturing of the eco-labelled printed paper product is not technically feasible, the applicant may provide calculations regarding the total amount of paper for recycling produced annually in the plant.

Criterion 6 - Energy use

The site where the EU Ecolabel product is manufactured shall have established an energy management system addressing all energy consuming devices (including machinery, lighting, air conditioning, cooling). The energy management plan shall include measures for the improvement of energy efficiency and shall include information on at least the following procedures:

(i) Establishing and implementing an energy data collection plan in order to identify key energy figures;

(ii) Analysis of energy consumption that includes a list of energy consuming systems, processes and facilities;

(iii) Identification of measures for more efficient use of energy;

(iv) Continuous improvement objectives and targets relating to the reduction of waste generation and the increase of reuse and recycling rates.

Assessment and verification: the applicant shall provide a declaration of compliance for the production site, supported by a description of the energy management system.

Applicants certified according to ISO 50001, EN 16247:2012 or an equivalent standard/scheme shall be considered as having fulfilled this requirement.

Applicants registered with EMAS shall be considered as having fulfilled this requirement if the inclusion of energy management in the scope of EMAS is documented in the EMAS environmental statement.

Applications certified according to ISO 14001 shall be considered as having fulfilled this criterion if the inclusion of energy management plan is sufficiently addressed by the ISO 14001 certification for the production site.

Criterion 7 —Training

All relevant members of staff participating in the day-to-day operation of the production site shall be given the knowledge necessary to ensure that the Ecolabel requirements are fulfilled and continuously improved.

Assessment and verification: the applicant shall provide a declaration of compliance with this criterion, together with details of the training programme, its content, and an indication of which staff have received what training and when. The applicant shall provide to the Competent Body also a sample of training material.

Criterion 8 —Fitness for use

The product should be suitable for its purpose.

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion supported by at least one of the following documents:

(i) letter/document/statements issued by clients for a specific product, assuring that the product met their specifications and works correctly in its intended application;

(ii) detailed description of procedure of handling consumer complains

(iii) documentation demonstrating the quality certification, in accordance with the standard ISO 9001, or equivalent

(iv) documentation demonstrating the paper quality, in accordance with the standard EN ISO/IEC 17050-1:2004, which provides general criteria for suppliers' declaration of conformity with standards.

Criterion 9 —Information on the product

The following information shall appear on the paper bag product:

'Please reuse this bag'.

The following information shall appear on the printed paper product:

'Please collect used paper for recycling'.

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion, supported by an image of the product with the information required.

Criterion 10 —Information appearing on the EU Ecolabel

The applicant shall follow the instructions on how to properly use the EU Ecolabel logo provided in the EU Ecolabel Logo Guidelines:

http://ec.europa.eu/environment/ecolabel/documents/logo_guidelines.pdf

If the optional label with text box is used, it shall contain the following three statements:

- Low process emissions to air and water
- The product is recyclable
- Paper with low environmental impact used

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion, supported by an image of the product packaging that clearly shows the label, the registration/licence number and, where relevant, the statements that can be displayed together with the label.