ECOMARK_STD_15 TEXTILE STANDARD

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Title: ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

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ABOUT US

A directive numbered 1980/2000 (EC) was issued by the European Union in 2000 within the scope of harmonization laws. This directive sample is required to draw a circle on the contour lines. The directive in question calls for the removal of the environment and the removal of this product with the target target indicated in the environmental

ing. Ekomark © Standard has prepared this product to be grown in aquaculture products that are not grown in aquaculture products and in aquaculture standards. While designing this standard, the Eco-Label Regulation 66/2010/EC updated by the European Union and updated in 2010 was taken as a basis for certification studies. The example of the products within the scope of use in the Ekomark © Standard is in line with the application given by Europe.

1. TEXTILE STANDARDS

Criterion 1: Cotton and other natural cellulose seed fibers (including kapok)

Cotton and other natural cellulose seed fibers should meet one of the following sub-standards:

• Substandard 1(a) Minimum requirements for organic production standards.

• Only if an organic cotton declaration is made under Standard 28, all conventional cotton and IPM cotton blended with organic cotton should be from non-GMO varieties.

• In order to calculate the percentage of cotton in products that need to meet standard 1(a), the recycled cotton fiber content should be deducted from the minimum percentage required, except for clothing for babies under 3 years old.

• For conventional cotton and IPM cotton blended with organic cotton, the common genetic modification qualitative screening test carried out according to the ropean Union's genetic modification analysis reference method, and the results show that the result does not contain genetic modification, which can be used as a compliance certificate. Raw cotton samples from each country of origin should be tested before any wet treatment. The certification of IPM cotton for programs that exclude genetically modified cotton should be accepted as a certificate of compliance.

Produce cotton according to IPM principles.

• IPM stands for "Integrated Pest Management" and ICM stands for "Integrated Crop Management".

• To calculate the percentage of cotton in products that must meet criterion 1(b):

o Any organic cotton fiber content should be deducted from the minimum required percentage.

o Recycled cotton fiber content should be deducted from the required minimum percentage, except for clothing for babies under 3 years of age.

Criterion 2: Flax and other bast fibers (including hemp, jute and ramie)

Flax and other bast fibers should meet the following sub-standards:

• Subcriteria 2(a) Immersion under ambient conditions.

• Sub-standard 2(b) Treatment of wastewater from retting treatment

Criterion 3: Wool and other keratin fibers (including sheep and lamb wool, as well as camel, alpaca and goat wool)

Wool and other keratin fibers should meet the following sub-standards:

• Sub-criteria 3(a) Restrictions on ectoparasiteicides applicable to wool

• Testing should be performed on the farmer or sales batch of raw wool according to the country of origin (if mixed) and before any wet processing. At least one composite sample shall be tested for each processing batch, including any of the following samples:

o Wool fibers from at least 10 randomly selected farmers or sales batches (according to the country of origin), of which there are more than 10 sales batches in the country of origin in the processing batch;

o Each sales batch or farmer's batch (whichever is less) provides a sample to supply processing batches, of which there are less than 10 sales batches in the country of origin in the processing batch.

Criterion 4: Acrylic

Acrylic fiber should meet the following sub-standards:

• Substandard 4(a) Emissions of Acrylonitrile to Air

• Substandard 4(b) N,N-Dimethylacetamide emissions to air

Criterion 5: Elastane

Elastic fibers should meet the following sub-standards:

• Sub-standard 5(a) does not use organotin compounds

• Substandard 5(b) Workplace Air Emissions

Criterion 6: Polyamide (or nylon)

Polyamide products should meet at least one of the following production standards:

• Sub-criteria 6(a) Production Criterion 1: Minimum recycled content

• Depending on its source, recycled fiber may contain hazardous substances restricted by other standards.

• In the cases required by Standard 13, declarations and laboratory test results should be provided by fiber manufacturers and raw material suppliers.

Criterion 7: Polyester

Textiles that are primarily sold to consumers should comply with substandards 7(a) and 7(b).

Textiles primarily sold to commercial or public sector customers should meet 7(a) and 7(b) or 7(c).

• Secondary standard 7(a) Antimony content

• Sub-criteria 7(b) Minimum recovery content

• Depending on its source, recycled polyester fiber may contain hazardous substances restricted by other standards. If required by Standard 13, the declaration and laboratory test results shall be provided by the fiber manufacturer and raw material supplier

Criterion 8: Polypropylene

• Sub-standard 8(a) does not use lead-based pigments

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

Pulp production

For the pulp production of man-made cellulose fibers, the following sub-standards should be met:

• Substandard 9(a) Wood Pulp

• Substandard 9(c) Bleaching of pulp without elemental chlorine

• Sub-criteria 9(d) Pulp from a dissolving plant, recovering value from its waste liquid

Fiber production sub-standard

• Substandard 9(e) Sulfur content emitted into the air during the production of viscose fiber and modal fiber

2. COMPONENT AND ACCESSORIES CRITERIA

Criterion 10: Fillings

•Sub-Criterion 10(a) Compliance with Textile Fibre Criteria

• Substandard 10(b) RSL requirements for fungicides and formaldehyde.

• Sub-criteria 10(c) Detergents and other chemicals used to clean fillings.

Criterion 11: Coatings, laminates and membranes

• Sub-standard 11(a) Parts made of polyurethane

• Substandard 11(b) Parts made of polyester

• Substandard 11(c) Polymer

Criterion 12: Accessories

• Accessories such as buttons and zippers may contain elements that may become allergens, such as nickel.

• The purpose of this standard is not to grant ecomark for specific accessories, but to declare that they are allowed to be used in final textile products.

3.CHEMICALS AND PROCESS CRITERIA

The standards in this section apply to the following production stages:

(i) Spinning

(ii) Fabric formation

(iii) Pretreatment

(iv) Dyeing

(v) Printing

(vi) Organize

(vii) Tailoring/making/trimming

Criterion 13: Restricted Substance List

The guidance on which declaration must be used for the verification of this criterion can be found in Appendix 4 of this User Manual.

•Sub-Criterion 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 limit values or according to the specified restrictions.

The final product, including any components or accessories, must not contain substances that meet the following conditions, unless specifically derogated.

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

According to Regulation (EC) 4 of the ropean Parliament and Council No. 1272/2008 or Council Directive 67/548, substances and mixtures applied to fabrics and knitted panels during dyeing, printing and finishing are retained in the final product/EC5, Compliance with the classification criteria and the hazard categories or risk phrases listed in the Commission Decision 2014/350/ shall not be used unless they have been explicitly derogated. These restrictions also apply to the functional substances incorporated in the manufacturing process of synthetic fibers and man-made cellulose fibers.

• Sub-criteria 14(a) Hazard classification restrictions

Criterion 15: Washing, drying and curing energy efficiency

The applicant should prove:

• The energy used in the washing, drying and curing steps related to the dyeing, printing and finishing steps of Ecomark products is measured and benchmarked as part of the energy or carbon dioxide emission management system.

• The production site has implemented a minimum number of Best Available Technology (BAT) energy efficiency technologies.

Criterion 16: Treatment of emissions to air and water

• Sub-standard 16(a) Wastewater discharge from wet processing

The waste water discharged into the environment shall not exceed 20 g COD/kg of processed textiles. This requirement applies to the weaving, dyeing, printing and finishing processes used to manufacture products. Wastewater discharge should also meet specific requirements regarding pH, temperature and color removal.

4.FITNESS FOR USE CRITERIA

Criterion 17: Dimensional changes during washing and drying

The standard does not need to be clarified.

Criterion 18: Colour fastness to washing

The standard does not need to be clarified.

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

The standard does not need to be clarified.

Criterion 20: Colour fastness to wet rubbing

The standard does not need to be clarified.

Criterion 21: Colour fastness to dry rubbing

The standard does not need to be clarified.

Criterion 22: Colour fastness to light

The standard does not need to be clarified.

Criterion 23: Wash resistance and absorbency of cleaning products

The standard does not need to be clarified.

Criterion 24: Fabric resistance to pilling and abrasion

The standard does not need to be clarified.

Criterion 25: Durability of function

The standard does not need to be clarified.

5.CORPORATE SOCIAL RESPONSIBILITY CRITERIA

Criterion 26: Fundamental principles and rights at work

The standard does not need to be clarified.

Criterion 27: Restriction on the sandblasting of denim

The standard does not need to be clarified.

6.SUPPORTING INFORMATION

Criterion 28: Information appearing on the Ecomark

The standard does not need to be clarified.

Application form

Please contact your competent authority to find out how to submit your completed application.

The applicant should also provide the technical file of the laboratory test report, and send it to the competent authority in duplicate, and keep an up-to-date document on its premises to show that it continues to comply with the standard. If the test method has been approved by the granting authority, an equivalent test method can be used instead of the method specified in the formal committee decision.

Application fee

An invoice will be sent when the application and the attached declarations are received. Before the application can be processed, the applicant must pay the application fee relevant for the company. Please refer to the section for fees.

This declaration is to be used so that the Competent Body can set the appropriate application and annual licence fees for the Ecomark.

All questions below have to be answered before handling of the application can begin.

Introduce

This part of the user manual includes declarations that need to be completed to prove compliance with the requirements of the textile standard.

An overview of the suppliers and their participation in each stage of textile product production (supply chain diagram) is also required to help the competent authority evaluate your application. The competent authority will also request a list of all suppliers and their contact details. This list of suppliers may help to develop a supply chain diagram of the final product. See the template below.

In this section, a checklist is also provided to help applicants verify whether all the documents required for each standard have been sent to the competent authority. Finally, a summary of all statements and guidance on who should contribute to each statement is provided.

APPENDICES

Appendix 1: Ecomark textile Restricted Substance List

The Ecomark RSL consists of restrictions that apply to the following production stages in the textile products 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, 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)(i) *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)(i) 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 2 contains 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 ***Applicability:*** All products.	Dyes shall **not** be used that are carcinogenic, mutagenic or toxic to reproduction. Appendix 2 contains a listing of CMR dyes that shall not be used.	n/a	***Verification:*** 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.		***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.

(d) Restrictions applying to printing processes

Printing			
Substance group	Scope of restriction	Limit values	Verification requirements
(i) Dyes and pigments	Dyes and pigments used to print Ecomarkled textiles shall comply with the restrictions applying to dye houses (Section c).	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			
Substance group	Scope of restriction	Limit values	Verification requirements

(i) Biocide finishes used to impart biocidal	Biocides products (within the meaning of Article 3(1)(a) of Regulation () No 528/2012 of the ropean Parliament and of the Council (*) shall not be incorporated into fibres, fabrics or the final product in order to impart biocidal properties.	n/a	***Verification:*** Declaration of non-use from the applicant

Functional finishes, treatments and additives			
properties to the final products. ***Applicability:*** All products	Common examples include triclosan, nano-silver, zinc organic compounds, tin organic compounds, dichlorophenyl(ester) compounds, benzimidazol derivatives and isothiazolinones.		
(*) Regulation () No 528/2012 of the ropean Parliament and of the Council of 22 May 2012 concerning the making available on the market and the use of biocidal products (OJ L 167, 27.6.2012, p. 1)			
(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 and/or ultimately biodegradable, or non-bioaccumulative in the aquatic environment including in aquatic sediment. They shall additionally comply with fitness for use sub-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 back-coating 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)			
Substance group	Scope of restriction	Limit values	Verification requirements
(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.ropa./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			
Substance group	**Scope of restriction**	**Limit values**	**Verification requirements**
(ii) All detergents, surfactants, fabric softeners and complexing agents ***Applicability:*** All wet processes	At least 95 % by total weight of fabric softeners, complexing agents, detergents and surfactants used at each production site 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.	n/a	***Verification:*** Declaration chemical from supplier supported by SDS and/or OECD or ISO test results ***Test method:*** See sizing and spinning agents (Appendix 1(a) i/ii)

	Surfactants may be used as auxiliaries or may be an active ingredient in detergents. The 95% applies to the sum total used in each wet process.		

Auxiliaries			
Substance group	Scope of restriction	Limit values	Verification requirements
(iv) Auxiliaries used in preparations and formulations. ***Applicability:*** All products.	The following substances shall not be used in any preparations or formulations used for textiles and are subject to limit values for the presence of substances on the final product: • Nonylphenol, mixed isomers • 4-Nonylphenol • 4-Nonylphenol, branched • Octylphenol • 4-Octylphenol • 4-tert-Octylphenol	25 mg/kg sum total	***Verification:*** Final product testing ***Test method:*** Solvent extraction followed by LCMS
	Alkylphenolethoxylates (APEOs) and their derivatives: • Polyoxyethylated octyl phenol • Polyoxyethylated nonyl phenol • Polyoxyethylated p-nonyl phenol		***Verification:*** Final product testing ***Test method:*** ISO 18254
	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) • 4-(1,1,3,3-tetramethylbutyl)phenol • 1-Methyl-2-pyrrolidone • Nitrilotriacetic acid (NTA)	n/a	***Verification:*** Declaration of non-use from the chemical suppliers supported by SDS for all production stages.

(g) Restrictions applying to the final product

Substance group	Scope of restriction	Limit values	Verification requirements
(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/or acrylic:		***Verification:*** Final product testing ***Test method:*** Solvent extraction, GCMS or LCMS
	- Products for babies and children under 3 years old	0.001 % w/w	
	- Products that are in direct contact with the skin	0.005 % w/w	
	- Garments with limited skin contact and interior textiles	0.005 % w/w	
(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:		***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
	- Products for babies and children under 3 years old.	16 ppm	
	- All products that are in direct contact with the skin.	16 ppm	
	- Garments with limited skin contact and interior textiles.	75 ppm	
(iii) Biocides used to protect textiles during transportation and storage. ***Applicability:*** All products	Only biocides that contain active substances that are approved under Regulation (EC) No 528/2012 of the ropean Parliament and the Council (*) are permitted for use. Applicants should consult the most current authorisation list: http://ec.ropa./environment/biocides/annexi_and_ia.htm The following specific biocides are restricted:	n/a	***Verification:*** Declaration of non-use prior to shipping and storage supported by SDS.

	• Chlorophenols (their salts and esters) • Polychlorinated biphenyls (PCB) • Organotin compounds, including TBT, TPhT, DBT and DOT • -Dimethyl fumarate (DMFu)		

(*) Regulation () No 528/2012 of the ropean 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).

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

(v) Coatings, laminates and membranes ***Applicability:*** Where incorporated into textile structure	Polymers shall 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	For metal accessories: A migration limit shall apply to nickel-containing metal alloys that are in direct and prolonged contact with the skin.	Nickel 0.5 $\mu g/cm^2$/week	***Verification:*** Testing of the composition of the metal components.

Applicability: Where incorporated into garment structure	Additionally, testing shall be carried out for the presence of the following metals, to which the following limit values shall apply:		***Test methods:*** For nickel migration EN 12472-2005 EN 1811-1998+A1-2008 For other metals Detection – GC-ICP-MS
	Lead (Pb)	90 mg/kg	
	Cadmium (Cd): Products intended for babies and children under 3 years old	50 mg/kg	
	All other products including interior textiles	100 mg/kg	
	Chrome (Cr) where there is chrome plating	60 mg/kg	
	Mercury (Hg)	60 mg/kg	
	The following phthalates shall not be used in any plastic accessories: • DEHP (Bis-(2-ethylhexyl)-phthalate) • BBP (Butylbenzylphthalate) • DBP (Dibutylphthalate) • DMEP (Bis2-methoxyethyl) phthalate • 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)	n/a	***Verification:*** SDS is to be provided for the plastic formulation.

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, 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 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 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