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From:	European Commission
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Subject:	Annex to the Commission Decision of XXX establishing the EU Ecolabel criteria for graphic paper and the EU Ecolabel criteria for tissue paper and tissue products

Delegations will find attached document D057037/02 - Annex II.

Encl.: D057037/02 - Annex II

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ANNEX II

EU Ecolabel criteria for awarding the EU Ecolabel to tissue paper and tissue products

FRAMEWORK

Aims of the criteria

The criteria aim, in particular, to reduce discharges of toxic or eutrophic substances into waters and environmental damage or risks related to the use of energy (climate change, acidification, ozone depletion, depletion of non-renewable resources). To this end, the criteria aim to:

- reduce energy consumption and related emissions to air;
- reduce environmental damage by reducing emissions to water and waste creation;
- reduce environmental damage or risks related to the use of hazardous chemicals; and
- safeguard forests by requiring recycled fibres or virgin fibres to be sourced from forests and areas that are managed in a sustainable manner.

Criteria for awarding the EU Ecolabel to 'tissue paper and tissue products':

1. Emissions to water and air;
2. Energy use;
3. Fibres: conserving resources, sustainable forest management;
4. Restricted hazardous substances and mixtures;
5. Waste management;
6. Final product requirements;
7. Information appearing on the EU Ecolabel.

The ecological criteria cover the production of pulp, including all constituent sub-processes from the point at which virgin fibres or recycled fibres enter the production site to the point at which the pulp leaves the pulp mill. For the paper production processes, the ecological criteria cover all sub-processes in the paper mill, from pulp preparation for tissue paper making to winding onto the mother reel.

Energy use and emissions to water and air during the conversion of tissue paper into tissue products are not included. The ecological criteria do not cover the transport and packaging of the raw materials (e.g. wood), pulp or the final paper 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 suppliers, etc. as appropriate.

Competent bodies shall preferentially recognise attestations and verifications issued by bodies that are 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 tissue product needs 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) 'air dry tonne' means air dry tonne (ADt) of pulp expressed as 90 % dryness;
- (2) 'chemical pulp' means fibrous material obtained by removal from the raw material of a considerable part of non-cellulosic compounds that can be removed by chemical treatment (cooking, delignification, bleaching);
- (3) 'CMP' means chemimechanical pulp;
- (4) 'CTMP' means chemithermomechanical pulp;
- (5) 'de-inked pulp' means pulp made from paper for recycling from which inks and other contaminants have been removed;
- (6) 'dyes' means an intensely coloured or fluorescent organic material, which imparts colour to a substrate by selective absorption. Dyes are soluble and/or go through an application process which, at least temporarily, destroys any crystal structure of the dye. Dyes are retained in the substrate by absorption, solution, and mechanical retention, or by ionic or covalent chemical bonds;
- (7) 'ECF pulp' means elemental chlorine-free bleached pulp;
- (8) 'integrated production' means pulp and paper is produced at the same site. The pulp is not dried before paper manufacture. The production of paper/board is directly connected with the production of pulp;
- (9) 'mechanical woodpulp paper or board' means paper or board containing mechanical woodpulp as an essential constituent of its fibre composition;
- (10) 'metal-based pigments and dyes' means dyes and pigments containing more than 50 % by weight of the relevant metal compound(s);

(11) ‘mother reel’ means a large roll of tissue paper, wound onto the winding station, covering either the full width or part of the width of the tissue paper machine;

(12) ‘non-integrated production’ means production of market pulp (for sale) in mills that do not operate paper machines, or production of paper/board using only pulp produced in other plants (market pulp);

(13) ‘paper machine broke’ means paper materials that are discarded by the paper machine process but that have properties allowing it to be reused on site by being incorporated back into the same manufacturing process that generated it. For the purposes of this Decision, this term shall not be extended to conversion processes, which are considered as distinct processes to the paper machine;

(14) ‘pigments’ means coloured, black, white or fluorescent particulate organic or inorganic solids which usually are insoluble in, and essentially physically and chemically unaffected by, the vehicle or substrate in which they are incorporated. They alter appearance by selective absorption and/or by scattering of light. Pigments are usually dispersed in vehicles or substrates for application, for instance in the manufacture of inks, paints, plastics or other polymeric materials. Pigments retain a crystal or particulate structure throughout the coloration process;

(15) ‘recycled fibres’ means fibres diverted from the waste stream during a manufacturing process or generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product. These fibres can no longer be used for their intended purpose. It excludes reutilisation of materials generated in a process and capable of being reclaimed within the same process that generated them (paper machine broke — own produced or purchased);

(16) ‘structured tissue paper’ means paper characterised by high bulk and absorption capacity obtained with significant local areas of high and low fibre density in the form of fibre pockets in the base sheet, generated by specific processes in the tissue paper machine;

(17) ‘TCF pulp’ means totally chlorine-free bleached pulp;

(18) ‘TMP’ means thermomechanical pulp.

EU ECOLABEL CRITERIA

Criterion 1 — Emissions to water and air

As a prerequisite, the pulp and paper production site must meet all respective legal requirements of the country in which it is located.

Assessment and verification: The applicant shall provide a declaration of compliance, supported by relevant documentation and declarations from the pulp supplier(s).

Criterion 1(a) Chemical oxygen demand (COD), sulphur (S), NO_x, phosphorous (P)

The requirement is based on information on emissions in relation to a specified reference value. The ratio between actual emissions and the reference value translates into an emissions score.

The score for any individual emission parameter shall not exceed 1.3.

In all cases, the total number of points ($P_{\text{total}} = P_{\text{COD}} + P_{\text{S}} + P_{\text{NO}_x} + P_{\text{P}}$) shall not exceed 4.0.

In case of non-integrated production, the applicant shall provide a calculation that includes pulp and paper production.

For pulp and papermaking as a whole, the calculation of P_{COD} shall be made as follows (P_{S} , P_{NO_x} , P_{P} to be calculated in exactly the same way).

For each pulp 'i' used, the related measured COD emissions ($\text{COD}_{\text{pulp } i}$ expressed in kg/air dry tonne — ADt) shall be weighted according to the proportion of each pulp used (pulp 'i' with respect to air dry tonne of pulp), and added together. Air dry tonne assumes 90 % dry matter content for pulp, and 95 % for paper.

The weighted COD emission for the pulp is then added to the measured COD emission from the paper production to give the total COD emission, $\text{COD}_{\text{total}}$.

The weighted COD reference value for the pulp production shall be calculated in the same way, with the sum of the weighted reference value for each pulp used and added to the reference value for the paper production to give a total COD reference value $\text{COD}_{\text{ref, total}}$. Table 1 contains the reference values for each pulp type used and for the paper production.

Finally, the total COD emission shall be divided by the total COD reference value as follows:

$$P_{\text{COD}} = \frac{\text{COD}_{\text{total}}}{\text{COD}_{\text{ref, total}}} = \frac{\sum_{i=1}^n [\text{pulp}, i \times (\text{COD}_{\text{pulp}, i})] + \text{COD}_{\text{papermachine}}}{\sum_{i=1}^n [\text{pulp}, i \times (\text{COD}_{\text{ref pulp}, i})] + \text{COD}_{\text{ref papermachine}}}$$

Table 1. Reference values for emissions from different pulp types and from paper production

Pulp grade/paper	Emissions (kg/ADt)			
	COD _{reference}	P _{reference}	S _{reference}	NO _x _{reference}

Pulp grade/paper	Emissions (kg/ADt)			
	COD _{reference}	P _{reference}	S _{reference}	NOx _{reference}
Bleached chemical pulp (other than sulphite)	16.00	0.025 0.09 ⁽¹⁾	0.35	1.60
Bleached chemical pulp (sulphite)	24.00	0.04	0.75	1.60
Magnefite pulp	28.00	0.056	0.75	1.60
Unbleached chemical pulp	6.50	0.016	0.35	1.60
CTMP /CMP	16.00	0.008	0.20	0.25 / 0.70 ⁽²⁾
TMP/groundwood pulp	3.00/5.40 ⁽³⁾	0.008	0.20	0.25
Recycled fibre pulp without de-inking	1.10	0.006	0.20	0.25
Recycled fibre pulp with de-inking	3.20	0.012	0.20	0.25
	Emissions (kg/tonne)			
Tissue paper making	1.20	0.01	0.30	0.50
Structured tissue paper making	1.20	0.01	0.30	0.70

⁽¹⁾ The higher value refers to mills using eucalyptus from regions with higher levels of phosphorous (e.g. Iberian eucalyptus).

⁽²⁾NOx emission value for non-integrated CTMP mills using flash-drying of pulp with biomass-based steam.

⁽³⁾ COD value for highly bleached mechanical pulp (70 – 100 % of fibre in final paper).

In cases where co-generation of heat and electricity occurs at the same plant, the emissions of S and NOx resulting from on-site electricity generation can be subtracted from the total amount. The following equation can be used to calculate the proportion of emissions resulting from electricity generation:

$$2 \times (MWh(\text{electricity})) / [2 \times MWh(\text{electricity}) + MWh(\text{heat})]$$

The electricity in this calculation is the electricity produced at the co-generation plant. The heat in this calculation is the net heat delivered from the co-generation plant to the pulp/paper production.

Assessment and verification: *The applicant shall provide detailed calculations and test data showing compliance with this criterion, together with related supporting documentation that include test reports using the following continuous or periodical monitoring standard test methods (or equivalent standard methods that are accepted by the competent body as providing data of equivalent scientific quality): COD: ISO 15705 or ISO 6060; NOx: EN 14792 or ISO 11564; S(sulphur oxides): EN 14791: or EPA no 8; S(reduced sulphur): EPA no 15A,16A or 16B; S content in oil: ISO 8754; S content in coal: ISO 19579; S content in biomass: EN 15289; Total P: EN ISO 6878.*

Rapid tests can also be used to monitor emissions as long as they are checked regularly (e.g. monthly) against the relevant aforementioned standards or suitable equivalents. In the case of COD emissions, continuous monitoring based on analysis of total organic carbon (TOC) shall be accepted as long as a correlation between TOC and COD results has been established for the site in question.

The minimum measurement frequency, unless specified otherwise in the operating permit, shall be daily for COD emissions and weekly for Total P emissions. In all cases, emissions of S and NO_x shall be measured on a continuous basis (for emissions from boilers with a capacity exceeding 50 MW) or a periodic basis (at least once a year for boilers and driers with a capacity less than or equal to 50 MW each).

Data shall be reported as annual averages except in cases where:

- the production campaign is for a limited time period only;*
- the production plant is new or has been rebuilt, in which case the measurements shall be based on at least 45 subsequent days of stable running of the plant.*

In either case, data may only be accepted if it is representative of the respective campaign and a sufficient number of measurements have been taken for each emission parameter.

The supporting documentation shall include an indication of the measurement frequency and calculation of the points for COD, Total P, S and NO_x.

Emissions to air shall include all emissions of S and NO_x which occur during the production of pulp and paper, including steam generated outside the production site, minus any emissions allocated to the production of electricity. Measurements shall include recovery boilers, lime kilns, steam boilers and destructor furnaces for strong smelling gases. Diffuse emissions shall also be taken into account. Reported emission values for S to air shall include both oxidised and reduced S emissions. The S emissions related to the heat energy generation from oil, coal and other external fuels with known S content may be calculated instead of measured, and shall be taken into account.

Measurements of emissions to water shall be taken on unfiltered and unsettled samples at the effluent discharge point of the mills' wastewater treatment plant. In cases where mill effluent is sent to a municipal or other third-party wastewater treatment plant, unfiltered and unsettled samples from the mill effluent sewer discharge point shall be analysed and the results multiplied by a standard removal efficiency factor for the municipal or third-party wastewater treatment plant. The removal efficiency factor shall be based on information provided by the operator of the municipal or other third-party wastewater treatment plant.

For integrated mills, due to the difficulties in getting separate emission figures for pulp and paper, if a combined figure is only available for pulp and paper production, the emission values for pulp(s) shall be set to zero and the combined emissions shall be compared against the combined reference values for the relevant pulp and paper production. The weighted content of each pulp granted a specific reference value from Table 1 shall be reflected in the equation.

Criterion 1(b) Adsorbable organic halogens (AOX)

This criterion refers to elemental chlorine free (ECF) pulp.

The AOX emissions from the production of each pulp used in EU Ecolabel tissue paper shall not exceed 0.17 kg/ADt.

Assessment and verification: *The applicant shall provide test reports using the AOX ISO 9562 test method or equivalent methods, accompanied by detailed calculations showing compliance with this criterion and any related supporting documentation.*

The applicant shall provide a declaration of compliance with this criterion, supported by a list of the different ECF pulps used in the pulp mix, their respective weightings and their individual amount of AOX emissions, expressed as kg AOX/ADt pulp.

The supporting documentation shall include an indication of the measurement frequency. AOX shall only be measured in processes where chlorine compounds are used for bleaching the pulp. AOX does not need to be measured in the effluent from non-integrated paper production or in the effluents from pulp production without bleaching or where bleaching is performed with chlorine-free substances.

Measurements of AOX emissions to water shall be taken on unfiltered and unsettled samples at the effluent discharge point of the mills' wastewater treatment plant. In cases where mill effluent is sent to a municipal or other third-party wastewater treatment plant, unfiltered and unsettled samples from the mill effluent sewer discharge point shall be analysed and the results multiplied by a standard removal efficiency factor for the municipal or third-party wastewater treatment plant. The removal efficiency factor shall be based on information provided by the operator of the municipal or other third-party wastewater treatment plant.

Information on the emissions shall be expressed as the annual average from measurements taken at least once every 2 months. In case of a new or rebuilt production plant, measurements shall be based on at least 45 subsequent days of stable running of the plant. They shall be representative of the respective campaign.

In case the applicant does not use any ECF pulp, a corresponding declaration to the competent body is sufficient.

Criterion 1(c) CO₂

Note: The criterion refers to the sum total of CO₂ emissions from pulp and paper manufacturing processes. Conversion is not included.

Carbon dioxide emissions from fossil fuels used for the production of process heat and electricity (whether on-site or off-site) must not exceed the following limit values:

- 1) 1 200 kg CO₂/tonne for conventional tissue paper,
- 2) 1 850 kg CO₂/tonne for structured tissue paper.

The actual emission value shall be calculated as the sum of the emissions from the pulp and paper production, taking into account the mixture of pulps used.

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

For each pulp used, the pulp manufacturer shall provide the applicant with a single CO₂ emission value in kg CO₂/ADt. The applicant shall also provide a single CO₂

emission value for the relevant paper machine(s) used to produce EU Ecolabel tissue paper. For integrated mills, CO₂ emissions for pulp and paper production may be reported as a single value.

The CO₂ emission data shall include all sources of non-renewable fuels used during the production of pulp and paper, including the emissions from the production of electricity (whether on-site or off-site).

Emission factors for fuels shall be used in accordance with Annex VI of Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions¹.

For grid electricity, an emission calculation factor of 384 (kg CO₂/MWh) shall be used in accordance with the MEErP methodology².

The period for the calculations or mass balances shall be based on the production over 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. The calculations shall be representative of the respective campaign.

For grid electricity, the value provided above (the European average) shall be used unless the applicant presents documentation establishing the average value for its suppliers of electricity (contracting suppliers), in which case the applicant may use this value instead of the value quoted. The documentation used as proof of compliance shall include technical specifications that indicate the average value (i.e. copy of a contract).

The amount of energy from renewable sources purchased and used for the production processes counts as zero CO₂ emission when calculating CO₂ emissions. The applicant shall provide appropriate documentation that this kind of energy is actually used at the mill or has been externally purchased.

Criterion 2 — Energy use

The requirement is based on information on actual energy use during pulp and paper production in relation to specific reference values.

The energy consumption includes electricity and fuel consumption for heat production to be expressed in terms of points (P_{total}) as detailed below.

The total number of points ($P_{\text{total}} = P_{\text{E}} + P_{\text{F}}$) shall not exceed 2.5.

Table 2 contains the reference values for calculating the energy consumption.

In case of a mix of pulps, the reference value for electricity and fuel consumption for heat production shall be weighted according to the proportion of each pulp used (pulp 'i' with respect to air dry tonne of pulp), and added together.

Criterion 2(a) Electricity

¹ OJ L 181, 12.7.2012, p. 30-104.

² Methodology for the Ecodesign of Energy-related Products

The electricity consumption related to pulp and paper production shall be expressed in terms of points (P_E) as detailed below.

Calculation for pulp production: For each pulp i used, the related electricity consumption ($E_{pulp,i}$ expressed in kWh/ADt) shall be calculated as follows:

$E_{pulp,i}$ = internally produced electricity + purchased electricity – sold electricity

Calculation for paper production: Similarly, the electricity consumption related to paper production (E_{paper}) shall be calculated as follows:

E_{paper} = internally produced electricity + purchased electricity – sold electricity

Finally, the points for pulp and paper production shall be combined to give the overall number of points (P_E) as follows:

$$P_E = \frac{\sum_{i=1}^n [\text{pulp},i \times E_{pulp,i}] + E_{paper}}{\sum_{i=1}^n [\text{pulp},i \times E_{ref pulp,i}] + E_{ref paper}}$$

In case of integrated mills, due to the difficulties in getting separate electricity figures for pulp and paper, if a combined figure is only available for pulp and paper production, the electricity values for pulp(s) shall be set to zero and the figure for the paper mill shall include both pulp and paper production.

Criterion 2(b) Fuel consumption for heat production

The fuel consumption related to pulp and paper production shall be expressed in terms of points (P_F) as detailed below.

Calculation for pulp production: For each pulp i used, the related fuel consumption ($F_{pulp,i}$ expressed in kWh/ADt) shall be calculated as follows:

$F_{pulp,i}$ = internally produced fuel + purchased fuel – sold fuel – 1.25 × internally produced electricity

Note:

1. $F_{pulp,i}$ (and its contribution to P_F , pulp) does not need to be calculated for mechanical pulp unless it is market air dried mechanical pulp containing at least 90 % dry matter.
2. The amount of fuel used to produce the sold heat shall be added to the term ‘sold fuel’ in the equation above.

Calculation for paper production: Similarly, the fuel consumption related to paper production (F_{paper} , expressed in kWh/ADt) shall be calculated as follows:

F_{paper} = internally produced fuel + purchased fuel – sold fuel – 1.25 × internally produced electricity

Finally, the points for pulp and paper production shall be combined to give the overall number of points (P_F) as follows:

$$P_F = \frac{\sum_{i=1}^n [\text{pulp},i \times F_{pulp,i}] + F_{paper}}{\sum_{i=1}^n [\text{pulp},i \times F_{ref pulp,i}] + F_{ref paper}}$$

Table 2. Reference values for electricity and fuel

Pulp grade	Fuel kWh/ADt $F_{\text{reference}}$		Electricity kWh/ADt $E_{\text{reference}}$	
	Non-admp	admp	Non-admp	admp
Chemical pulp	3 650	4 650	750	750
Thermomechanical pulp (TMP)	0	900	2 200	2 200
Groundwood pulp (including pressurised groundwood)	0	900	2 000	2 000
Chemithermomechanical pulp (CTMP)	0	800	1 800	1 800
Recycled pulp	350	1 350	700	700
Paper grade	kWh/tonne			
Tissue paper	1 950		950	
Structured tissue	3 000		1 500	
admp = air dried market pulp				

Assessment and verification (for both (a) and (b)): The applicant shall provide detailed calculations showing compliance with this criterion, together with all related supporting documentation. Reported details shall therefore include the total electricity and fuel consumption.

The applicant shall calculate all energy inputs, divided into heat/fuels and electricity used during the production of pulp and paper, including the energy used in the de-inking of waste paper for the production of recycled pulp. Energy used in the transportation of raw materials, as well as in packaging, is not included in the energy consumption calculations.

Total heat energy includes all purchased fuels. It also includes heat energy recovered by incinerating liquors and waste from on-site processes (e.g. wood waste, sawdust, liquors, waste paper, paper broke) as well as heat recovered from the internal generation of electricity. However, the applicant only needs to count 80 % of the heat energy from such sources when calculating the total heat energy.

Electric energy means net imported electricity coming from the grid and the internal generation of electricity measured as electric power. Electricity used for wastewater treatment does not need to be included.

Where steam is generated using electricity as the heat source, the heat value of the steam shall be calculated, then divided by 0.8 and added to the total fuel consumption.

In case of integrated mills, due to the difficulties in getting separate fuel (heat) figures for pulp and paper, if a combined figure is only available for pulp and paper

production, the fuel (heat) values for pulp(s) shall be set to zero and the figure for the paper mill shall include both pulp and paper production.

Criterion 3 — Fibres — conserving resources, sustainable forest management

The fibre raw material may consist of recycled fibres or virgin fibres.

Any virgin fibres must not originate from GMO species.

All fibres shall be covered by valid chain of custody certificates issued by an independent third-party certification scheme such as the Forest Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification (PEFC) or equivalent, or be covered by delivery notes of paper for recycling in accordance with EN 643.

At least 70 % of the fibre material allocated to the product or production line shall originate from forests or areas managed according to sustainable forestry management principles that meet the requirements set out by the relevant independent chain of custody scheme and/or originate from recycled materials.

Excluded from the calculation of recycled fibre content is the reutilisation of waste materials that are capable of being reclaimed within the same process that generated them (i.e. paper machine broke — own produced or purchased). However, inputs of broke from conversion operations (own or purchased) may be considered as contributing towards the recycled fibre content if covered by EN 643 delivery notes.

Any uncertified virgin material shall be covered by a verification system which ensures that it is legally sourced and meets any other requirement of the certification scheme with respect to uncertified material.

The certification bodies issuing forest and/or chain of custody certificates shall be accredited or recognised by that certification scheme.

Assessment and verification: *The applicant shall provide the competent body with a declaration of compliance supported by a valid, independently certified chain of custody certificate from the manufacturer of EU Ecolabel tissue paper and for all fibres used in the product or production line. FSC, PEFC or equivalent schemes shall be accepted as independent third-party certification. In case recycled fibre has been used and FSC or PEFC or equivalent recycled claims are not used, evidence shall be covered by EN 643 delivery notes.*

The applicant shall provide audited accounting documents that demonstrate that at least 70 % of the materials allocated to the product or production line originate from forests or areas managed according to sustainable forestry management principles that meet the requirements set out by the relevant independent chain of custody scheme and/or originate from recycled materials.

If the product or production line includes uncertified virgin material, proof shall be provided that the content of uncertified virgin material does not exceed 30 % and is covered by a verification system that ensures that it is legally sourced and meets any other requirement of the certification scheme with respect to uncertified material.

In case the certification scheme does not specifically require that all virgin material is sourced from non-GMO species, additional evidence shall be provided to demonstrate

this.

Criterion 4 — Restricted hazardous substances and mixtures

The basis for demonstrating compliance with each of the sub-criteria under criterion 4 shall be the applicant providing a list of all the relevant chemicals used together with appropriate documentation (safety data sheet or a declaration from the chemical supplier).

Criterion 4(a) Restrictions on Substances of Very High Concern (SVHC)

Note: All process and functional chemicals used in the paper mill and, where relevant, during the tissue paper conversion process must be screened. This criterion does not apply to chemicals used for wastewater treatment unless the treated wastewater is recirculated back into the paper production process.

The paper product shall not contain substances that have been identified according to the procedure described in Article 59(1) of Regulation (EC) No 1907/2006 and included in the Candidate List for Substances of Very High Concern in concentrations greater than 0.10 % (weight by weight). No derogation from this requirement shall be granted.

Assessment and verification: *The applicant shall provide a declaration that the paper product does not contain any SVHC in concentrations greater than 0.10 % (weight by weight). The declaration shall be supported by safety data sheets or appropriate declarations from chemical suppliers of all process and functional chemicals used in the paper mill that show that none of the chemicals contain SVHC in concentrations greater than 0.10 % (weight by weight).*

The list of substances identified as SVHC 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.

Criterion 4(b) Classification, Labelling and Packaging (CLP) restrictions

Note: All process and functional chemicals used in the paper mill and, where relevant, during the tissue paper conversion process must be screened. This criterion does not apply to chemicals used for wastewater treatment unless the treated wastewater is recirculated back into the paper production process.

Unless derogated in Table 3, the paper product shall not contain substances or mixtures in concentrations greater than 0.10 % (weight by weight) that are classified with any of the following hazard statements in accordance with Regulation (EC) No 1272/2008:

- **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.

- **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.

*H317 restrictions shall only apply to commercial dye formulations, surface finishing agents and coating materials applied to paper.

The use of substances or mixtures that are chemically modified during the paper production process (e.g. inorganic flocculating agents, cross-linking agents, inorganic oxidising and reducing agents) so that any relevant restricted CLP hazard no longer applies shall be exempted from the above requirement.

Table 3. Derogations to the CLP hazard restrictions and applicable conditions

Substance / mixture type	Applicability	Derogated classification(s)	Derogation conditions
Dyes and pigments	Used in wet end or surface application during the production of coloured paper.	H411, H412, H413	The chemical supplier shall declare that a fixation rate of 98 % can be achieved on the paper and provide instructions about how this can be ensured. The paper producer shall provide a declaration of compliance with any relevant instructions.
Polyamidoamine-epichlorohydrin (PAE)-based wet strength agents	Used as retention agents to improve runnability or to impart wet strength to the product.	H411, H412, H413	The combined residual monomer content of epichlorohydrin (ECH, CAS No 106-89-8) and its breakdown products 1,3-dichloro-2-propanol (DCP, CAS No 96-23-1) and 3-monochloro-1,2-propanediol (MCPD, CAS No 96-24-2) must not exceed 0.35 % (w/w) of the active solids content of the formulation.
Glyoxal (recycled fibre)	Impurity in recycled fibres.	H341, H317	Only permitted in concentrations exceeding 0.10 % (w/w) if due to contaminants from recycled materials used in the papermaking process. In such cases, compliance with the limit defined in criterion 6c) must be demonstrated.
Polyamidoamine-epichlorohydrin (PAE)-based Yankee auxiliary chemicals	Used as creping aids.	H411, H412, H413	The combined residual monomer content of epichlorohydrin (ECH, CAS No 106-89-8) and its breakdown products 1,3-dichloro-2-propanol (DCP, CAS No 96-23-1) and 3-monochloro-1,2-propanediol (MCPD, CAS No 96-24-2) must not exceed 0.05 % (w/w) of the active solids content of the formulation.

Substance / mixture type	Applicability	Derogated classification(s)	Derogation conditions
Cationic polymers (including polyethyleneimines, polyamides and polyamines)	Various uses possible, which include use as retention aids, improve wet-web strength, dry strength and wet strength.	H411, H412, H413	The paper producer shall provide a declaration of compliance with any relevant instructions for safe handling and dosing specified in the safety data sheet.

Assessment and verification: *The applicant shall provide a list of all relevant chemicals used together with the relevant safety data sheet or supplier declaration.*

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.

Justifications for any deviation from a retention factor of 100 % 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 paper product but are derogated, proof of compliance with the relevant derogation conditions must be provided.

Criterion 4(c) Chlorine

Note: This requirement shall apply to pulp and paper producers. While it also applies to the bleaching of recycled fibres, it is accepted that the fibres in their previous life cycle may have been bleached with chlorine gas.

Chlorine gas shall not be used as a bleaching agent. This requirement does not apply to chlorine gas related to the production and use of chlorine dioxide.

Assessment and verification: *The applicant shall provide a declaration that chlorine gas has not been used as a bleaching agent in the paper production process, together with declarations from any relevant pulp suppliers.*

Criterion 4(d) Alkylphenol ethoxylates (APEOs)

Note: This requirement shall apply to pulp and paper producers.

APEOs or other alkylphenol derivatives shall not be added to cleaning chemicals, de-inking chemicals, foam inhibitors or dispersants. Alkylphenol derivatives are defined as substances that upon degradation produce alkylphenols.

Assessment and verification: *The applicant shall provide a declaration(s) from its chemical supplier(s) that APEOs or other alkylphenol derivatives have not been added to these products.*

Criterion 4(e) Surfactants used in de-inking

Note: This requirement shall apply to the producer(s) of de-inked pulp.

All surfactants used in de-inking processes shall demonstrate ready biodegradability or inherent ultimate biodegradability (see test methods and pass levels below). The only exemption to this requirement shall be the use of surfactants based on silicone derivatives provided that paper sludge from the de-inking process is incinerated.

Assessment and verification: *The applicant shall provide a declaration of compliance with this criterion together with the relevant safety data sheets or test reports for each surfactant. These shall indicate the test method, threshold and conclusion reached using one of the following test methods and pass levels:*

- *For ready biodegradability: OECD No 301 A-F (or equivalent ISO standards) with a percentage degradation (including adsorption) within 28 days of at least 70 % for 301 A and E, and of at least 60 % for 301 B, C, D and F.*

- *For inherent ultimate biodegradability: OECD 302 A-C (or equivalent ISO standards), with a percentage degradation (including adsorption) within 28 days of at least 70 % for 302 A and B, and of at least 60 % for 302 C.*

In cases where silicone-based surfactants are used, the applicant shall provide a safety data sheet for the chemicals used and a declaration that paper sludge from the de-inking process is incinerated, including details of the destination incineration facility or facilities.

Criterion 4(f) Biocidal product restrictions for slime control

Note: This requirement shall apply to the paper producer.

The active substances in biocidal products used to counter slime-forming organisms in circulation water systems containing fibres shall have been approved for this purpose, or be under examination pending a decision on approval, under Regulation (EU) No 528/2012 and shall not be potentially bio-accumulative.

For the purposes of this criterion, the potential to bio-accumulate shall be characterised by log Kow (log octanol/water partition coefficient) ≤ 3.0 or an experimentally determined bioconcentration factor ≤ 100 .

Assessment and verification: *The applicant shall provide a declaration of compliance with this criterion together with the relevant material safety data sheet or test report. This shall indicate the test method, threshold and conclusion reached, using one of the following test methods: OECD 107, 117 or 305 A-E.*

Criterion 4(g) Azo dye restrictions

Note: This requirement shall apply to the paper producer.

Azo dyes, which by reductive cleavage of one or more azo groups may release one or more of the aromatic amines listed in Directive 2002/61/EC or Regulation (EC) No 1907/2006 Annex XVII, Appendix 8, shall not be used in the production of EU Ecolabel tissue paper.

Assessment and verification: *The applicant shall provide a declaration of compliance with this criterion from the supplier(s) of all colourants used in the production process for EU Ecolabel tissue paper and tissue products. The colourant supplier declaration should be supported by test reports according to the appropriate methods described in Appendix 10 to Annex XVII to Regulation (EC) No 1907/2006 or equivalent methods.*

Criterion 4(h) Metal-based pigments and dyes

Note: This requirement shall apply to the paper producer or, where relevant, to the tissue paper converter. See definition of metal-based pigments and dyes in the preamble of this Annex.

Dyes or pigments based on aluminium*, silver, arsenic, barium, cadmium, cobalt, chromium, mercury, manganese, nickel, lead, selenium, antimony, tin or zinc shall not be used.

*The restriction for aluminium shall not apply to aluminosilicates.

Assessment and verification: *The applicant shall provide a declaration of compliance with the requirements of this criterion from the supplier(s) of all colourants used in the production process for EU Ecolabel tissue products. The supplier declaration(s) shall be supported by safety data sheets or other relevant documentation.*

Criterion 4(i) Ionic impurities in dye-stuffs

Note: This requirement shall apply to the paper producer or, where relevant, to the tissue paper converter.

The levels of ionic impurities in the dyestuffs used shall not exceed the following limits: silver 100 ppm; arsenic 50 ppm; barium 100 ppm; cadmium 20 ppm; cobalt 500 ppm; chromium 100 ppm; mercury 4 ppm; nickel 200 ppm; lead 100 ppm; selenium 20 ppm; antimony 50 ppm; tin 250 ppm; zinc 1 500 ppm.

Assessment and verification: *The applicant shall provide a declaration of compliance with the requirements of this criterion from the supplier(s) of all colourants used in the production process for EU Ecolabel tissue paper. The supplier declaration(s) shall be supported by safety data sheets or other relevant documentation.*

Criterion 4(j) Lotions

No substances that are classified as H317, H334, CMR or listed on the Candidate List for Substances of Very High Concern shall be added to lotion formulations used during the conversion of EU Ecolabel tissue products. Furthermore, no parabens, triclosan, formaldehyde, formaldehyde releasers or methylisothiazolinone shall be added to lotion formulations.

Furthermore, no lotion formulation used shall be dosed in quantities that result in any individual substances with the CLP restricted classifications listed in criterion 4(b) being present in quantities exceeding 0.010 % (w/w) of the final tissue product. The

sum of substances with any particular restricted CLP classifications shall not exceed 0.070 % (w/w) of the tissue product.

Assessment and verification: *The applicant shall provide a list of any relevant lotion formulations used in the production of EU Ecolabel tissue products together with declarations of compliance from the respective suppliers of those lotion formulations, relevant safety data sheets and, for demonstrating compliance with the limits in the final product, calculations based on dosing rates used by the applicant that estimate the concentrations of any restricted CLP substances in the formulation that would remain in the final EU Ecolabel tissue product.*

Criterion 5 — Waste management

All pulp and paper production sites, including converted tissue production sites, shall have a system in place for the handling of waste arising from the production process and a waste management and minimisation plan that describes the production process and includes information on the following aspects:

- 1) procedures in place for waste prevention;
- 2) procedures in place for waste separation, reuse, and recycling;
- 3) procedures in place for the safe handling of hazardous waste;
- 4) 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 waste minimisation and management plan for each of the sites concerned and a declaration of compliance with the criterion.*

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).*

Criterion 6 — Final product requirements

Criterion 6(a) Dyes and optical brighteners

For dyed tissue paper, good fastness (level 4 or higher) shall be demonstrated according to the short procedure defined in EN 646.

For tissue paper treated with optical brightening agents, good fastness (level 4 or higher) shall be demonstrated according to the short procedure defined in EN 648.

Assessment and verification: *The applicant or the chemical supplier(s) shall provide a declaration of compliance with this criterion supported by relevant test reports in accordance with standards EN 646 and/or EN 648 as appropriate.*

Otherwise, the applicant shall provide a declaration stating that no dyes or optical brightening agents have been used.

Criterion 6(b) Slimicides and antimicrobial substances

Samples of the final tissue product shall not result in the growth inhibition of micro-organisms in accordance with EN 1104.

***Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion supported by relevant test reports in accordance with EN 1104.*

Criterion 6(c) Product safety

Any final tissue product that contains recycled fibre shall not contain any of the following hazardous substances above the specified limits and according to the specified test standards:

- Formaldehyde: 1 mg/dm² in accordance with EN 1541 (cold water extraction);
- Glyoxal: 1.5 mg/dm² in accordance with DIN 54603;
- Pentachlorophenol (PCP): 2 mg/kg in accordance with EN ISO 15320 (cold water extraction).

***Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion supported by relevant test reports in accordance with the respective standards.*

Criterion 6(d) Fitness for use

The EU Ecolabel tissue product needs to meet all respective requirements of the country where it is placed on the market.

For structured tissue paper, the absorbency of the individual base sheet of tissue paper before conversion shall be equal to or higher than 10.0 g water/g tissue paper.

***Assessment and verification:** The applicant shall provide a declaration of compliance with the criterion supported by relevant documentation.*

Producers shall guarantee the fitness for use of their products, providing documentation that demonstrates the product quality in accordance with EN ISO/IEC 17050. The standard provides general criteria for suppliers' declaration of conformity with normative documents.

For structured tissue paper, the applicant shall provide a declaration of compliance with the requirement supported by a relevant test report in accordance with EN ISO 12625-8:2010.

Criterion 7 — 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 emissions to air and water during production;
- Low energy use during production;
- xx% sustainably sourced fibres / xx% recycled fibres (as appropriate).

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.*