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From:	European Commission
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Subject:	Commission Decision establishing the ecological criteria for the award of the EU Ecolabel for textile products - ANNEX

Delegations will find attached document D029993/02 ANNEX.

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ANNEX

The criteria for awarding the EU Ecolabel to textile products, and the sub-categories under which they are grouped, are as follows:

Textile fibres

1. Cotton and other natural cellulosic seed fibres
2. Flax and other bast fibres
3. Wool and other keratin fibres
4. Acrylic
5. Elastane
6. Polyamide
7. Polyester
8. Polypropylene
9. Man-made cellulose fibres (lyocell, modal and viscose)

Components and accessories

10. Fillings
11. Coatings, laminates and membranes
12. Accessories

Chemicals and processes

13. Restricted Substance List (RSL)
14. Substitution of hazardous substances in dyeing, printing and finishing
15. Washing, drying and curing energy efficiency
16. Treatment of emissions to air and water

Fitness for use

17. Dimensional changes during washing and drying
18. Colour fastness to washing
19. Colour fastness to perspiration (acid, alkaline)

20. Colour fastness to wet rubbing

21. Colour fastness to dry rubbing

22. Colour fastness to light

23. Wash resistance of cleaning products

24. Fabric resistance to pilling and abrasion

25. Durability of function

Corporate Social Responsibility

26. Fundamental principles and rights at work

27. Restriction on the sandblasting of denim

Supporting information

28. Information appearing on the Ecolabel

Appendix 1 additionally contains the RSL referred to in criterion 13. This lists restrictions applying to hazardous substances that may be used to manufacture textile products and which may be contained in the final product.

The Ecolabel criteria reflect the best environmental performing products on the market of textiles. Whilst the use of chemical products and release of pollutants is part of the production process, a product that bears the EU Ecolabel guarantees the consumer that the use of such substances has been limited to the extent technically possible without prejudice to the fitness for use.

The criteria exclude whenever possible or restrict at minimum the concentration (required for providing specific functions and properties) of a number of substances identified as hazardous or potentially hazardous to the human health and the environment that may be used to manufacture textiles. Only where a substance is required to meet consumer performance expectations or mandated requirements for the product (for instance flame retardancy), and where there are no applied and tested available alternatives, derogation for such a substance to be used in the Ecolabel is granted.

Derogations are evaluated on the basis of the precautionary principle and scientific and technical evidence, especially if safer products are available on the market.

Product testing for restricted hazardous substances is requested in order to provide a high level of assurance to consumers. Strict conditions are also imposed on the manufacturing processes for textiles to control pollution of water and air, and to minimise exposure of the workforce. The verification of compliance with the criteria is formulated in a way that provides a high level of assurance to consumers, reflects the practical potential for applicants to obtain information from the supply chain and excludes the potential for ‘free riding’ by applicants.

Assessment and verification

In order to show compliance with the criteria the applicant is required to declare the following information about the product(s) and their supply chain:

Table 1. Overview of assessment and verification requirements

Criteria set	Verification source
(a) Textile fibre criteria: The complete material composition of the product(s), identifying and showing compliance for textile fibres, components and accessories;	Fibre and component manufacturers, their raw material and chemical suppliers and testing laboratories working in accordance with the specified test methods.
(b) Chemicals and processes: The substances, production recipes and technologies used to manufacture and impart specific qualities and functions to the product at the spinning, pre-treatment, dyeing, printing and finishing stages and to treat air and wastewater emissions;	Production sites, their chemical suppliers and testing laboratories working in accordance with the specified test methods. Where required product analytical testing shall be carried out annually during the license period and submitted to the appropriate competent body for verification.
(c) Fitness for use: The performance of the product(s) as defined by specific testing procedures which address colour fastness under specific conditions, resistance to pilling and abrasion, and the durability of repellency, easycare and flame retardancy functions;	Testing laboratories working in accordance with specified test methods.
(d) Corporate Social Responsibility: Compliance of the applicants' selected cut/make/trim suppliers with the defined ILO standards.	Independent verifiers or documentary evidence based on the auditing of cut/make/trim production sites.

Each criteria contains detailed verification requirements which require the applicant to compile declarations, documentation, analyses, test reports and other evidence relating to the product(s) and their supply chain.

The validity of the license is based on verification upon application and, where specified under criterion 13, product testing which shall be submitted to competent bodies for verification. Changes in suppliers and production sites pertaining to licensed products shall be notified to competent bodies, together with supporting information to verify ongoing compliance with the license conditions.

Competent bodies shall preferentially recognise tests which are accredited according to ISO 17025 and verifications performed by bodies which are accredited under the EN 45011 standard or an equivalent international standard.

The functional unit, to which inputs and outputs should be related, is 1 kg of textile product at normal conditions (65 % RH ± 4 % and 20 °C ± 2 °C; these norm conditions are specified in ISO 139 Textiles — standard atmospheres for conditioning and testing).

Where the applicant uses a certification system to provide independent verifications the chosen system and associated systems for accreditation of verifiers shall meet the general requirements of EN 45011 and ISO 17065. Where appropriate, competent bodies may require supporting documentation and may carry out independent verifications and site visits.

The competent bodies are recommended to take into account the implementation of recognised environmental management schemes, such as EMAS, ISO 14001 and ISO 50001, when assessing applications and monitoring compliance with the criteria (note: it is not required to implement such management schemes).

EU ECOLABEL CRITERIA

Applicants shall demonstrate the compliance with the criteria as relevant to the material composition, chemical formulations, production sites and fitness for use of products they wish to carry the Ecolabel.

1. TEXTILE FIBRE CRITERIA

Fibre-specific criteria are set out in this section for the following fibre types:

(a) Natural fibres: Cotton and other natural cellulosic seed fibres, flax and other bast fibres, wool and other keratin fibres;

(b) Synthetic fibres: Acrylic, elastane, polyamide, polyester and polypropylene;

(c) Man-made cellulose fibres: lyocell, modal and viscose.

The criteria for a given fibre-type need not be met if a fibre contributes to less than 5 % of the total weight of the product or if they constitute a padding or lining. With the exception of polyamide and polyester these criteria do not have to be met:

(a) By the whole product if it contains fibres that contain recycled content constituting at least 70 % by weight of all fibres in the product,

(b) By individual fibres forming part of the ecolabelled product which contain at least 70 % by weight of recycled content.

In this context, fibres that contain a recycled content are defined as fibres originating from pre-consumer waste (including polymer and fibre production waste, cuttings from textile and clothing manufacturers) and post-consumer waste (textile and all kind of fibre and textile products, as well as non-textile waste including PET drinking bottles and fishing nets).
Recycled content shall, with the exception of PET bottles used to manufacture polyester, meet the requirements of the criterion 13 RSL. This shall include annual, randomised analytical testing for specified substance groups.
Assessment and verification for recycled content*: recycled content shall be traceable back to the reprocessing of the feedstock. This shall be verified by independent third party certification of the chain of custody or by documentation provided by feedstock suppliers and reprocessors. Where required by criterion 13 declarations and laboratory testing results shall be provided by fibre manufacturers and feedstock suppliers.*

Criterion 1. Cotton and other natural cellulosic seed fibres (including kapok)

Cotton and other natural cellulosic seed fibres (hereinafter referred to as cotton) shall contain a minimum content of either organic cotton (see criterion 1a) or integrated pest management (IPM) cotton (see criterion 1b). In addition to this:

– All conventional cotton and IPM cotton used shall comply with the pesticide restrictions in criterion 1c;

- For the production standard 1(a) Organic, all conventional cotton and IPM cotton used shall come from non-genetically modified varieties;

- All organic and IPM cotton shall be fully traceable in accordance with criterion 1d.

- Clothing for babies of less than 3 years old shall contain a minimum of 95% organic cotton

Products meeting specific content thresholds for organic or IPM cotton shall be permitted to display additional text alongside the Ecolabel communicating the content claim. Guidance is provided in criterion 28.

1(a) Organic production standard

With the exception of the products listed below a minimum of 10% of the cotton shall be grown according to the requirements laid down in Regulation (EC) No 834/2007[1], the US National Organic Programme (NOP) or equivalent legal obligations set by trade partners of the EU. The organic cotton content may include organically grown cotton and transitional organic cotton.

The cotton content of the following products shall contain a minimum of 95% organic cotton: T-shirts, woman's tops, casual shirts, jeans, pyjamas and nightwear, underwear and socks.

Assessment and verification*: Organic content should be certified by an independent control body to have been produced in conformity with the production and inspection requirements laid down in Regulation (EC) No 834/2007 the US National Organic Programme (NOP) or those set by other trade partners.. Verification shall be provided on an annual basis for each country of origin.*

Non-genetically modified varieties of cotton shall be verified in conformity with Regulation (EC) No 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms.

1(b) Cotton production according to IPM principles

A minimum of 20 % of the cotton shall be grown according to IPM principles as defined by the UN Food and Agricultural Organisation (FAO) IPM programme, or Integrated Crop Management (ICM) systems incorporating IPM principles, and shall comply with the pesticide restrictions in criterion 1(c).

For the following products the minimum percentage of the cotton that shall be grown according to IPM principles as defined above shall be 60 %: T-shirts, woman's tops, casual shirts, jeans, pyjamas and nightwear, underwear and socks.

Assessment and verification: *The applicant shall provide evidence that the cotton has been grown by farmers that have participated in formal training programmes of the UN FAO or Government IPM and ICM programmes and/or that have been audited as part of third party certified IPM schemes. Verification shall either be provided on an annual basis for each country of origin or on the basis of certifications for all IPM cotton bales purchased to manufacture the product.*

[1] Council Regulation (EC) No 834/2007of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91 (OJ L 189, 20.7.2007, p. 1)

Compliance with the pesticide restriction shall not be required for schemes that prohibit use of the substances listed in criterion 1(c) and where either testing is carried out or declarations of non-use are obtained from farmers and/or farmer producer groups that are verified by site visits carried out by control bodies accredited by either national governments or recognised organic or IPM certification schemes.

Non-genetically modified IPM cotton used in combination with organic cotton shall be verified in conformity with Regulation (EC) No 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms. IPM schemes that exclude genetically modified cotton shall be accepted as proof of compliance for IPM content.

1(c) Pesticide restrictions applying to conventional and IPM cotton

All cotton used in ecolabelled textile products, with the exception of organic cotton and applicable IPM schemes, 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, neonicotinoids (clothianidine, imidacloprid, thiametoxam), parathion, phosphamidon, pentachlorophenol, thiofanex, triafanex, triazophos

Cotton shall not contain more than 0.5 ppm in total of the substances listed above.

Assessment and verification: *Cotton shall be tested for the listed substances. A test report shall be provided based on the following test methods, as appropriate:*

- *US EPA 8081 B (organo-chlorine pesticides, with ultrasonic or Soxhlet extraction and apolar solvents (iso-octane or hexane)),*
- *US EPA 8151 A (chlorinated herbicides, using methanol),*
- *US EPA 8141 B (organophosphorus compounds),*
- *US EPA 8270 D (semi-volatile organic compounds).*

Tests shall be made on samples of raw cotton from each country of origin and before it passes through any wet treatment. For each country of origin testing shall be carried out on the following basis:

(i) Where only one lot of cotton is used per year a sample shall be taken from a randomly selected bale,

(ii) If two or more lots of cotton are used per year composite samples shall be taken from 5 % of the bales.

Cotton is not required to be tested where it has been certified by an IPM scheme that prohibits the use of the listed substances.

1(d) Traceability requirements applying to organic and IPM cotton

All cotton grown according to the organic and IPM production standards and used to manufacture an Ecolabelled textile product shall be traceable from the point of verification of the production standard up until, as a minimum, greige fabric production.

Assessment and verification: *the applicant shall demonstrate compliance with the minimum cotton content requirement either for the annual volume of cotton purchased or for the blend of cotton used to manufacture the final product(s) and according to each product line:*

(i) On an annualised basis: Transaction records and/or invoices shall be provided that document the quantity of cotton purchased on an annual basis from farmers or producer groups, and/or the total weight of certified bales, up until greige fabric production.

(ii) On a final product basis: Documentation shall be provided from the spinning and/or fabric production stages. All documentation shall reference the Control Body or certifier of the different forms of cotton.

Criterion 2. Flax and other bast fibres (including hemp, jute and ramie)

2(a) Flax and other bast fibres shall be retted under ambient conditions and without thermal energy inputs.

Assessment and verification: *the applicant shall provide a declaration of the retting method used from the farmers and/or scutching mills supplying the fibre.*

2(b) Where water retting has been used the wastewater from retting ponds-shall be treated so as to reduce the COD or TOC by at least 75 % for hemp fibres and by at least 95 % for flax and other bast fibres.

Assessment and verification: *if water retting is used, the applicant shall provide a test report showing compliance and using the following test method: ISO 6060 (COD).*

Criterion 3. Wool and other keratin fibres (including wool from sheep and lambs, and hair from camel, alpaca and goat)

3(a) The sum totals provided in table 2 shall not be exceeded for wool ectoparasiticide concentrations on raw wool prior to scouring.
These requirements shall not apply if documentary evidence can be presented that establishes the identity of the farmers producing at least 75 % of the wool or keratin fibres in question, together with a independent verification based on site visits that the substances listed above have not been applied to the fields or animals concerned.

Table 2. Sum total restrictions on ectoparasiticide concentrations in wool

Ectoparasiticide groups	**Sum total limit value**
γ-hexachlorocyclohexane (lindane), α-hexachlorocyclohexane, β-hexachlorocyclohexane, δ-hexachlorocyclohexane, aldrin, dieldrin, endrin, p,p'-DDT, p,p'-DDD	0.5 ppm
Cypermethrin, deltamethrin, fenvalerate, cyhalothrin, flumethrin	0.5 ppm
Diazinon, propetamphos, chlorfenvinphos, dichlofenthion,	2 ppm

chlorpyriphos, fenchlorphos	
Diflubenzuron, triflumuron, dicyclanil	2 ppm

Wool scourers that operate closed loop water systems without the discharge of wastewater effluent and which break down the aforementioned ectoparasiticides that may be present in scouring residues and sludge through incineration are derogated from the requirement for wool testing but must comply with at least two of the measures in 3(c).

Assessment and verification: *the applicant shall either provide the documentation indicated above or compile test reports, using the following test method: IWTO draft test method 59. The test should be made on sales lots of raw wool, by country of origin (if mixed) and before any wet processing. A minimum of one composite sample of multiple lots from each country of origin shall be tested per processing lot. A composite sample should consist of:*

(i) Wool fibres from at least 10 randomly selected farmer lots within the sales lot, or

(ii) One composite sample per farmer supplying the lots where there are less than 10 sales lots within the processing lot.

Alternatively residue test certificates may be submitted for all sales lots in a processing lot.

Where a derogation applies then the applicant shall provide evidence confirming the scouring plant configuration and laboratory test reports demonstrating the breakdown of ectoparasiticides that may be present in scouring residues and sludge.

3(b) Wool scouring operations shall minimise effluent COD by maximising dirt removal and grease recovery, followed by treatment to the standard specified in table 3 either on or off site. The following COD limits shall apply to coarse and fine greasy wool scouring. Fine wool is defined as merino wool of ≤23.5 micron in diameter.

Table 3. COD values for the final discharge of effluent from wool scouring

Type of wool	**Final discharge to the environment (g COD/kg greasy wool)**
Coarse wool	25 g/kg
Fine wool	45 g/kg

Assessment and verification: *the applicant shall provide relevant data and test reports related to this criterion, using the following test method: ISO 6060. The data shall demonstrate compliance by the wool scouring site or, if the effluent is treated off-site, by the wastewater treatment operator. Compliance with this criterion shall be on the basis of monthly averages for the six months preceding the application.*

3(c) Wool scourers shall implement at least one of the following measures to recover value from either oxidised grease, fibre, suint or sludge arising from the scouring site used for the ecolabelled wool products:

(i) recovery for sale as a chemical feedstock,

(ii) the production of compost or liquid fertiliser,

(iii) the manufacturing of products such as building materials,

(iv) treatment and energy recovery by anaerobic digestion or incineration.

Assessment and verification: the applicant shall provide a report and waste transfer notes confirming the type and proportion of waste recovered and the method used.

Criterion 4. Acrylic

4(a) The emissions to air of acrylonitrile (during polymerisation and up to the solution ready for spinning), expressed as an annual average, shall be less than 1.0 g/kg of fibre produced.

Assessment and verification: *the applicant shall provide detailed documentation and/or test reports showing compliance with this criterion, together with a declaration of compliance from the fibre manufacturer(s).*

4(b) The workplace emissions to air of N,N-dimethylacetamide (127-19-5) during polymerisation and spinning shall not exceed an Indicative Occupational Exposure Limit Value (IOELV) of 10.0 ppm.

Assessment and verification: *emissions values are to be measured at those process stages in which the substances are used, expressed as an 8-hour average value (shift mean value). The applicant shall provide test reports and monitoring data from the fibre manufacturer(s) showing compliance with this criterion.*

Criterion 5. Elastane

5(a) Organotin compounds shall not be used to manufacture the fibres.

Assessment and verification: *the applicant shall provide a declaration of non-use from the fibre manufacturer(s).*

5(b) The workplace emissions to air of the following substances during polymerisation and spinning shall not exceed the following indicative occupational exposure limit values (IOELV):

(i) diphenylmethane-4,4'-diisocyanate (101-68-8) 0.005 ppm

(ii) toluene-2,4-diisocyanate (584-84-9) 0.005 ppm

(iii) N,N-dimethylacetamide (127-19-5) 10.0 ppm

Assessment and verification: *emissions values are to be measured at those process stages in which the substances are used, expressed as an 8-hour average value (shift mean value). The applicant shall provide test reports and monitoring data from the fibre manufacturer(s) showing compliance with this criterion.*

Criterion 6. Polyamide (or nylon)

Polyamide products shall comply with at least one of the production standards listed in sub-criteria 6(a) and 6(b).

Any product that meets the minimum recycled content threshold shall be permitted to display additional text alongside the Ecolabel communicating a content claim. Guidance is provided in criterion 28.

6(a) Production standard 1: Minimum recycled content.

Fibres shall be manufactured using a minimum content of 20 % nylon that has been recycled from pre and/or post-consumer waste.

Assessment and verification: *recycled content shall be traceable back to the reprocessing of the feedstock. This shall be verified by independent certification of the chain of custody or by documentation provided by suppliers and processors.*

6(b) Production standard 2: N_2O emissions from monomer production.

The emissions to air of N_2O from nylon monomer production, expressed as an annual average, shall not exceed 9.0 g N_2O /kg of caprolactam (for nylon 6) or adipic acid (for nylon 6,6).

Assessment and verification: *the applicant shall provide documentation or test reports showing compliance based on monitoring data, together with a declaration of compliance from fibre manufacturer(s) and their feedstock providers.*

Criterion 7. Polyester

Textile products that are primarily for sale to consumers shall comply with sub-criteria (a) and (b). Textile products that are primarily for sale to commercial or public sector customers shall comply with (a) and *either* (b) or (c).

Any product that meets the minimum recycled content threshold shall be permitted to display additional text alongside the Ecolabel communicating this content claim. Guidance is provided in criterion 28.

7(a) The level of antimony present in the polyester fibres shall not exceed 260 ppm. Polyester fibres manufactured from recycled PET bottles are derogated from this requirement.

Assessment and verification: *the applicant shall either provide a declaration of non-use or a test report using the following test methods: direct determination by Atomic Absorption Spectrometry or Inductively Coupled Plasma (ICP) Mass Spectrometry. The test shall be carried out on a composite sample of raw fibres prior to any wet processing. A declaration shall be provided for fibres manufactured from recycled PET bottles.*

7(b) Fibres shall be manufactured using a minimum content of PET that has been recycled from pre-consumer and/or post-consumer waste. Staple fibres shall contain a minimum content of 50 % and filament fibres 20 %. Micro-fibres are derogated from this requirement and shall instead comply with (c).

Assessment and verification: *recycled content shall be traceable back to the reprocessing of the feedstock. This shall be verified by independent certification of the chain of custody or by documentation provided by suppliers and processors.*

7(c) The emissions of VOCs during the production of polyester, expressed as an annual average including both point sources and fugitive emissions, shall not exceed 1.2 g/kg for PET chips and 10.3 g/kg for filament fibre.

Assessment and verification: *the applicant shall provide monitoring data and/or test reports demonstrating compliance with EN 12619 or standards with an equivalent test method. Monthly averages for the total emissions of organic compounds from production sites for ecolabelled products shall be provided for a minimum of six months preceding the application.*

Criterion 8. Polypropylene

8(a) Lead based pigments shall not be used.

Assessment and verification: *the applicant shall provide a declaration of non-use.*

Criterion 9. Man-made cellulose fibres (including viscose, modal and lyocell)

Pulp production sub-criteria

9(a) A minimum 25 % of 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 proportion of pulp fibres shall be from pulp that is sourced from legal forestry and plantations.

Assessment and verification: *the applicant shall obtain from the fibre manufacturer(s) valid, independently certified chain of custody certificates demonstrating that the wood fibres have been grown according to sustainable forestry management principles and/or are from legal sources. FSC, PEFCor equivalent schemes shall be accepted as independent certification.*

The fibre manufacturer shall demonstrate that due diligence processes have been followed as specified in Regulation (EU) No 995/2010 in order to ensure that timber has been legally harvested. Valid EU FLEGT (Forest Law Enforcement, Governance and Trade) or UN CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) licenses and/or third party certification shall be accepted as evidence of legal sourcing.

9(b) Pulp produced from cotton linters shall, as a minimum, meet with the requirements of either cotton criterion 1a or 1b.

Assessment and verification: *as indicated in the corresponding criteria*

9(c) Pulp used to manufacture fibres shall be bleached without the use of elemental chlorine. The resulting total amount of chlorine and organically bound chlorine in the finished fibres (OX) shall not exceed 150 ppm or in the wastewater from pulp manufacturing (AOX) shall not exceed 0.170 kg/ADt pulp.

Assessment and verification: *the applicant shall provide a test report showing compliance with either the OX or the AOX requirement, using the appropriate test method: OX: ISO 11480 (controlled combustion and microcoulometry).*

AOX: ISO 9562

9(d) A minimum of 50 % of the pulp used to manufacture fibres shall be purchased from dissolving pulp mills that recover value from their spent process liquors either by:

i. Generating on-site electricity and steam

ii. Manufacturing chemical co-products.

Assessment and verification: *the applicant shall provide a list of pulp suppliers used to make the ecolabelled fibres and the proportion of pulp that they supply. Documentation and evidence shall be provided that the required proportion of suppliers have the appropriate energy generating equipment and/or co-product recovery and manufacturing systems installed at related production sites.*

Fibre production sub-criteria

9(e) For viscose and modal fibres, the sulphur content of the emissions of sulphur compounds to air from fibre production processes, expressed as an annual average, shall not exceed the following performance values in table 4.

Table 4. Viscose and Modal fibre sulphur emissions values

Fibre type	**Performance value (g S/kg)**
Staple fibre	30 g/kg

Filament fibre	
- Batch washing	40 g/kg
- Integrated washing	170 g/kg

Assessment and verification: *the applicant shall provide detailed documentation and/or test reports showing compliance with this criterion, together with a declaration of compliance.*

2. COMPONENT AND ACCESSORIES CRITERIA

The criteria in this section apply to components and accessories that form part of a final product.

Criterion 10. Fillings

10(a) Filling materials consisting of textile fibres shall comply with the textile fibre criteria (1–9) where appropriate.

10(b) Filling materials shall comply with the textile RSL' requirements for biocides and formaldehyde (see Appendix 1).

10(c) Detergents and other chemicals used for the washing of fillings (down, feathers, natural or synthetic fibres) shall comply with the textile RSL' requirements for auxiliary chemicals and for detergents, softeners and complexing agents (see Appendix 1).

Assessment and verification: *as indicated in the corresponding criteria*

Criterion 11. Coatings, laminates and membranes

11(a) Components made of polyurethane shall comply with Textile fibre criteria 5(a) relating to organic tin and 5(b) relating to workplace exposure to aromatic diisocyanates and DMAc.

11(b) Components made of polyester shall comply with Textile fibre criteria 7(a) and 7(c) regarding antimony content and the emission of VOCs during polymerisation.

11(c) Polymers shall comply with restriction g(v) of the RSL in Appendix 1 of this Decision.

Assessment and verification: *as indicated in the corresponding criteria and/or in the Appendix 1 to this Decision.*

Criterion 12. Accessories

Metal and plastic components such as zips, buttons and fasteners shall comply with the RSL' requirements for accessories (see Appendix 1).

Assessment and verification: *as indicated in the corresponding criteria.*

3. CHEMICALS AND PROCESS CRITERIA

The criteria in this section apply, where specified, to the following production stages:

(i) Spinning

(ii) Fabric formation

(iii) Pre-treatment

(iv) Dyeing

(v) Printing

(vi) Finishing

(vii) Cut/make/trim

Unless specified otherwise these criteria, including the requirements for random testing, shall also apply to fibres containing recycled content.

Criterion 13. Restricted Substance List (RSL)

13(a) General requirements

The final product and the production recipes used to manufacture the final product shall not contain the hazardous substances listed in the Restricted Substance List at or above the specified concentration limits or according to the specified restrictions. The RSL can be found in Appendix 1. The restrictions in the RSL take precedence over the derogations listed in Criterion 14, Table 6.

The RSL shall be communicated to suppliers and agents responsible for the spinning, dyeing, printing and finishing stages of production. Verification and testing requirements are specified in the RSL for each production stage and for the final product.

Laboratory testing, where required, shall be carried out for each product line based on random sampling. Testing shall be carried out annually during the license period in order to demonstrate ongoing compliance with the RSL.

Assessment and verification: *the applicant shall provide a declaration of compliance with the RSL supported by evidence as applicable to the substances and production recipes used to manufacture the final product. The requirements are indicated in the RSL and include declarations obtained from those responsible for related production stages, declarations from chemical suppliers and test results from laboratory analysis of samples of the final product. Declarations obtained from production stages shall be supported by safety data sheets (SDS) for production recipes and, where necessary, declarations from chemical suppliers. SDS shall be completed in accordance with the guidance in Section 2,3,9,10, 11 and 12 of Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council [2] (Guide to the compilation of safety data sheets). Incomplete SDS shall require supplementing by declarations from chemical suppliers.*

Laboratory analysis of the final product shall be carried out in a representative way for the licensed product lines, where specified in the RSL and according to the test methods listed. Testing, where required, shall be carried out upon application and once a year thereafter for each product line based on a random sample, with results then communicated to the relevant competent body. Test data obtained for the purposes of compliance with industry RSL's and other schemes shall be accepted where the test methods are equivalent and have been carried out on a representative sample of the final product.

Failure of a test result during a license period shall result in retesting for the specific product line. If the second test fails then the license shall be suspended for the specific product line. Remedial action will then be required in order to re-instate the license.

[2] Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006, p. 1).

13(b) Substances of Very High Concern (SVHC's)

The final product including any component or accessory shall not, unless specifically derogated, contain substances that:

(i) Meet the criteria in Article 57 of Regulation (EC) No 1907/2006,

(ii) Have been identified according to the procedure described in Article 59(1) of Regulation (EC) No 1907/2006 which establishes the candidate list for substances of very high concern.

This applies to substances used to impart function to the final product and to substances that have been intentionally used in production formulas.

No derogation shall be given concerning substances that meet either of these two conditions, and which are present in a textile article, or in any homogeneous part of a complex textile article, in concentrations higher than 0,10 % (weight by weight).

Assessment and verification: *Substances and recipes used at each production stage shall be screened against the latest version of the candidate list published by ECHA. The applicant shall compile declarations of compliance from each production stage supported by screening documentation.*

Where a derogation has been granted then the applicant shall show that use of the substance is in compliance with the concentration limits and derogation conditions set out in the RSL.

Criterion 14. Substitution of hazardous substances used in dyeing, printing and finishing

Substances applied to fabrics and knitted panels during dyeing, printing and finishing processes which remain on the final product and, in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council[3] or Council Directive 67/548/EC[4], meet the criteria for classification with the hazard classes or risk phrases listed in table 5 shall not be used unless they have been specifically derogated. These restrictions shall also apply to functional substances incorporated into man-made fibres during their manufacturing.

14(a) Hazard classification restrictions

The hazard classifications restricted are listed in table 5. The most recent classification rules adopted by the European Union shall take precedence over the listed hazard classifications and risk phrases. Applicants shall therefore ensure that any classifications are based on the most recent classification rules.

The use of substances or mixtures which change their properties upon processing (e.g., become no longer bioavailable, undergo chemical modification) so that the identified hazard no longer applies are exempted from the above requirements. This shall include polymers that have been modified to incorporate a function and monomers or additives which become covalently bonded with polymers.

Table 5: Restricted hazard classifications and risk phrases and their CLP categorisation

[3] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1).

[4] Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (OJ 196, 16.8.1967, p. 1).

Acute toxicity	
Category 1 and 2	**Category 3**
H300 Fatal if swallowed (R28)	H301 Toxic if swallowed (R25)
H310 Fatal in contact with skin (R27)	H311 Toxic in contact with skin (R24)
H330 Fatal if inhaled (R23/26)	H331 Toxic if inhaled (R23)
H304 May be fatal if swallowed and enters airways (R65)	EUH070 Toxic by eye contact (R39/41)

Specific target organ toxicity	
Category 1	**Category 2**
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 (R48/25, R48/24, R48/23)	H373 May cause damage to organs (R48/20, R48/21, R48/22)
Respiratory and skin sensitisation	
Category 1A	**Category 1B**
H317: May cause allergic skin reaction (R43)	H317: May cause allergic skin reaction (R43)
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled (R42)	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled (R42)
Carcinogenic, mutagenic or toxic for reproduction	
Category 1A and 1B	**Category 2**
H340 May cause genetic defects (R46)	H341 Suspected of causing genetic defects (R68)
H350 May cause cancer (R45)	H351 Suspected of causing cancer (R40)
H350i May cause cancer by inhalation (R49)	
H360F May damage fertility (R60)	H361f Suspected of damaging fertility (R62)
H360D May damage the unborn child (R61)	H361d Suspected of damaging the unborn child (R63)
H360FD May damage fertility. May damage the unborn child (R60, R60/61)	H361fd Suspected of damaging fertility. Suspected of damaging the unborn child (R62/63)
H360Fd May damage fertility. Suspected of damaging the unborn child (R60/63)	H362 May cause harm to breast fed children (R64)
H360Df May damage the unborn child. Suspected of damaging fertility (R61/62)	

Hazardous to the aquatic environment	
Category 1 and 2	**Category 3 and 4**
H400 Very toxic to aquatic life (R50)	H412 Harmful to aquatic life with long-lasting effects (R52/53)
H410 Very toxic to aquatic life with long-lasting effects (R50/53)	H413 May cause long-lasting effects to aquatic life (R53)
H411 Toxic to aquatic life with long-lasting effects (R51/53)	
Hazardous to the ozone layer	
EUH059 Hazardous to the ozone layer (R59)	

14(b) Derogations that apply to textile substance groups

In accordance with Article 6(7) of Regulation (EC) No 66/2010 the substance groups in table 6 are specifically derogated from the requirements set out in Criterion 14(a) and in accordance with the derogation conditions described in table 6. For each substance group all derogation conditions are provided for the specified hazard classifications. These derogations also apply to substances added to synthetic and man-made fibres during their manufacturing.

Table 6: Derogated hazard classifications by substance group

Substances that impart function to the final product		
Substance group	**Derogated hazard classifications**	**Derogation conditions**
(i) Dyestuff for dyeing and non-pigment printing	H301, H311, H331, H317, H334	Dust free dye formulations or automatic dosing and dispensing of dyes shall be used by dye houses and printers to minimise worker exposure;
	H411, H412, H413	Dyeing processes using reactive, direct, vat, sulphur dyes with these classifications shall meet a minimum of one of the following conditions: – Use of high affinity dyes; – Achievement of a reject rate of less than 3.0% – Use of colour matching instrumentation; – Implementation of standard operating procedures for the dyeing process; – Use of colour removal to treat wastewater in compliance with criterion 16a) The use of solution dyeing and/or digital printing are exempted from these conditions.
(ii) Flame	H317 (1B), H373,	– The product must be intended to be

retardants	H411, H412, H413	used in applications in which it is required to meet fire protection requirements in ISO, EN, Member State or public sector procurement standards and regulations. – The product shall meet the requirements for durability of function (see criterion 25)
	H351 is derogated for the application of antimony trioxide synergist as a backcoating for interior textiles.	– The product must be intended to be used in applications in which it is required to meet fire protection requirements in ISO, EN, Member State or public sector procurement standards and regulations. – Emissions to air in the workplace where the flame retardant is applied to the textile product shall meet an eight hour occupational exposure limit value of 0.50 mg/m^3.
(iii) Optical brighteners	H411, H412, H413	Optical brighteners may only be applied in the following cases: - In white coloured printing; - To achieve enhanced brightness in uniforms and work wear; - As additives during the production of polyamide and polyester with a recycled content.

(iv) Water, dirt and stain repellents	H413	– The repellent and its degradation products shall be readily andor inherently biodegradable and non-bioaccumulative in the aquatic environment, including aquatic sediment. – The product shall meet the requirements for durability of function (See criterion 25)
Other residual substances that may be found on the final product		
(v) Auxilliaries comprising: Carriers, Levelling agents, Dispersing agents, Surfactants, Thickeners, Binders,	H301, H311, H331, H371, H373, H317 (1B), H334, H411, H412, H413, EUH070,	Recipes shall be formulated using automatic dosing systems and processes shall follow standard operating procedures. Substances classified with H311, H331, H317 (1B) shall not be present on the final product at concentrations of greater than 1.0% w/w.

Assessment and verification: *the applicant shall obtain declarations of compliance from each dyeing, printing and finishing production site and, where necessary, their chemical suppliers. This shall declare that, where used in production recipes, the following substances, together with any additional functional substances used that may remain on the final product, do not meet the criteria for classification with one or more of the hazard classifications and risk phrases listed in table 5:*

- *biocides*
- *dyestuffs and pigments*
- *auxilliary carriers, leveling agents and dispersing agents*
- *optical brighteners*
- *print thickeners, binders and plasticizers*

– *cross-linking agents (from easy care finishes and printing)*

– *flame retardants and synergists*

– *water, dirt and stain repellents*

– *fabric softeners*

Where substances are derogated in table 6 then the declaration shall specifically identify those derogated substances and provide supporting evidence showing how the derogation conditions are to be met.

Derogation (v) Auxilliaries shall require verification based on laboratory testing of the final product if the production formulas include substances that carry the specified hazard classifications.

The following technical information shall be provided to support the declaration of classification or non-classification for each substance:

(i) For substances that have not been registered under Regulation (EC) No 1907/2006 or which do not yet have a harmonised CLP classification: Information meeting the requirements listed in Annex VII to that Regulation;

(ii) For substances that have been registered under Regulation (EC) No 1907/2006 and which do not meet the requirements for CLP classification: Information based on the REACH registration dossier confirming the non-classified status of the substance;

(iii) For substances that have a harmonised classification or are self-classified: SDS where available. If these are not available or the substance is self-classified then information shall be provided relevant to the substances hazard classification according to Annex II to Regulation (EC) No 1907/2006;

(iv) In the case of mixtures: safety data sheets where available. If these are not available then calculation of the mixture classification shall be provided according to the rules under Regulation (EC) No 1272/2008 together with information relevant to the mixtures hazard classification according to Annex II to Regulation (EC) No 1907/2006.

SDS shall be completed in accordance with the guidance in Section 2,3,9,10, 11 and 12 of Annex II to Regulation (EC) 1907/2006 (requirements for the compilation of SDS). Incomplete SDS will require supplementing by declarations from chemical suppliers.

Criterion 15. Washing, drying and curing energy efficiency

The applicant shall demonstrate that the energy used in washing, drying and curing steps associated with dyeing, printing and finishing steps for ecolabelled products is measured and benchmarked as part of an energy or carbon dioxide emissions management system.

Furthermore, they shall demonstrate that production sites have implemented a minimum number of Best Available Techniques (BAT) energy efficiency techniques as specified in table 7 and as listed in Appendix 3 to this decision.

Table 7: Washing, rinsing and drying energy efficiency techniques

BAT themes	**Production volume**

	<10 tonnes/day	>10 tonnes/day
1. General energy management	Two techniques	Three techniques
2. Washing and rinsing processes	One technique	Two techniques
3. Drying and curing using stenter frames	One technique	Two techniques

Assessment and verification: *the applicant shall compile reporting from energy management systems for each dyeing, printing and finishing production site. ISO 50001 or equivalent systems for energy or carbon dioxide emissions shall be accepted as evidence for the energy management system.*

The evidence required of BAT implementation shall include, as a minimum, site photographs, technical descriptions of each technique and evaluations of the energy savings achieved.

Criterion 16. Treatment of emissions to air and water

16(a) Wastewater discharges from wet processing

Wastewater discharges to the environment shall not exceed 20 g COD/kg textiles processing. This requirement shall apply to weaving, dyeing, printing and finishing processes used to manufacture the product(s). The requirement shall be measured downstream of on-site wastewater treatment plant and/or off-site wastewater treatment plant receiving wastewater from these processing sites.

If the effluent is treated on site and discharged directly to surface waters, it shall also meet the following requirements:

(i) pH between 6.0 and 9.0 (unless the pH of the receiving water is outside this range)

(ii) temperature of less than 35°C (unless the temperature of the receiving water is above this value)

If colour removal is required by a derogation condition in criterion 14 then the following spectral absorption coefficients shall be met:

(i) 436 nm (yellow sector) 7 m-1

(ii) 525 nm (red sector) 5 m-1

(iii) 620 nm (blue sector) 3 m-1

Assessment and verification: *the applicant shall provide detailed documentation and test reports, using ISO 6060 and ISO 7887 as relevant, and showing compliance with this criterion on the basis of monthly averages for the six months preceding the application, together with a declaration of compliance. The data shall demonstrate compliance by the production site or, if the effluent is treated off-site, by the wastewater treatment operator.*

16(b) Emissions to air from printing and finishing processes

Total emissions of organic compounds, as defined in Council Directive 1999/13/EC[5], from textile printing and finishing production sites used to manufacture the ecolabelled product(s) shall not exceed 100.0 mg C/Nm^3.

Where textile coating and drying processes allow for the recovery and reuse of solvents an emissions limit of 150.0 mg C/Nm^3 shall apply.

Finishing processes include the thermosetting, thermosoling, coating and impregnating of textiles including their respective drying (stenter) facilities.

Assessment and verification: *the applicant shall demonstrate compliance according to EN 12619 or other equivalent standards. Monthly averages for the total emissions of organic compounds from production sites shall be provided for the six months preceding the application. Where recovery and reuse of solvents is carried out then monitoring data shall be provided to evidence the operation of these systems.*

4. FITNESS FOR USE CRITERIA

The criteria in this section apply to intermediate fabric and knitted product and to the final product.

Criterion 17. Dimensional changes during washing and drying

The dimensional changes after washing and drying at either domestic or industrial washing temperatures and conditions shall not exceed those specified in table 8.

Table 8. Tolerances for dimensional changes during washing and drying

Textile products or type of material	**Dimensional changes during washing and drying**
Knitted fabrics	+/- 4.0 %
Chunky knit	+/- 6.0 %
Interlock	+/- 5.0 %
Woven fabrics: - Cotton and cotton mix - Wool mix - Synthetic fibres	 +/- 3.0 % +/- 2.0 % +/- 2.0 %
Socks and hosiery	+/-8.0 %
Bathroom linen, including terry towelling and fine rib fabrics	+/- 8.0 %
Washable and removable woven upholstery -	

[5] Council Directive 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations (OJ L 85, 29.3.1999, p. 1).

Curtains and furniture fabric - Mattress ticking	+/- 2.0 % +/- 3.0 %
Non-woven fabrics - Mattress ticking - All other fabrics	 +/- 5.0 % +/- 6.0 %

This criterion does not apply to:

(a) fibres or yarn,

(b) products clearly labelled “dry clean only” or equivalent,

(c) furniture fabrics that are not removable and washable.

Assessment and verification: *the applicant shall provide test reports using the standards appropriate for the product.*

For domestic washing EN ISO 6330 in combination with EN ISO 5077 shall be used as follows: three washes at temperatures as indicated on the product, with tumble drying after each washing cycle.

For commercial washing in industrial laundries ISO 15797 in combination with EN ISO 5077 shall be used at a minimum of 75 ^{o}C or as indicated in the standard for the fibre and bleaching combination. Drying shall be as indicated on the product label.

Alternatively for removable and washable mattress ticking EN ISO 6330 in combination with EN 25077 shall be used. The default conditions shall be washing 3A (60°C) and drying C (flat drying) unless the product label states otherwise.

Criterion 18. Colour fastness to washing

The colour fastness to washing shall be at least level 3-4 for colour change and at least level 3-4 for staining.

This criterion does not apply to products labelled “dry clean only” or equivalent (in so far as it is normal practice for such products to be so labelled), to white products or products that are neither dyed nor printed, or to non-washable furniture fabrics.

Assessment and verification: *for domestic washing the applicant shall provide test reports using the test method: ISO 105 C06 (single wash, at temperature as marked on the product, with perborate powder).*

For commercial washing in industrial laundries ISO 15797 in combination with ISO 105 C06 shall be used at a minimum of 75^{o} C or as indicated in the standard for the fibre and bleaching combination.

Criterion 19. Colour fastness to perspiration (acid, alkaline)

The colour fastness to perspiration (acid and alkaline) shall be at least level 3-4 (colour change and staining). A level of 3 is nevertheless allowed when fabrics are both dark coloured (standard depth > 1/1) and made of regenerated wool. This criterion does not apply to white products, to products that are neither dyed nor printed, to furniture fabrics, curtains or similar textiles intended for interior decoration.

Assessment and verification: *the applicant shall provide test reports using the following test method: ISO 105 E04 (acid and alkaline, comparison with multi-fibre fabric).*

Criterion 20. Colour fastness to wet rubbing

The colour fastness to wet rubbing shall be at least level 2-3. A level of 2 is nevertheless allowed for indigo dyed denim.

This criterion does not apply to white products or products that are neither dyed nor printed.

Assessment and verification*: the applicant shall provide test reports using the following test method: ISO 105 X12.*

Criterion 21. Colour fastness to dry rubbing

The colour fastness to dry rubbing shall be at least level 4. A level of 3-4 is nevertheless allowed for indigo dyed denim.

This criterion does not apply to white products or products that are neither dyed nor printed, or to curtains or similar textiles intended for interior decoration.

Assessment and verification: *the applicant shall provide test reports using the following test method: ISO 105 X12.*

Criterion 22. Colour fastness to light

For fabrics intended for furniture, curtains or drapes, the colour fastness to light shall be at least level 5. For all other products the colour fastness to light shall be at least level 4.

A level of 4 is nevertheless allowed when fabrics intended for furniture, curtains or drapes are both light coloured (standard depth < 1/12) and made of more than 20 % wool or other keratin fibres, or more than 20 % linen or other bast fibres.

This requirement does not apply to mattress ticking, mattress protection or underwear.

Assessment and verification: *the applicant shall provide test reports using the following test method: ISO 105 B02.*

Criterion 23. Wash resistance and absorbency of cleaning products

Cleaning products shall be wash resistant and absorbent according to the relevant testing parameters identified in table 9 and 10. The testing specified for absorbency shall not apply to twisted yarn products.

Table 9. Values and parameters for the wash resistance of cleaning products

Textile cleaning products or type of material	**Numbers of washes**	**Temperature**	**EN ISO 6630 test reference**
Woven and non-woven products for wet cleaning	80	40 °C	Procedure 4N
Microfibre products for dusting	200	40 °C	Procedure 4N

Products deriving from recycled textile fibres	20	30 °C	Procedure 3G
Mops for washing floors	200	60 °C	Procedure 6N
Cloths for washing floors	5	30 °C	Procedure 3G

Table 10. Values and parameters for the absorbency of cleaning products

Textile cleaning products or type of material	**Liquid absorbency time**
Products deriving from recycled textile fibres	≤ 10 seconds
Microfibre products for surface and floor cleaning	≤ 10 seconds
Woven and non-woven products for wet cleaning	≤ 10 seconds
Products for washing floors	≤ 10 seconds

Assessment and verification: the applicant shall provide test reports using the following test methods as relevant: EN ISO 6330 and EN ISO 9073-6. Testing according to EN ISO 6330 shall be carried out using washing machine type A for all products and materials.

Criterion 24. Fabric resistance to pilling and abrasion

Non-woven fabrics and knitted garments, accessories and blankets made of wool, wool blends and polyester (including fleece), shall resist pilling to rating of a minimum of 3.

Woven cotton fabrics used for garments shall resist pilling to a rating of a minimum of 3. Polyamide tights and leggings shall resist to a rating of a minimum of 2.

Assessment and verification: the applicant shall provide reports from tests carried out as appropriate to the substrate:

- Knitted and non-woven products: ISO 12945-1 Pill box method
- Woven fabrics: ISO 12945-2 Martindale method

Criterion 25. durability of function

Finishes, treatments and additives that impart water, oil and stain repellency flame retardancy and easy care (also referred to as non-crease or permanent press) to the textile product when it is in use shall be durable according to the values and parameters set out in sub-criteria 25(a), (b) and (c).

For water, oil and stain repellents consumers shall be provided with guidance on how to maintain the functionality of finishes applied to the product.

Textile fibres, fabrics and membranes that lend the final product intrinsic functional properties are exempt from these requirements.

Assessment and verification: *for products with intrinsic properties applicants shall provide test reports demonstrating comparable or improved performance compared with alternatives that may be applied as finishes.*

25(a) Water, oil and stain repellent functions

Water repellents shall retain a functionality of 80 out of 90 after 20 domestic wash and tumble dry cycles at 40°C, or after 10 industrial washing and drying cycles at a minimum of 75°C.

Oil repellents shall retain a functionality of 3.5 out of 4.0 after 20 domestic wash and tumble dry cycles at 40°C, or after 10 industrial washing and drying cycles at a minimum of 75°C.

Stain repellents shall retain a functionality of 3.0 out of 5.0 after 20 domestic wash and tumble dry cycles at 40°C, or after 10 industrial washing and drying cycles at a minimum of 75°C.

Industrial washing temperatures may be reduced to 60°C for garments with taped seams.

Assessment and verification: *the applicant shall provide reports from tests carried out according to the following standards, as appropriate to the product:*

For all products domestic wash cycles ISO 6330 or industrial laundry cycles ISO 15797 in combination with:

- *water repellents: ISO 4920*
- *oil repellents: ISO 14419*
- *-stain repellents: ISO 22958*

25(b) Flame retardant functions

Washable products shall retain their functionality after 50 industrial wash and tumble dry cycles at a minimum of 75°C. Non-washable products shall retain their functionality after a soak test.

Assessment and verification: *The applicant shall provide reports from tests carried out according to the following standards, as appropriate to the product:*

For domestic wash cycles ISO 6330 or commercial laundry cycles EN ISO 10528 both in combination with EN ISO 12138. Where the textile is non-removable BS 5651 or equivalent.

25(c) Easy-care (also referred to as non-crease or permanent press)

Natural fibre products shall achieve an SA-3 fabric smoothness grade and blended natural and synthetic fibre products an SA-4 fabric smoothness grade after 10 domestic wash and tumble drying cycles at 40°C.

Assessment and verification: *the applicant shall provide reports from tests carried out according to the ISO 7768 test method for assessing the smoothness appearance of fabrics after washing.*

5. CORPORATE SOCIAL RESPONSIBILITY CRITERIA

The criteria in this section apply to the cut/make/trim stages of production for textile products.

Criterion 26. Fundamental principles and rights at work

Applicants shall ensure that the fundamental principles and rights at work as described in the International Labour Organisation's (ILO) Core Labour Standards, the UN Global Compact and the OECD Guidelines for Multi-National Enterprises shall be observed by all

cut/make/trim production sites used to manufacture the licensed product(s). For the purpose of verification the following ILO Core Labour Standards shall be referred to:

029 Forced Labour

087 Freedom of Association and Protection of the Right to Organise

098 Right to Organise and Collective Bargaining

100 Equal remuneration

105 Abolition of Forced Labour

111 Discrimination (Employment and Occupation)

155 Occupational safety and health

138 Minimum Age Convention

182 Elimination of the Worst Forms of Child Labour

These standards shall be communicated to cut/make/trim production sites used to manufacture the final product.

Assessment and verification: *the applicant shall demonstrate third party verification of compliance, using independent verification or documentary evidence, including site visits by auditors during the Ecolabel verification process for cut/make/trim production sites in the supply chain for their licensed products. This shall take place upon application and subsequently during the license period if new production sites are introduced.*

Criterion 27. Restriction on the sandblasting of denim

The use of manual and mechanical sandblasting to achieve distressed denim finishes shall not be permitted.

Assessment and verification*: the applicant shall provide details of all production sites used to produce ecolabelled denim products together with documentary and photographic evidence of the alternative processes used to achieve distressed denim finishes.*

Criterion 28. Information appearing on the Ecolabel

Box 2 of the Ecolabel may contain the following text:

More sustainable fibre production (or as selected from table 11 below)

a. Less polluting production processes
b. Restrictions on hazardous substances
c. Tested for durability

Table 11: Text that may appear alongside the Ecolabel depending on product content

Fibres used	**Production specification**	**Text that may be displayed**
Cotton fibres	Organic content of more than 50 %	Made with xx % organic cotton

	Organic content of more than 95 %	Made with organic cotton
	IPM content of more than 70%	Cotton grown with reduced pesticides
Man-made cellulose fibres	Certified sustainable pulp of more than 25 %	Made using xx % wood from sustainable forests
	Certified sustainable pulp of more than 95 %	Made using wood from sustainable forests
Polyamide	Recycled content of more than 20 %	Made with xx % recycled nylon
	Recycled content of more than 95 %	Made with recycled nylon
Polyester	Recycled content of more than 50 %	Made with xx % recycled polyester
	Recycled content of more than 95 %	Made with recycled polyester

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

Appendix 1

EU Ecolabel textile Restricted Substance List

The EU Ecolabel RSL consists of restrictions that apply to the following production stages in the textile supply chain:

(a) fibre and yarn spinning
(b) bleaching and pre-treatment
(c) dye houses
(d) printing processes
(e) finishing processes
(f) all production stages
(g) the final product

A number of restrictions under (g) also apply to the final product, for which analytical testing may be required.

(a) Restrictions applying to fibre and yarn spinning and weaving

Substance group	**Scope of restriction**	**Limit values**	***Verification requirements***
(i) Sizing preparations applied to fibres and yarns *Applicability:* Spinning processes	At least 95 % (by dry weight) of the component substances shall be readily biodegradable. *In all cases the sum of each component shall be taken into account.*	*Readily biodegradable:* 70 % degradation of dissolved organic carbon within 28 days *or* 60% of theoretical maximum oxygen depletion or carbon dioxide generation within 28 days.	*Verification:* Declaration from the chemical supplier supported by OECD or ISO test results *Test method:* OECD 301 A, ISO 7827 OECD 301 B, ISO 9439 OECD 301 C, (2) OECD 301 D, ISO 10708 OECD 301 E, OECD 301 F, ISO 9408,

(ii) Spinning solution additives, spinning additives and preparation agents (including carding oils, spin finishes and lubricants) *Applicability:* Primary spinning processes	At least 90 % (by dry weight) of the component substances shall be readily biodegradable, inherently biodegradable or eliminable in waste water treatment plants. *In all cases the sum of each component shall be taken into account.*	*Readily biodegradable*: See definition under (a)(ii) *Inherently biodegradable*: 70 % degradation of dissolved organic carbon within 28 days *or* 60 % of theoretical maximum oxygen depletion or carbon dioxide generation within 28 days. *Eliminability:* 80 % degradation of dissolved organic carbon within 28 days	*Verification:* Declaration from chemical supplier supported by OECD or ISO test results *Test method:* See (a)(ii) for readily biodegradable tests. Inherently biodegradable tests that are accepted: ISO 14593 OECD 302 A, ISO 9887, OECD 302 B, ISO 9888 OECD 302 C, Tests for eliminability: OECD 303A/B ISO 11733

(b) Restrictions applying to bleaching

Substance group	Scope of restriction	Limit values	*Verification requirements*
(i) Bleaching of yarns, fabrics and end products *Applicability:* All fibre types	Chlorine agents shall not be used for the bleaching of any yarns, fabrics, knitted panels or end-products with the exception of man-made cellulose fibres.	n/a	*Verification:* Declaration of non-use by production stage(s)

(c) Restrictions applying to dye houses

Substance group	Scope of restriction	Limit values	*Verification requirements*
(i) Halogenated carriers *Applicability:* Polyester, polyester-wool blends, acrylic and polyamide where disperse dyes are used.	Halogenated dyeing accelerants (carriers) shall not be used to dye synthetic fibres and fabrics or polyester-wool blends. *Examples of carriers include1,2-dichlorobenzene, 1,2,4-trichlorobenzene, chlorophenoxyethanol.*	n/a	*Verification:* Declaration of non-use from the chemical supplier supported by SDS.
(ii) Azo dyes *Applicability:* Application of colours from Appendix 2 to acrylic, cotton, polyamide, wool fibres, knits and fabrics.	Azo dyes shall not be used that may cleave to aromatic amines that are known to be carcinogenic. *Appendix 2contains a list of restricted aryl amines and an indicative list of azo dyes that may cleave to these aryl amines. The latter should be used as a guide to dyes that should not be used. The limit value for aryl amines shall be applied to the final product.*	30 mg/kg for each amine [1]	*Verification:* Final product testing to be carried out as specified. *Test method:* EN 14362-1 and 3.
(iii) CMR dyes	Dyes shall not be used that are carcinogenic, mutagenic	n/a	*Verification:*

Applicability: All products.	or toxic to reproduction. *Appendix 2 contains a listing of CMR dyes that shall not be used. The limit value for dyes shall be applied to the final product.*		Declaration of non-use from the chemical supplier supported by SDS.
(iv) Potentially sensitising dyes *Applicability:* - polyester, - acrylic, - polyamide Elasticated or stretchable skin contact garments or underwear	Dyes shall not be used that are potentially sensitising. *Appendix 2 contains a listing of sensitising dyes that shall not be used. The limit value for dyes shall be applied to the final product.*		*Verification:* Declaration of non-use from the chemical supplier supported by SDS.
(v) Chrome mordant dyes *Applicability:* Wool, polyamide	Chrome mordant dyes shall not be used.	n/a	*Verification:* Declaration of non-use from the chemical supplier supported by SDS.
(vi) Metal complex dyes *Applicability:* Polyamide, wool, cellulose fibres	Metal complex dyes based on copper, chrome and nickel shall only be permitted for dyeing: - wool fibres - polyamide fibres - blends of wool and/or polyamide with man-made cellulose fibres.	n/a	*Verification:* Declaration of non-use from the chemical supplier supported by SDS

[1.] Measures should be taken to avoid false positives from the presence of 4-aminoazobenzene.

(d) Restrictions applying to printing processes

Printing			
(i) Dyes and pigments	Dyes and pigments used to print ecolabelled textiles shall comply with the restrictions applying to dye houses (Section c of this Appendix).	*Please refer to the dye house restrictions (Section c)*	*Verification:* As specified for dye houses
(ii) Printing pastes *Applicability:* Where printing is applied	Printing pastes used shall not contain more than 5 % Volatile Organic Compounds (VOC's). These may include: - aliphatic hydrocarbons (C10 - C20) - monomers such as acrylates, vinyl acetates, styrene - monomers such as acrylonitrile, acrylamide,butadiene - alcohols, esters, polyols - formaldehyde - phosphoric acid esters - benzene as impurity from upper hydrocarbons - ammonia (e.g., urea decomposition, biuret reaction)	<5.0 % w/w VOC content	*Verification:* Declaration from applicant that no printing has been made *or* Declaration from printer supported by SDS and/or calculations for the printing paste.

(iii) Plastisol binders *Applicability:* Where printing is applied	'Plastisol' additives to print binders, including PVC and restricted phthalates, shall not be used.	n/a	*Verification:* Declaration from applicant that no printing has been made *or* Declaration of non-use from chemical suppliers supported by SDS for additives.

(e) Restrictions applying to finishing processes

Functional finishes, treatments and additives			
(i) Biocide finishes used to impart biocidal properties to the final products. *Applicability:* All products	Biocides shall not be incorporated into fibres, fabrics or the final product in order to impart biocidal properties. Common examples include *triclosan, nano-silver, zinc organic compounds, tin organic compounds, dichlorophenyl(ester) compounds, benzimidazol derivatives and isothiazolinones*.	n/a	*Verification:* Declaration of non-use from the applicant
(ii) Anti-felting and shrink resistance *Applicability:* Where applied.	Halogenated substances or preparations shall only be applied to wool slivers and loose scoured wool.	n/a	*Verification:* Declaration of non-use from wool processors.

(iii) Water, stain and oil repellent treatments *Applicability:* Where applied to provide the function.	Fluorinated water, stain and oil repellent treatments shall not be used. These shall include perfluorinated and polyfluorinated treatments. Non-fluorinated treatments shall be readily biodegradable and non-bioaccumulative in the aquatic environment including in aquatic sediment. They shall additionally comply with fitness for use criterion 25(a).	n/a	*Verification:* Declaration of non-use supported by SDS for the repellents used to be provided by finishers. *Test method:* *n/a*
(iv) Flame retardants *Applicability:* Where applied and as specified for synergists.	*The following flame retardants shall not be used:* HBCDD – Hexabromocyclododecane PeBDE – Pentabromodiphenyl ether OcBDE – Octabromidiphenyl ether DecaBDE – Decabromodiphenyl ether PBBs – Polybrominated biphenyls TEPA – Tris(aziridinyl) phosphinoxide TRIS – Tris (2,3 dibromopropyl) phosphate TCEP – Tris (2,chloroethyl)phosphate Paraffin, C10-C13, chlorinated (SCCP)	n/a	*Verification:* Declaration of non-use supported by SDS
	The synergist antimony trioxide (H351) is derogated for use as a synergist for the backcoating of interior textiles only under the condition that the product is required to be flame retardant and that workplace occupational exposure limit values are met.	Eight hour mean shift value ELV for 0.50 mg/m^3	*Verification:* Monitoring data shall be provided by the finisher where the antimony

			trioxide is applied.

(f) Restrictions applying to all production stages

Substances of Very High Concern (SVHC's)			
(i) Substances that have been entered onto the ECHA Candidate List. *Applicability* All products.	SVHC's that have been identified according to Article 59 of Regulation 1907/2006 (REACH) as meeting the criteria of Article 57 of that Regulation and are listed in the candidate list for eventual inclusion in Annex XIV of REACH ("Candidate List") that is current at the time of application shall not be present in the final product, either or to impart function to the final product or that have been intentionally used during production stages, unless a derogation has been approved. The current Candidate List can be consulted at: http://echa.europa.eu/web/guest/candidate-list-table No derogation from the exclusion in this criterion shall be given concerning substances identified as SVHC's and which have been entered onto the list foreseen in Article 59 of Regulation (EC) No 1907/2006, and which are present in the article or in any homogenous part of it in concentrations of more than 0.10 %.	n/a	*Verification:* Declaration of compliance by each production stage and their chemical suppliers.
Surfactants, softeners and complexing agents			

(ii) All surfactants, fabric softeners and complexing agents *Applicability:* All wet processes	At least 95 % by weight of fabric softeners, complexing agents and surfactants shall be: - readily biodegradable under aerobic conditions or - inherently biodegradable and/or - eliminable in wastewater treatment plants. The latest revision of the Detergents Ingredients Database should be used as a reference point for biodegradability: http://ec.europa.eu/environment/ecolabel/documents/did_list/didlist_part_a_en.pdf	n/a	*Verification:* Declaration chemical supplier supported by SDS and/or OECD or ISO test results *Test method:* See sizing and spinning agents (*Appendix 1(a) i/ii)*
(iii) Non-ionic and cationic surfactants *Applicability:* All wet processes	All non-ionic and cationic surfactants must also be readily biodegradable under anaerobic conditions The detergents ingredients database should be used as a reference point for biodegradability: http://ec.europa.eu/environment/ecolabel/documents/did_list/didlist_part_a_en.pdf	n/a	*Verification:* Declaration from SDS and/or chemical supplier supported by OECD or ISO test results *Test method:* EN ISO 11734, ECETOC No 28 OECD 311

Auxilliaries			
(iv) Auxiliaries used in preparations and formulations. *Applicability:* All products.	*The following substances shall not be used in any textile preparations or formulations and are subject to limit values for the presence of substances on the final product:* Nonylphenol, mixed isomers 25154-52-3 4-Nonylphenol 104-40-5 4-Nonylphenol, branched 84852-15-3 Octylphenol 27193-28-8 4-Octylphenol 1806-26-4 4-tert-Octylphenol 140-66-9 Alkylphenolethoxylates (APEOs) and their derivatives: Polyoxyethylated octyl phenol 9002-93-1 Polyoxyethylated nonyl phenol 9016-45-9 Polyoxyethylated p-nonyl phenol 26027-38-3	25 mg/kg sum total	*Verification:* Final product testing is to be carried out as specified for alkyphenols. *Test method:* Solvent extraction followed by LCMS
	The following substances shall not be used in any textile preparations or formulations: bis(hydrogenated tallow alkyl) dimethyl ammonium chloride (DTDMAC) distearyl dimethyl ammonium chloride (DSDMAC) di(hardened tallow) dimethyl ammonium chloride (DHTDMAC) ethylene diamine tetra acetate (EDTA), diethylene triamine penta acetate (DTPA)	n/a	*Verification:* Declaration of non-use from the chemical suppliers supported by SDS for all production stages.

	4-(1,1,3,3-tetramethylbutyl)phenol 1-Methyl-2-pyrrolidone Nitrilotriacetic acid (NTA)		

(g) Restrictions applying to the final product

(i) Candidate List SVHC's that are derogated. *Applicability:* Elastane, acrylic	N,N-Dimethylacetamide (127-19-5) *The following limit values apply to end products containing elastane and acrylic:* - Products for babies and children under 3 years old - Products that are in direct contact with the skin - Garments with limited skin contact and interior textiles	0.001 % w/w 0.005 % w/w 0.005 % w/w	*Verification:* Final product testing *Test method:* Solvent extraction, GCMS or LCMS
(ii) Formaldehyde residues *Applicability:* All products. Specific conditions apply to garments with easy care finishes (also referred to as non-crease or permanent press)	*The following limit values apply to residual formaldehyde from easy care finishes:* - Products for babies and children under 3 years old. - All products that are in direct contact with the skin - Garments with limited skin contact and interior textiles	16 ppm 16 ppm 75 ppm	*Verification:* Final product testing for products with an easy care finish. A declaration of non-use is required for all other

			products. *Test method:* EN ISO 14184-1
(iii) Biocides used to protect textiles during transportation and storage. Applicability: All products	Only biocides that are authorised under Directive 98/8/EC of the European Parliament and of the Council [6]and Regulation (EC) No 528/2012 of the European Parliament and of the Council[7] are permitted for use. Applicants should consult the most current authorisation list: http://ec.europa.eu/environment/biocides/annexi_and_ia.htm The following specific biocides are restricted: - Chlorophenols (their salts and esters) - Polychlorinated biphenyls (PCB) - Organotin compounds, including TBT, TPhT, DBT and DOT - Dimethyl fumarate (DMFu)	n/a	*Verification:* *Declaration of non-use prior to shipping and storage supported by SDS.*
(iv) Extractable metals *Applicability:* All products with different limit	*The following limit values apply to products intended for babies and children under 3 years old:* Antimony (Sb) Arsenic (As)	mg/kg 30.0 0.2	Verification: Final product testing *Test method:*

[6] Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market (OJ L 123, 24.4.1998, p. 1).
[7] Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products (OJ L 167, 27.6.2012, p. 1).

values applying to babies and children under 3 years old.	Cadmium (Cd) Chromium (Cr) - *Textiles dyed with metal complex dyes* - *All other textiles* Cobalt (Co) Copper (Cu) Lead (Pb) Nickel (Ni) - *Textiles dyed with metal complex dyes* - *All other textiles* Mercury (Hg)	0.1 1.0 0.5 1.0 25.0 0.2 1.0 0.5 0.02	Extraction - EN ISO 105-E04-2013 (Acid sweat solution) Detection – ICP-MS or ICP-OES
	The following limit values apply to all other products including interior textiles: Antimony (Sb) Arsenic (As) Cadmium (Cd) Chromium (Cr) - *Textiles dyed with metal complex dyes* - *All other textiles* Cobalt (Co) - *Textiles dyed with metal complex dyes* - *All other textiles* Copper (Cu)	mg/kg 30.0 1.0 0.1 2.0 1.0 4.0 1.0 50.0	Verification: Final product testing *Test method:* Extraction - DIN EN ISO 105-E04-2013 (Acid sweat solution) Detection – ICP-MS or ICP-OES

	Lead (Pb) Nickel (Ni) Mercury (Hg)	1.0 1.0 0.02	
(v) Coatings, laminates and membranes Applicability: Where incorporated into textile structure	Polymers should not contain the following phthalates: DEHP (Bis-(2-ethylhexyl)-phthalate) BBP (Butylbenzylphthalate) DBP (Dibutylphthalate) DMEP (Bis2-methoxyethyl) phthalate DIBP (Diisobutylphthalat) DIHP (Di-C6-8-branched alkyphthalates) DHNUP (Di-C7-11-branched alkylphthalates) DHP (Di-n-hexylphthalate)	Sum total 0.10% w/w	*Verification:* Declaration of non-use by polymer manufacturer supported by SDS for the plasticisers used in the formulation. Where the information is not available testing may be requested. *Test method:* EN ISO 14389
	Fluoropolymer membranes and laminates may be used for outdoor wear and technical outdoor clothing. They shall not be manufactured using PFOA or any of its higher homologues as defined by the OECD.		*Verification:* Declaration of compliance from the membrane or laminate manufacturer with respect to

			the polymer production.
(vi) Accessories such as buttons, rivets and zips *Applicability:* Where incorporated into garment structure	For metal accessories: A migration limit shall apply to nickel-containing metal alloys that are in direct and prolonged contact with the skin. Additionally testing shall be carried out for the presence of the following metals, to which the following limit values shall apply: Lead (Pb), Cadmium (Cd) *- products intended for babies and children under 3 years old:* *- all other products including interior textiles:* Chrome (Cr) where there is chrome plating Mercury (Hg)	Nickel 0.5 µg/cm^2/week 90 mg/kg 50 mg/kg 100 mg/kg 60 mg/kg 60 mg/kg	*Verification:* Testing of the composition of the metal components. *Test methods:* For nickel migration EN 12472-2005 EN 1811-1998+A1-2008 For other metals Detection – GC-ICP-MS
	The following phthalates shall not be used in any plastic accessories: - DEHP (Bis-(2-ethylhexyl)-phthalate) - BBP (Butylbenzylphthalate) - DBP (Dibutylphthalate) - DMEP (Bis2-methoxyethyl) phthalate	n/a	*Verification:* SDS is to be provided for the plastic formulation.

	- DIBP (Diisobutylphthalate) - DIHP (Di-C6-8-branched alkyphthalates) - DHNUP (Di-C7-11-branched alkylphthalates) - DHP (Di-n-hexylphthalate) The following phthalates shall not be used in children's clothing where there is a risk that the accessory may be placed in the mouth e.g. zip handles: – DINP (Di-isononyl phthalate) – DIDP (Di-isodecyl phthalate) – DNOP (Di-n-Octyl phthalate)		

Appendix 2

Dye restrictions

(a) Carcinogenic aromatic amines

Aryl amine	CAS Number
4-aminodiphenyl	92-67-1
Benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphtylamine	91-59-8
o-amino-azotoluene	97-56-3
2-amino-4-nitrotoluene	99-55-8
4-chloroaniline	106-47-8
2,4-diaminoanisol	615-05-4
4,4′-diaminodiphenylmethane	101-77-9
3,3′-dichlorobenzidine	91-94-1
3,3′-dimethoxybenzidine	119-90-4
3,3′-dimethylbenzidine	119-93-7
3,3′-dimethyl-4,4′-diaminodiphenylmethane	838-88-0
p-cresidine	120-71-8
4,4’-methylene-bis-(2-chloro-aniline)	101-14-4
4,4′-oxydianiline	101-80-4
4,4′-thiodianiline	139-65-1
o-toluidine	95-53-4
2,4-diaminotoluene	95-80-7
2,4,5-trimethylaniline	137-17-7

4-aminoazobenzene	60-09-3
o-anisidine	90-04-0
2,4-Xylidine	95-68-1
2,6-Xylidine	87-62-7

(b) Indicative list of dyes that may cleave to carcinogenic aromatic amines

Disperse dyes		
Disperse Orange 60	Disperse Yellow 7	
Disperse Orange 149	Disperse Yellow 23	
Disperse Red 151	Disperse Yellow 56	
Disperse Red 221	Disperse Yellow 218	
Basic dyes		
Basic Brown 4	Basic Red 114	
Basic Red 42	Basic Yellow 82	
Basic Red 76	Basic Yellow 103	
Basic Red 111		
Acid dyes		
CI Acid Black 29	CI Acid Red 24	CI Acid Red 128
CI Acid Black 94	CI Acid Red 26	CI Acid Red 115
CI Acid Black 131	CI Acid Red 26:1	CI Acid Red 128
CI Acid Black 132	CI Acid Red 26:2	CI Acid Red 135
CI Acid Black 209	CI Acid Red 35	CI Acid Red 148
CI Acid Black 232	CI Acid Red 48	CI Acid Red 150

CI Acid Brown 415	CI Acid Red 73	CI Acid Red 158
CI Acid Orange 17	CI Acid Red 85	CI Acid Red 167
CI Acid Orange 24	CI Acid Red 104	CI Acid Red 170
CI Acid Orange 45	CI Acid Red 114	CI Acid Red 264
CI Acid Red 4	CI Acid Red 115	CI Acid Red 265
CI Acid Red 5	CI Acid Red 116	CI Acid Red 420
CI Acid Red 8	CI Acid Red 119:1	CI Acid Violet 12
Direct dyes		
Direct Black 4	Basic Brown 4	Direct Red 13
Direct Black 29	Direct Brown 6	Direct Red 17
Direct Black 38	Direct Brown 25	Direct Red 21
Direct Black 154	Direct Brown 27	Direct Red 24
Direct Blue 1	Direct Brown 31	Direct Red 26
Direct Blue 2	Direct Brown 33	Direct Red 22
Direct Blue 3	Direct Brown 51	Direct Red 28
Direct Blue 6	Direct Brown 59	Direct Red 37
Direct Blue 8	Direct Brown 74	Direct Red 39
Direct Blue 9	Direct Brown 79	Direct Red 44
Direct Blue 10	Direct Brown 95	Direct Red 46
Direct Blue 14	Direct Brown 101	Direct Red 62
Direct Blue 15	Direct Brown 154	Direct Red 67
Direct Blue 21	Direct Brown 222	Direct Red 72
Direct Blue 22	Direct Brown 223	Direct Red 126

Direct Blue 25	Direct Green 1	Direct Red 168
Direct Blue 35	Direct Green 6	Direct Red 216
Direct Blue 76	Direct Green 8	Direct Red 264
Direct Blue 116	Direct Green 8.1	Direct Violet 1
Direct Blue 151	Direct Green 85	Direct Violet 4
Direct Blue 160	Direct Orange 1	Direct Violet 12
Direct Blue 173	Direct Orange 6	Direct Violet 13
Direct Blue 192	Direct Orange 7	Direct Violet 14
Direct Blue 201	Direct Orange 8	Direct Violet 21
Direct Blue 215	Direct Orange 10	Direct Violet 22
Direct Blue 295	Direct Orange 108	Direct Yellow 1
Direct Blue 306	Direct Red 1	Direct Yellow 24
Direct Brown 1	Direct Red 2	Direct Yellow 48
Direct Brown 1:2	Direct Red 7	
Direct Brown 2	Direct Red 10	

(c) Dyes that are CMR or which potentially be sensitising

Dyes that are carcinogenic, mutagenic or toxic to reproduction		
C.I. Acid Red 26	C. I. Direct Black 38	C.I. Disperse Blue 1
C.I. Basic Red 9	C. I. Direct Blue 6	C.I. Disperse Orange 11
C.I. Basic Violet 14	C. I. Direct Red 28	C. I. Disperse Yellow 3
Disperse dyes that are potentially sensitising		
C.I. Disperse Blue 1	C.I. Disperse Blue 124	C.I. Disperse Red 11

C.I. Disperse Blue 3	C.I. Disperse Brown 1	C.I. Disperse Red 17
C.I. Disperse Blue 7	C.I. Disperse Orange 1	C.I. Disperse Yellow 1
C.I. Disperse Blue 26	C.I. Disperse Orange 3	C.I. Disperse Yellow 3
C.I. Disperse Blue 35	C.I. Disperse Orange 37	C.I. Disperse Yellow 9
C.I. Disperse Blue 102	C.I. Disperse Orange 76	C.I. Disperse Yellow 39
C.I. Disperse Blue 106	C.I. Disperse Red 1	C.I. Disperse Yellow 49

Appendix 3

Best available technique in the field of washing, drying and curing energy efficiency

Domain	BAT Techniques
1. General energy management	1.1 Sub-metering, 1.2 Process monitoring and automatic control systems for flow control, filling volumes, temperatures and timing; 1.3 Insulation of pipework, valves and flanges 1.4 Frequency controlled electric motors and pumps 1.5 Closed design of machines to reduce vapour loss 1.6 Water and liquor re-use/recycling in batch processes 1.7 Heat recovery e.g. rinse water, steam condensate, process exhaust air, combustion gases
2. Washing and rinsing process	2.1 Use of cooling water as process water 2.2 Replacement of overflow washing with drainage/inflow washing 2.3 Use of 'smart' rinsing technologies with water flow controls and counter currents 2.4 Installation of heat exchangers
3. Drying and curing using stenter frames	3.1 Optimisation of air flow 3.2 Insulation of enclosures 3.3 Installation of Efficient burner systems 3.4 Installation of heat recovery systems

Note:

New BAT techniques referenced and recommended by EU Member State authorities after the date of publication of the European Commissions textile BREF (2003) shall be considered complementary to those listed above.