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Development of EU Ecolabel Criteria for Sanitary Products

Criteria Document – Draft v.2

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European Commission

Development of EU Ecolabel Criteria for Absorbent Hygiene Products

(formerly referred to as “sanitary products”)

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1. Definition of the product group scope

In accordance with the product scope as defined in the preliminary report (Sections 2.4), the following definition is proposed for the product group scope:

1. The product group "adsorbent hygiene products" shall include products which:

- *a. Are used for the physical and direct collection of human body waste streams and*
- *b. Are composed of a mix of natural fibres and polymers, with the fibre content lower than 90% by weight and*
- *c. Are disposable.*

2. The product group shall comprise:

- *a. all kinds of children's diapers*
- *b. all kinds of sanitary pads/napkins and panty liners*
- *c. all kinds of tampons*
- *d. breast pads*

3. The product group shall not comprise incontinence products and any other type of products falling under the scope of the Council Directive 93/42/EEC 14 June 1993 concerning medical devices.

Area of discussion:

Based on the feedback received by some stakeholders, it is suggested that **products with specific design and size** (e.g. a size-4 pull-on diaper produced by the company X) were awarded the EU Ecolabel. This option is considered to allow some flexibility to producers.

A possible alternative would be to assign the EU Ecolabel to **products with the same design** (e.g. all the pull-on diapers of the same product line produced by the company X).

Reasoning in terms of **combination of products fulfilling a certain function** (e.g. all the types of diapers produced by company X and used during the diapering period) does not seem practicable within this context.

Pros and cons of these options will be discussed at the **2nd AHWG meeting** (Brussels, 24 April 2013).

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2. List of Proposed Criteria for the EU Ecolabel of Absorbent Hygiene Products

The below EU Ecolabel criteria are suggested for AHPs:

Criteria area	***Proposed criteria***
Materials and design	1. Use of materials 2. Fluff pulp 3. Man-made fibres 4. Cotton 5. Polymers 6. Other materials
Chemicals	7. Excluded or limited substances or mixtures
Manufacture	8. Minimisation of the production waste
End-of-life	9. Disposal of AHP
Fitness for Use	10. Fitness for use and quality of the product
Other issues	11. Information appearing on the EU Ecolabel 12. Social aspects

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Option 1: Setting maximal weight thresholds

The weight thresholds reported in Table 1 below shall be respected.

Table 2: Examples of potential requirements for some AHPs

Product		Maximal weight threshold
Baby diapers	Taped	(0.5 x + 32)g, with x average class weight in kg To be determined (if desirable/feasible)
	Pull on	To be determined (if desirable/feasible)
	Night	To be determined (if desirable/feasible)
	Swim	To be determined (if desirable/feasible)
Feminine care pads	Panty liners for blood collection and handling	To be determined (if desirable/feasible)
	Panty liners for blood and urine collection and handling	
	Pads categorization based on absorbency, presence/absence of wings?	To be determined (if desirable/feasible)
Tampons	Tampons categorization based on 6 classes of absorbency and presence/absence of the applicator?	To be determined (if desirable/feasible)
Breast pads	No categorization needed?	To be determined (if desirable/feasible)

Assessment and verification: The applicant shall send a sample of the product including a declaration of compliance with indicated the weight of the product.

Option 2: Setting environmental thresholds based on the GWP of the product

The environmental thresholds reported in Table 2 below shall be respected.

Table 2: Examples of potential requirements for some AHPs

Product	Maximal GWP

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Baby diapers	Taped	(α x + β)kg_{CO2eq}, with x average class weight in kg To be determined (if desirable/feasible)
	Pull on	To be determined (if desirable/feasible)
	Night	To be determined (if desirable/feasible)
	Swim	To be determined (if desirable/feasible)
Feminine care pads	Panty liners for blood collection and handling	To be determined (if desirable/feasible)
	Panty liners for blood and urine collection and handling	
	Pads categorization based on absorbency, presence/absence of wings?	To be determined (if desirable/feasible)
Tampons	Tampons categorization based on 6 classes of absorbency and presence/absence of the applicator?	To be determined (if desirable/feasible)
Breast pads	No categorization needed?	To be determined (if desirable/feasible)

Assessment and verification: The applicant shall send a sample of the product including a declaration of compliance with indicated the calculated GWP value.

Option 3: No criteria on the use of materials

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Area of discussion:

Three scenarios have been identified for dealing with the environmental impacts due to the use of materials in some AHPs:

- **Option 1: Setting maximal weight thresholds;**
- **Option 2: Setting environmental thresholds based on the GWP of the product;**
- **Option 3: No criteria on the use of materials.**

These three options will be discussed at the 2nd AHWG meeting.

Industry is generally not supporting the presence of weight/composition constraints for AHPs. Based on the lack of information, at the moment the most reasonable choice seems to be Option 3. Options 1 and 2 would require the **direct collection of pieces of information about classification, weight and composition** for all or some AHPs (the kind **support of industry and/or Competent Bodies** would be essential).

Criterion 2: Fluff pulp

2.1) Sourcing

A minimum of X% pulp fibres (100?) shall be manufactured from wood that has been grown according to the principles of Sustainable Forestry Management as defined by the UN FAO. The remaining balance of pulp fibres shall be from pulp that is from legal forestry and plantations.

Assessment and verification:

The applicant shall provide valid, independently certified chain of custody certificates from his pulp supplier(s) demonstrating that pulp fibres have been grown according to Sustainable Forestry Management principles and/or are from legal sources. FSC, PEFC (and SFI?) shall be accepted as independent certification schemes. Due diligence processes shall be followed as specified in Regulation (EC)19/2010 in order to minimise the risk that timber has been illegal harvested. Valid FLEGT (Forest Law Enforcement, Governance and Trade) or CITES (Convention on International Trade in Endangered Species) licenses or third party certification shall be accepted as evidence of legal sourcing.

2.2) Bleaching:

(a) The pulp used in the product shall not be bleached with the use chlorine gas.

(b) The AOX emissions from the production of each kind of pulp shall not exceed 0.170 (to be decreased?) kg/ADT.

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Assessment and verification:

(a) The applicant should provide a declaration from the supplier that chlorine gas is not used.

(b) The applicant shall provide test reports using the test method AOX ISO 9562 or the equivalent EPA9562, accompanied by detailed calculations showing compliance with this criterion, together with related supporting documentation.

The supporting documentation shall include an indication of the measurement frequency.

AOX shall only be measured in processes where chlorine compounds are used for the bleaching of the pulp. AOX need not be measured in the effluent from non-integrated pulp production or in the effluents from pulp production without bleaching or where the bleaching is performed with chlorine-free substances.

Measurements shall be taken on unfiltered and unsettled samples either after treatment at the plant or after treatment by a public treatment plant.

The measurement period shall be 12 months of production. Measurements shall be taken on a weekly basis, from a representative composite sample (24 hours composite).In case of a new or re-built plant or a change of process at the production plant, measurements shall be done on a weekly basis for a total of 8 consecutive weeks following steady running of the plant. The measurement shall be representative of the respective campaign.

2.3) Visual whitening and colouring agents

Visual whitening and colouring agents must not be intentionally added to the pulp. Fluorescent whitening agents are included within this group of substances.

Assessment and verification: The applicant should provide a declaration from the supplier that the requirements have been fulfilled.

2.4) Emission of COD and phosphorous (P) to water and sulphur (S) compounds and NOx to air from production

The emissions to air and/or water from the pulp production shall be expressed in terms of points (P_{COD}, P_S , P_{NOx} , P_P). Points are calculated by dividing actual emission by the reference values reported below.

Pulp grade	**Emissions (kg/ADT)**			
	COD_{ref}	**S_{ref}**	**NOx_{refe}**	**P_{ref}**
Bleached chemical pulp (others than sulphite)	18.0	0.6	1.6	0.045*
Bleached chemical pulp (sulphite)	25.0	0.6	1.6	0.045
CTMP	15.0	0.2	0.3	0.005
TMP/groundwood pulp	3.0	0.2	0.3	0.01

* The emission limit value can be set up to 0.05 where it can be demonstrated that the higher level of P emissions is due to P naturally contained in wood fibres and

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water (wording to be clarified?).

- None of the individual points P_{COD}, P_S, P_{NOx}, P_P shall exceed 1.5.
- The total number of points (P total = P_{COD} + P_S + P_{NOx} + P_P) shall not exceed 4.0.

Where different types of pulp are used, measured emissions and reference value shall be weighted according to the relative weight of each pulp type.

In case of a co-generation of heat and electricity at the same plant, the emissions of S and NOx resulting from electricity generation can be subtracted from the total amount.

The following equation can be used to calculate the proportion of the emissions resulting from electricity generation:

2 × (MWh(electricity)) / [2 × MWh(electricity) + MWh(heat)]

The electricity in this calculation is the electricity produced at the co-generation plant.

The heat in this calculation is the net heat value input that is produced at the co-generation plant and that is actually delivered to the pulp production process (wording to be clarified?).

Assessment and verification: The applicant shall provide detailed calculations showing compliance with this criterion, together with related supporting documentation which shall include test reports using the following test methods: COD: ISO 6060, EPA SM 5220D or HACH 8000;

NOx: ISO 11564 or EPA 7E;

S(oxid.): EPA 8;

S(red.): EPA 8 or EPA 16A;

S content in oil: ISO 8754 or EPA 8;

S content in coal: ISO 351 or EPA 8;

P: ISO 6878, SM4500, APAT IRSA CNR 4110 or Dr Lange LCK 349.

The supporting documentation shall include an indication of the measurement frequency and the calculation of the points for COD, S, NOx and P. It shall include all emissions of S and NOx which occur during the production of pulp, including steam generated outside the production site, except those emissions related to the production of electricity.

Measurements shall include recovery boilers, lime kilns, steam boilers and destructor furnaces for strong smelling gases. Diffuse emissions shall be taken into account.

Reported emission values for S to air shall include both oxidised and reduced S emissions (dimethyl sulphide, methyl mercaptan, hydrogen sulphide and the like). 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 either after treatment at the plant or after treatment by a public treatment plant.

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The measurement period shall be 12 months of production. Measurements for COD and P shall be taken on a weekly basis, measurements for S and NO_x on yearly basis.

In case of a new or re-built plant or a change of process at the production plant, measurements shall be done on a weekly basis for a total of 8 consecutive weeks following steady running of the plant. The measurement shall be representative of the respective campaign.

2.5) Emissions of CO_2 from production

CO_2 emissions from non-renewable energy sources shall not exceed 1100 kg per tonne of pulp produced.

Reference values according to the following table shall be taken into account:

Fuel	**CO_2 fossil emissions (g $CO_{2fossil}$/MJ)**
Coal	95
Crude oil	73
Fuel oil 1	74
Fuel oil 2-5	77
LPG	69
Natural Gas	56
Grid Electricity	400

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

The applicant shall provide data on the air emissions of carbon dioxide. This shall include all sources of non-renewable fuels during the production of pulp, including the emissions from the production of electricity (whether on-site or off-site).

The measurement period shall be 12 months of production. Measurements shall be done on a yearly basis.

In case of a new or re-built plant or a change of process at the production plant, measurements shall be done on a weekly basis for a total of 8 consecutive weeks following steady running of the plant. The measurement shall be representative of the respective campaign.

The amount of energy from renewable sources purchased and used for the production processes will not be considered in the calculation of the CO_2 emissions: appropriate documentation that this kind of energy are actually used at the mill or are externally purchased shall be provided by the applicant.

2.6) Energy use during the production

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Electricity

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

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

$E_{pulp,i}$ = Purchased electricity (+ Internally produced electricity – sold electricity)

Points shall be calculated by dividing actual consumption figures by the reference values reported below.

Where different types of pulp are used, consumption figures and reference value shall be weighted according to the relative weight of each pulp type.

The number of points P_E shall be less than or equal to 1.5.

Fuel (heat)

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

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

$F_{pulp,i}$ = Purchased fuel (+ Internally produced fuel – sold fuel – 1.25 ***(or 1.4-1.5? to be discussed at the AHWG meeting)*** *× internally produced electricity)*

$F_{pulp,i}$ (and its contribution to $P_{F,\ pulp}$) does not need to be calculated for mechanical pulp unless it is marketed as air dried mechanical pulp containing at least 90% dry matter.

The amount of fuel used to produce the sold heat shall be added to the term 'sold fuel' in the equation above.

Points shall be calculated by dividing actual consumption figures by the reference values reported below.

Where different types of pulp are used, consumption figures and reference value shall be weighted according to the relative weight of each pulp type.

The number of points P_F shall be less than or equal to 1.5.

Reference values according to the following table shall be taken into account.

Pulp grade	**Fuel (kWh/ADT)**	**Electricity (kWh/ADT)**
Chemical pulp	4000*	800
Mechanical pulp	900**	1900
CTMP	1000	2000

*: For air dry market pulp (admp) containing at least 90% dry matter, this value may be upgraded by 25% for the drying energy

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** This value is only applicable for admp

Assessment and verification: 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 papers for the production of recycled paper. Energy used in the transport of raw materials, as well as conversion and 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 wastes 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 need only 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 internal generation of electricity measured as electric power. Electricity used for wastewater treatment need not 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 only a combined figure for pulp and paper production is available, 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.

2.7) Industrial best practices

The following measures shall be implemented in the pulp production plant order to limit emissions to water and air, consumption of resources and production of waste streams

Environmental area	Measures
Waste management	1. Implementing an integrated waste management plan to optimize prevention, reuse, recycling, recovery, and final disposal of waste according to waste hierarchy. 2. Separating different waste fractions to allow reuse or recirculation of the single fractions. 3. Recycling fibres, wherever possible

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Assessment and verification: The applicant should provide a declaration from the supplier that the requirements have been fulfilled.

Area of discussion:

The following points must be clarified:

2.1) Sourcing

- Which amount of pulp should be certified according to the principle of Sustainable Forestry Management?
- Should SFI be accepted as certification scheme?

2.2) Bleaching:

- Which limit value should be set for AOX emissions?
- Should we refer to OX emissions as for criteria on man-made cellulosic fibres?
- How to improve the assessment and verification procedure? (e.g. test methods, definition of "new or re-built production plant", frequency of measurements)

2.4) Emission of COD and phosphorous (P) to water and sulphur (S) compounds and NOx to air from production

- How to improve the assessment and verification procedure? (e.g. test methods, definition of "new or re-built production plant", frequency of measurements)
- How to improve wording for clarifying when a) limit value for P emissions can be increased and b) what the "heat" in the equation can be used to calculate the proportion of the emissions resulting from electricity generation?

2.5) Emissions of CO_2 from production

- How to improve the assessment and verification procedure? (e.g. definition of "new or re-built production plant", frequency of measurements)

2.6) Energy use during the production

- Should the factor used to deduct the internally produced electricity from the fuel consumption be increased from 1.25 to 1.4-1.5? Which value should be chosen?

Criterion 3: Man-made cellulose fibres (including viscose, modal, lyocell, cupro, triacetate)

3.1) Sourcing

(a) A minimum of 25% pulp fibres shall be manufactured from wood that has been grown according to the principles of Sustainable Forestry Management as defined by the UN FAO. The remaining balance of pulp fibres shall be from pulp that is from legal forestry and plantations.

(b) Dissolving pulp produced from cotton linters shall meet with the requirements 4.1 and 4.2 for cotton (sourcing and traceability) with the exception that 25% of cotton should comply with the IPM production standard if selected and 10% should comply with the organic production standard if selected.

Assessment and verification:

(a) The applicant shall provide valid, independently certified chain of custody certificates from his pulp supplier(s) demonstrating that pulp fibres have been grown according to Sustainable Forestry Management principles and/or are from legal sources. FSC and PEFC shall be accepted as independent certification schemes. Due diligence processes shall be followed as specified in Regulation (EC)19/2010 in order to minimise the risk that timber has been illegal harvested. Valid FLEGT (Forest Law Enforcement, Governance and Trade) or CITES (Convention on International Trade in Endangered Species) licenses or third party certification shall be accepted as evidence of legal sourcing.

(b) The application shall provide evidence of compliance according to criteria 4.1 and 4.2 for cotton.

3.2) Bleaching

(a) The pulp used to manufacture fibres shall not be bleached with the use of chlorine gas.

(b) The resulting level of halogenated compounds (OX) in the fibres shall not exceed 0.150 kg/ADT

Assessment and verification:

(a) The applicant should provide a declaration from the supplier that chlorine gas is not used.

(b) The applicant shall provide a test report, using the following test method: ISO 11480.1997 (controlled combustion and microcoulometry).

3.3) Visual whitening and colouring agents

Visual whitening and colouring agents must not be intentionally added to the pulp. Fluorescent whitening agents are included within this group of substances.

Assessment and verification: The applicant should provide a declaration from the supplier that the requirements have been fulfilled.

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3.4) Production of fibres

(a) The following limits shall be respected in the viscose and in the modal fibres production process:

Fibre type	Sulphur emissions to air Limit value (g/kg)	Zinc emissions to water Limit value (g/kg)
Staple fibre	30	0.30
Filament fibre - Batch washing - Integrated washing	 60 170	 0.16 0.16
Note: Limit values expressed as annual average		

(b) For cupro fibres, the copper content of the effluent water leaving the site, expressed as an annual average, shall not exceed 0.10 ppm.

(c) More than 50% of pulp used to manufacture fibres shall be obtained from dissolving pulp mills that recover value from their spent process liquor either by 1) generating on-site electricity and steam and/or 2) by manufacturing chemical co-products.

Assessment and verification:

(a), (b) The applicant shall provide detailed documentation and/or test reports showing compliance with this criterion, together with a declaration of compliance.

(c) The applicant shall provide a list of pulp suppliers used to make the fibres and the proportion they supply. Supporting documentation and evidence shall be provided that the required proportion of suppliers has energy generating equipment and/or co-product recovery and manufacturing systems installed at production sites.

3.5) Industrial best practices

The following measures shall be implemented in the pulp production plant order to limit emissions to water and air, consumption of resources and production of waste streams

Environmental area	Measures
Water consumption and wastewater emissions	~~1. Removal of Na_2SO_4 from wastewater (spinning baths, in which the viscose solution is pressed through spinnerets) for coagulation of the fibres~~ ~~2. Reduction of Zinc from wastewaters by alkaline precipitation followed by sulphide precipitation.~~ ~~3. Use of anaerobic sulphate reduction techniques for sensitive waterbodies. If further desulphurization is necessary, anaerobic reduction to H_2S must be carried out.~~

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	4. Use of separate effluent collection systems for – Contaminated process effluent water – Potentially contaminated water from leaks and other sources, including cooling water and surface runoff from process plant areas, etc. – Uncontaminated water
Waste management	1. Use of fluidized bed incinerators to burn non-hazardous wastes with subsequent heat and energy recovery 2. Recycling of fibres, wherever possible
Air emissions	1. Condensation of exhaust air from spinning streets to recover CS_2 and backcycling into the process. (different technologies available). 2. Operation of spinning frames in houses in order to minimise CS_2 emissions, (spinning frames are the sources of CS_2 emissions). Housings have to be equipped with leak-proof sliding windows and have suction systems inside where excess CS_2 is purged to a recovery facility. 3. Application of exhaust air desulphurization processes based on catalytic oxidation with H_2SO_4 production.

Assessment and verification: The applicant should provide a declaration from the supplier that the requirements have been fulfilled..

Area of discussion:

The following points must be clarified:

3.1) Sourcing

- Should the list of accepted certification schemes include even SFI?

3.5) Industrial best practices

- Which measures should be included in the final criterion proposal?

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4.1) Sourcing

Cotton and other natural cellulosic seed fibres (hereinafter referred to as cotton) shall be grown according to one of the following two production standards and must meet the common content claim requirements.

Option 1: IPM

50% cotton (to increase this threshold?) used shall be grown according to Integrated Pest Management (IPM) principles as defined by the UN FAO's IPM programme. All the cotton shall be grown without the use of any of the following substances:

Alachlor, aldicarb, aldrin, campheclor (toxaphene), captafol, chlordane, 2,4,5-T, chlordimeform, chlorobenzilate, cypermethrin, DDT, dieldrin, dinoseb and its salts, endosulfan, endrin, glyphosulfate, heptachlor, hexachlorobenzene, hexachlorocyclohexane (total isomers), methamidophos, methyl-o-dematon, methylparathion, monocrotophos, parathion, phosphamidon, pentachlorophenol, thiofanex, triafanex, triazophos.

Cotton shall not contain more than 0.5 ppm in total (sensitivity of the test method permitting) of the substances listed above. Cotton is not required to be tested where it has been certified by a suitable IPM scheme that prohibits the use of the listed substances.

Option 2: Organic

A minimum of 25% (to increase this threshold to 90%?) of cotton shall be grown according to the requirements laid down in Regulation (EC) No 834/2007 or the US National Organic Programme (NOP). The cotton content may include organically grown cotton and transitional organic cotton.. The remaining balance of the cotton is excluded from pesticide testing.

Assessment and verification:

Option 1: The applicant shall provide evidence that the cotton is grown by farmers that participate either in Government IPM programmes or third party certified IPM schemes. Government programmes include the UN FAO IPM programme, the USDA IPM programme and other programmes to be specified. Certification to the following IPM schemes will be accepted – the Better Cotton Initiative (BCI), Cotton Made in Africa and the Australian Better Management Programme (BMP).

A test report should be provided demonstrating that the listed substances have not been used. The following test methods shall be used, as appropriate:

- US EPA 8081 A (organo-chlorine pesticides, with ultrasonic or Soxhlet extraction and apolar solvents (iso-octane or hexane)),

- 8151 A (chlorinated herbicides, using methanol),

- 8141 A (organophosphorus compounds),

- 8270 C (semi-volatile organic compounds).

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Tests should be made on raw cotton, before it comes through any wet treatment, for each lot of cotton or composite samples of 5% of the bales from each country of origin if more than two lots of cotton per year are received.
Declarations of non-use compiled from farmer producer groups will be accepted where they are verified by annual site visits. The following IPM certification schemes will be accepted - BCI, Cotton Made in Africa and Fair Trade – together with IPM schemes which restrict use of the pesticides list in their criteria.

Option 2: Organic content should be certified by an independent organisation to have been produced in conformity with the production and inspection requirements laid down in Regulation 834/2007/EC or the US National Organic Programme (NOP). Verification either on an annual basis for a proportion of the cotton purchased or of the blending of cotton at the spinning stage shall be accepted.

4.2) Traceability

It shall be possible to trace the IPM or organic cotton used to manufacture an Ecolabelled product from farmer and producer groups to, as a minimum, greige fabric production. This shall be ensured for all cotton purchased for use in Ecolabelled products. Documentary evidence shall be provided that assures the integrity of the cotton content claim.

Assessment and verification: Transaction records and/or invoices shall be provided that document the quantity of cotton purchased on an annual basis from farmer or producer groups up until greige fabric production before dyeing, printing and finishing. Documentary evidence shall reference the Control Body or certifier of the cotton. Cotton certified to the GOTS, Fair Trade, OE Blended and OE 100 standards, as well as any other equivalent content claim standards shall be accepted as complying with these requirements.

4.3) Bleaching

Cotton shall not be bleached with the use of chlorine gas.

Assessment and verification: The applicant should provide a declaration from the supplier that chlorine gas is not used.

4.4) Visual whitening and colouring agents

Visual whitening and colouring agents must not be intentionally added to the pulp. Fluorescent whitening agents are included within this group of substances.

Assessment and verification: The applicant should provide a declaration from the supplier that the requirements have been fulfilled

4.5). Industrial best practices

The following measures shall be implemented in the pulp production plant order to limit emissions to water and air, consumption of resources and production of waste streams

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Environmental area	Measures
Water consumption and wastewater emissions	1. Implementing water-saving solutions such as monitoring of water flow in a facility, adjustment of processes in pretreatment to quality requirements in downstream processes and re-use of water. 2. Implementing a monitoring plan in order to avoid/ minimize any kind of surplus of applied chemicals and auxiliaries (e.g. by automated dosing and dispensing of chemicals) and to minimize consumption of complexing agents in hydrogen peroxide bleaching. ~~3.~~ Implementing multi-step waste water treatment plants to decrease the emission of AOX.
Waste management	4. Implementing an integrated waste management plan to optimize prevention, reuse, recycling, recovery, and final disposal of waste according to waste hierarchy. 5. Separating different waste fractions to allow reuse or recirculation of the single fractions.
Air emissions	6. Proving that in the selection of auxiliaries and chemicals within the facility higher preferences are given to products with a low volatility and low smell intensity.
Energy management	7. Implementing measure to optimize energy efficiency (e.g. via segregation of hot and cold waste water streams prior to heat recovery and recovery of heat from the hot stream) and to reduce the consumption of fossil fuels. 8. Applying on-site generation of electricity and heat in combined heat and power plants (CHP), which can save up to 30% of energy when compared to conventional technologies.

Assessment and verification: The applicant should provide a declaration from the supplier that the requirements have been fulfilled.

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Area of discussion:

The following points must be clarified:

4.1) Sourcing

- Should options 1 and 2 be applicable in combination (1 AND 2) or exclusively (1 OR 2)?
- Which weight thresholds should be set for both options?

4.5) Industrial best practices

- Which measures should be included in the final criterion proposal?

Criterion 5: Polymers

5.1) Sourcing*

An X% by weight of the polymers shall come from renewable feedstock*.

Assessment and verification: See note*

* Note: This criterion will be proposed only if practical assessment and verification schemes and/or procedures are found which can be used to provide evidence that specific renewable-based polymers are functionally equivalent to petroleum-based materials and lead to an overall better environmental performance. A **final decision** will be taken **at the 2nd AHWG group meeting**.

5.2) Heavy metals / organostannic compounds

Contents of lead, cadmium, mercury, hexavalent chrome and attendant impurities as well as organostannic compounds must be lower than 0.1% of the mass of the respective material (e.g. plastic) in the product.

Assessment and verification: The applicant should provide a declaration from the supplier that the requirements have been fulfilled.

5.3) Super Absorbent Polymers

(a) Super Absorbent Polymers may contain a maximum of 400 ppm residual monomers (total of unreacted acrylic acid and cross linkers).

(b) SAP may as a maximum contain 5% (weight/weight) of water-soluble extracts (i.e. monomers and oligomers of acrylic acid with lower molecular weight than SAP according to ISO 17190 – 10:2001)

(c) Acryl amide shall not be intentionally used.

Assessment and verification:

(a) The applicant should provide a declaration from the supplier documenting the composition of the superabsorbent polymer(s) used in the product. This must be done by means of a product safety data sheet which specifies the full name and CAS number and the residual monomers contained in the product classified in accordance with the above requirements and the quantities thereof. The methods used for the analyses must be described and the names of the laboratories used for analysis must be stated. The recommended test methods are WSP 210.2 (05), ERT 410.2 (02)/IST 210.2(02), ISO 17190 – 2:2001.

(b) The applicant should provide a declaration from the supplier specifying the quantity of water-soluble extracts in the super-absorbent polymer(s). The methods of analysed used must be described and the analysis laboratories must be stated. The recommended test method is WSP 270.2 (05), ERT 470.2 (02)/IST 270.2(02), ISO 17190 – 10:2001**Error! Bookmark not defined.**.

(c) The applicant should provide a declaration of non use.

5.4) Industrial best practices

The following measures shall be implemented in the pulp production plant order to limit emissions to water and air, consumption of resources and production of waste streams

Environmental area	Measures
Water consumption and wastewater emissions	1. Implementing water-saving solutions such as monitoring of water flow in a facility and circulating the water in closed systems.
Waste management	2. Implementing an integrated waste management plan to optimize prevention, reuse, recycling, recovery, and final disposal of waste according to waste hierarchy. 3. Separating different waste fractions to allow reuse or recirculation of the single fractions.
Air emissions	No measure identified
Energy management	1. Implementing measures to optimize energy efficiency. 2. Reusing the steam generated during the manufacture of SAPs (e.g. at Verbund sites)

Assessment and verification: The supplier has to provide a declaration to the manufacturer that the requirements have been fulfilled.

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Area of discussion:

The following points must be clarified:

5.1) Sourcing

- Which schemes or practical approaches could be used to assess and verify the sustainability of plastics and polymers from renewables? If any, which percentage of plastics, polymers or product should come from renewables-based materials?

5.2) Heavy metals / organostannic compounds

- Are these requirements relevant? Please explain your rationale.
- Which other requirements could be of relevance for plastics?

5.3) SAP

- Are these requirements relevant? Please explain your rationale.
- Which other requirements could be of relevance for SAPs?

5.4) Industrial best practices

- Which measures should be included in the final criterion proposal?

Criterion 6: Other materials

6.1) Adhesive materials

Adhesives must not contain:

- Colophony resins,
- Diisobutyl phthalate (DIBP, CAS 84-69-5) or
- Formaldehyde (50-00-0).

The requirement does not apply if these substances

1. are not intentionally added to the material or to the final product, and
2. are present in the adhesive material in concentrations below 100 ppm (0.010% by weight).

For formaldehyde, the maximum limit for the content of formaldehyde generated during adhesive production is 250 ppm, measured in newly produced polymer dispersion. Content of free formaldehyde in hardened adhesive (glue) must not

exceed 10 ppm. Hotmelt adhesives are exempted from this requirement.

Assessment and verification: The applicant should provide a declaration from the supplier that the requirements have been fulfilled. Test results for formaldehyde shall be provided.

6.2) Inks and dyes

(a) The product and any homogeneous part of it must not be dyed. This prescription does not apply to tampon strings, packaging materials, tape. Titanium dioxide in polymers and viscose is exempted from this requirement.

Materials that are not directly in contact with the skin may, however, be dyed if the dye has the specific function of reducing visibility of the product through white or light coloured clothing.

(b) Inks and dyes must comply with Criterion 7 on Excluded or limited substances or mixtures.

Assessment and verification:

(a) The applicant should provide a declaration that the requirements have been fulfilled. In case dyes are used, their presence will be justified by indicating the specific function provided.

(b) The applicant should provide a declaration from the supplier that the requirements have been fulfilled.

6.3) Lotions and fragrances

(a) Products intended for infants, babies and children under the age of twelve years shall be fragrance-free. Infant, baby and/or children products refers to products that are marketed as designed and intended for infants, babies and/or children or have any of these words on the label/packaging.

(b) Any ingoing substance added to the product as a fragrance shall be manufactured and handled following the code of practice of the International Fragrance Association (IFRA). The code can be found on IFRA website: http://www.ifraorg.org. The recommendations of the IFRA Standards concerning prohibition, restricted use and specified purity criteria for materials shall be followed by the manufacturer.

(c) The following fragrances shall not be used in AHPs

Common name	CAS number
Cinnamal	104-55-2
Cinnamyl Alcohol*	104-54-1
Citral	5392-40-5
Coumarin	91-64-5

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Eugenol*	97-53-0
Farnesol*	4602-84-0
Geraniol*	106-24-1
Hydroxycitronellal	107-75-5
Hydroxyisohexyl 3-cyclohexene carboxaldehyde (HICC)	31906-04-4
Isoeugenol*	97-54-1
Limonene (oxidised)	5989-27-5
Linalool* (oxidised)	78-70-6
Oak moss	90028-68-5
Tree moss	90028-67-4
Canaga odorata and Ylang-ylang oil	83863-30-3; 8006-81-3
Eugenia caryophyllus leaf / Flower oil	8000-34-8
Jasminum grandiflorum / Officinale	84776-64-7; 90045-94-6; 8022-96-6
Myroxylon pereirae (Balsam of Peru)	8007-00-9
Santalum album (Sandelholz)	84787-70-2; 8006-87-9
Turpentine (oil)	8006-64-2; 9005-90-7; 8052-14-0
* including their respective esters	

(d) In case a product contains lotions or fragrances, the manufacturer must declare its presence on the packaging.

***Assessment and verification**:*

(a), (d) The applicant should provide a declaration that the requirements have been fulfilled.

(b), (c) The applicant should provide a declaration from the supplier that the requirements have been fulfilled.

6.4) Silicone

a) Where components of the product are treated with silicone, the manufacturer must ensure that employees are protected from the solvents.

b) Neither octamethyl cyclotetrasiloxane D4 (CAS 556-67-2) nor decamethyl cyclopentasiloxane D5 (CAS 541-02-6) can be present in chemical products used in the silicone treatment of components. The requirement does not apply if D4 and D5:

1. are not intentionally added to the material or to the final product, and
2. are present in the silicone in concentrations below 100 ppm (0.01% by weight)

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Assessment and verification:

a) The applicant shall provide information on the method used for the treatment of silicone and documentation attesting that employees are protected.

b) The applicant shall provide a declaration from the supplier that the requirements have been fulfilled.

Area of discussion:

The following points must be clarified:

6.2) Inks and dyes

- Should the use of titanium dioxide in polymers and viscose be allowed or not?
- Which specific functions of dyes should be allowed?

6.3) Lotions and fragrances

- How much strict should be the requirements for fragrances and lotions?

Criterion 7: Excluded or limited substances or mixtures

a) Substances and mixtures of relevance for Regulation (EC) No 66/2010

Any material used in the product shall not contain substances meeting criteria for classification with the hazard statements or risk phrases specified below in accordance with Regulation (EC) No 1272/2008 or Directive 67/548/EC nor shall it contain substances referred to in Article 57 of Regulation (EC) No 1907/2006. The risk phrases below generally refer to substances. However, if information on substances cannot be obtained, the classification rules for mixtures apply.

Table 3. List of hazard statements and risk phrases:

Hazard Statement[1]	***Risk Phrase***[2]
H300 Fatal if swallowed	R28
H301 Toxic if swallowed	R25
H304 May be fatal if swallowed and enters airways	R65
H310 Fatal in contact with skin	R27
H311 Toxic in contact with skin	R24

1 *As provided for in Regulation (EC) No 1272/2008 of the European Parliament and of the Council*

2 *As provided for in Council Directive 67/548/EEC*

H330 Fatal if inhaled	R26
H331 Toxic if inhaled	R23
H340 May cause genetic defects	R46
H341 Suspected of causing genetic defects	R68
H350 May cause cancer	R45
H350i May cause cancer by inhalation	R49
H351 Suspected of causing cancer	R40
H360F May damage fertility	R60
H360D May damage the unborn child	R61
H360FD May damage fertility. May damage the unborn child	R60; R61; R60-61
H360Fd May damage fertility. Suspected of damaging the unborn child	R60-R63
H360Df May damage the unborn child. Suspected of damaging fertility	R61-R62
H361f Suspected of damaging fertility	R62
H361d Suspected of damaging the unborn child	R63
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child	R62-63
H362 May cause harm to breast fed children	R64
H370 Causes damage to organs	R39/23; R39/24; R39/25; R39/26; R39/27; R39/28
H371 May cause damage to organs	R68/20; R68/21; R68/22
H372 Causes damage to organs through prolonged or repeated exposure	R48/25; R48/24; R48/23
H373 May cause damage to organs through prolonged or repeated exposure	R48/20; R48/21; R48/22
H400 Very toxic to aquatic life	R50
H410 Very toxic to aquatic life with long-lasting effects	R50-53
H411 Toxic to aquatic life with long-lasting effects	R51-53
H412 Harmful to aquatic life with long-lasting effects	R52-53
H413 May cause long-lasting harmful effects to aquatic life	R53

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EUH059 Hazardous to the ozone layer	R59
EUH029 Contact with water liberates toxic gas	R29
EUH031 Contact with acids liberates toxic gas	R31
EUH032 Contact with acids liberates very toxic gas	R32
EUH070 Toxic by eye contact	R39-41
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled	R42
H317: May cause allergic skin reaction	R43

Substances or mixtures which change their properties through processing (e.g. become no longer bio-available, or undergo chemical modification in a way that removes the previously identified hazard) are exempted from the above requirement.

Concentration limits for substances or mixtures which may be or have been assigned the hazard statements or risk phrase listed above, meeting the criteria for classification in the hazard classes or categories, and for substances meeting the criteria of Article 57 (a), (b) or (c) of Regulation (EC) No 1907/2006, shall not exceed the generic or specific concentration limits determined in accordance with the Article 10 of Regulation (EC) No 1272/2008. Where specific concentration limits are determined they shall prevail over the generic ones.

Concentration limits for substances meeting criteria of Article 57 (d), (e) or (f) of Regulation (EC) No 1907/2006 shall not exceed 0.1% weight by weight.

(b) Substances listed in accordance with article 59(1) of Regulation (EC) No 1907/2006

No derogation from the exclusion in Article 6(6) of the Regulation (EC) No 66/2010 shall be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006, present in any materials used in the product in concentrations >0.1%. Specific concentration limits determined in accordance with Article 10 of Regulation (EC) No1272/2008 shall apply in cases where the concentration is lower than 0.1%.

Assessment and verification:

(a) For each material used in the product, the applicant shall provide a declaration of compliance with this criterion, together with related documentation, such as declarations of compliance signed by their suppliers, on the non-classification of the substances or materials with any of the hazard classes associated to the hazard statements referred to in the above list in accordance with Regulation (EC) 1272/2008, as far as this can be determined, as a minimum, from the information meeting the requirements listed in Annex VII of Regulation (EC) 1907/2006.

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Compliance with this criterion will be demonstrated by providing a declaration on the non-classification of each substances into any of the hazard classes associated to the hazard statements listed above in accordance with Regulation (EC) 1272/2008, as far as this can be determined, as a minimum, from the information meeting the requirements listed in Annex VII of the Regulation (EC) 1907/2006.

This declaration shall be supported by summarized information on the relevant characteristics associated to the hazard statements referred to in the above list, to the level of detail specified in section 10, 11 and 12 of Annex II of Regulation (EC) 1907/2006 (Requirements for the Compilation of Safety Data Sheets). Whenever possible, reference shall be made to the list of registered substances under the REACH regulation scheme, available at: http://echa.europa.eu/information-on-chemicals/registered-substances. In alternative, reference shall be made to the C&L inventory database, available at: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database

Information on intrinsic properties of substances may be generated by means other than tests, for instance through the use of alternative methods such as in vitro methods, by quantitative structure activity models or by the use of grouping or read-across in accordance with Annex XI of Regulation (EC) 1907/2006. The sharing of relevant data is strongly encouraged. The information provided shall relate to the forms or physical states of the substance or mixtures as used in the final product.

For substances listed in Annexes IV and V of REACH, exempted from registration obligations under Article 2(7)(a) and (b) of Regulation 1907/2006 REACH, a declaration to this effect will suffice to comply with the requirements set out above.

(b) The applicant shall provide a declaration of compliance with this criterion, together with related documentation, such as declarations of compliance signed by the material suppliers and copies of relevant Safety Data Sheets for substances or mixtures in accordance with Annex II to Regulation (EC) No 1907/2006 for substances or mixtures. Concentration limits shall be specified in the Safety Data Sheets in accordance with Article 31 of Regulation (EC) No 1907/2006 for substances and mixtures.

The list of substances identified as substances of very high concern and included in the candidate list in accordance with Article 59 of Regulation (EC) No 1907/2006 can be found on the ECHA webiste:

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 8: Minimisation of production waste

The amount of production waste that is not reused within the AHP manufacturing process or not converted to useful materials and energy shall not exceed 0.5% by weight of the end product.

Assessment and verification: The applicant shall provide evidence of the amount of waste that cannot be reused within the AHP manufacturing process or that is not converted to materials and energy.

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Criterion 9: Guidance on the product disposal

The producers shall write or indicate through visual symbols on the packaging that the product must be disposed in waste bins and not flushed into the toiled.

Assessment and verification: The applicant shall provide a sample of the packaging.

Criterion 10: Fitness for use and quality of the product

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

Fitness-for-use has to be tested with respect to the characteristics and parameters reported in Table 4 . Performance thresholds must be matched, where these have been identified.

Table 4. Fitness-for-use characteristics and test methods

Characteristic and parameter		Scope	Tests	Performance threshold
User tests	Overall performance	All AHP	• User trial	90% of the consumers testing the product shall rate themselves as "satisfied" (rating 4) or "very satisfied" (rating 5) in a rating scale from 1 to 5.
	Leakage protection	All AHP	• User trial	Leakage results in less than 10% of all diaper changes.
	Skin dryness and compatibility	All AHP	• User trial	90% of the consumers testing the product shall rate themselves as "satisfied" (rating 4) or "very satisfied" (rating 5) in a rating scale from 1 to 5.
	Fit and comfort	All AHP	• User trial	90% of the consumers testing the product shall rate themselves as "satisfied" (rating 4) or "very satisfied" (rating 5) in a rating scale from 1 to 5.

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Safety tests	Chemical safety	All AHP	• Tests in accordance with the Oeko-Tex Standard 100	not available
	Microbiological safety	All AHP	• Tests in accordance with ISO 11737-1	to be determined
Technical tests	Absorption	All AHP	• Absorption rate • Absorption before leakage	not available
	Skin dryness and compatibility	All AHP	• Skin wetting (rewet) • Dermatological testing	not available
	Evaluation of the closure/fastening system	All AHP	• Tensile strength for tapes and elastics	not available

Assessment and verification:

A test report must be provided including a description of test methods, test results and data used.

The test methods used must be based as much as possible on product-relevant, reproducible and rigorous methods. Tests can be carried out by laboratories certified to implement quality management systems, no matter if internal or external.

Sampling, test design, panel recruitment and the analysis of test results must comply with ASTM E1958-07e1. Tests should be conducted on the main product designs and/or the most common size. Special care must be taken regarding sampling, transport and storage of the products to guarantee comparable results. It is recommended not to blind products or repack them in neutral packaging due to the risk of altering the performance of products and/or packaging.

Information on the test methods used must be made available to all relevant stakeholders, for instance on the company website. The results must be presented in language, units and symbols that are understandable to the consumers. The presentation of the test results must be clearly explained. It must include the criteria used to select the products tested, the representativeness and the sampling of the products, the characteristics selected and if applicable, the reasons why some were not included, the test methods used and their limitations if any. External factors such as branding, market shares and advertising that may have an impact on the perceived performance of the products should be communicated. Clear guidelines on the use of test results must be provided (for example, it should be required to indicate the date and source of the test result).

Additional requirements for user tests:

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- Consumer surveys must be conducted and analysed according to standard statistical practices, i.e. ASTM E1958-07e1
- The recommended number of required answers in a user panel is at least 30
- The results are to be statistically evaluated after the user trial has been completed
- Each product should be assessed on the basis of a questionnaire compiled by the test institute. The test is to last at least 72 hours per test, a full week when possible
- The ratio of male to female individuals should be 1:1 (not applicable to products designed specifically for one gender)
- All participants should be current users of the specific type/size of diaper being tested
- A mixture of participants representing proportionally different groups of consumers available on the market should take part in the study
- The product should be used under direct supervision of the respondents, in the same way and conditions as the product they normally use.
- If the test is conducted in a different country than the target market, the name of the country should be clearly stated
- Sick individuals those with a chronic skin condition should not participate in the test. In cases where individuals become ill during the course of the user trial, this is to be indicated on the questionnaire and the results are not to be taken into consideration for the assessment.

Additional requirements for safety tests:

- Chemical tests shall be carried out in accordance with the Oeko-Tex Standard 100.
- The determination of the microbiological quality shall be carried out on the original product in accordance with ISO 11737-1 "Sterilization of medical devices - Microbiological methods - Part 1: Determination of a population of microorganisms on products". As applicable, other guidelines, recommendations, relevant legal decisions, scientific publications and other regulations and standards may also be taken into consideration.

Additional requirements for technical tests:

- Tests can be conducted with saline solution (0.9% NaCl analytical grade in de-ionized water)
- A minimum of 5 samples should be tested, and results should be reported with the average and standard deviation from those 5 samples.
- A description of the construction of the diaper should be recorded, together with the weight and dimensions of the diaper.

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Area of discussion

A discussion is planned at the 2nd AHWG meeting in order to **shape the final version** of this criterion. In particular, a decision must be taken with respect to:

- which performance characteristics are worthy of consideration for which product
- which assessment and verification procedure to follow
- for which characteristics it is possible to set performance thresholds and how.

Criterion 11: Information appearing on the EU Ecolabel

The use of the EU Ecolabel logo is protected in primary EU law. The logo should be visible and legible. The EU Ecolabel registration/license number must appear on the product, it must be legible and clearly visible.

The optional label with text box shall contain the following text:

1. The product satisfies the most relevant performance and quality tests;
2. The use of substances of concern for human health and environment is restricted;
3. The product is designed in order to reduce the impact from the consumption of resources

The guidelines for the use of the optional label with text box can be found in the "Guidelines for use of the Ecolabel logo" on the website: http://ec.europa.eu/environment/ecolabel/documents/logo_guidelines.pdf

The following text should moreover appear on the packaging:

"For more information on why this product has been awarded the EU Ecolabel, please visit http://ec.europa.eu/environment/ecolabel/".

Assessment and verification: The applicant shall provide a sample of the product label, together with a declaration of compliance with this criterion

Criterion 12: Social aspects

Applicants shall ensure that the fundamental principles and rights at work as specified in the International Labour Organisation's Core Labour Standards shall be observed by all production sites used to manufacture EU Ecolabelled products. The ILO Core Standards are:

029 Forced Labour

087 Freedom of Association and Protection of the Right to Organise

098 Right to Organise and Collective Bargaining

100 Equal remuneration

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105 Abolition of Forced Labour

111 Discrimination (Employment and Occupation)

138 Minimum Age Convention

182 Elimination of the Worst Forms of Child Labour

Assessment and verification:

The applicant shall obtain reports on compliance from their production sites and from the productions sites of their suppliers. These should be compiled and provided to Competent Bodies. Third party certification will be accepted as evidence of compliance. A license may be suspended or revoked if substantive evidence is received that ILO Core Labour Standards have been breached.

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