EUROPEAN
COMMISSION

Brussels, XXX
[…](2012) XXX draft

COMMISSION DECISION

of XXX

establishing the ecological criteria for the award of the EU Ecolabel for bed mattresses

(Text with EEA relevance)

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel[1], and in particular Article 8(2) thereof,

After consulting the European Union Eco-labelling Board,

Whereas:

(1) Under Regulation (EC) No 66/2010, the EU Ecolabel may be awarded to products which have a reduced environmental impact during their entire life cycle.

(2) Regulation (EC) No 66/2010 provides that specific EU Ecolabel criteria are to be established according to product groups.

(3) Since the market volume of bed mattresses in the EU27 is significant and since impacts to the environment and risks for the human health may be associated with manufacturing materials and with the use and disposal of the mattress after its lifetime, it is appropriate to revise and keep the EU Ecolabel criteria for this product group.

(4) The measures provided for in this Decision are in accordance with the opinion of the Committee established by Article 16 of Regulation (EC) No 66/2010.

[1] OJ L 27, 30.1.2010, p. 1.

HAS ADOPTED THIS DECISION:

Article 1

1. The product group “bed mattresses” shall comprise products providing a surface to sleep or rest upon for indoor use.

2. The products consist of a cloth cover that is filled with materials and that can be placed on an existing supporting bed structure or designed for free standing. Materials filling and covering the bed mattresses may include latex and polyurethane foam, metal parts, textile fibres and fabrics.

3. The product group shall not comprise wooden and upholstered bed bases, inflatable mattresses and water mattresses, as well as mattresses classified under Council Directive 93/42/EEC (medical devices)[2].

Article 2

For the purpose of this Decision, the following definitions shall apply:. [To be revised and completed depending on the needs]

1. "Volatile organic compound (VOC)" means any organic compound having an initial boiling point less than or equal to 250°C, measured at a standard pressure of 101.3 kPa..

2. Inherently biodegradable substance means a substance that: [to be complete]

   - shows a percentage degradation of at least 60% within 28 days, when tested with one of the methods OECD 301 B, EN ISO 9439, OECD 301 C, OECD 302 C, OECD 301 D, EN ISO 10707, OECD 301 F, EN ISO 9408, EN ISO 10708 or EN ISO 14593; or

3. Non-biodegradable substance [to be complete]

4. Non-biodegradable and bioaccumulative substance [to be complete]

5. Readily biodegradable substance means a substance that:

   - shows a percentage degradation of at least 70% within 28 days, when tested with one of the methods OECD 301 A, OECD 301 E, EN ISO 7827, OECD 302 A, EN ISO 9887,OECD 302 B, or EN ISO 9888; or

   - that shows a percentage degradation of at least 80% within 28 days, when tested with one of the methods OECD 303 or EN ISO 11733; or

   - for which evidence of an equivalent level of biodegradation or elimination is presented, when these test methods are inapplicable.

Article 3

In order to be awarded the EU Ecolabel under Regulation (EC) No 66/2010, a product shall fall within the product group "bed mattresses" as defined in Article 1 of this Decision and shall comply with the criteria as well as the related assessment and verification requirements set out in the Annex to this Decision.

[2] OJ L 169, 12.7.1993, p. 1.

Article 4

The criteria for the product group "bed mattresses", as well as the related assessment and verification requirements, shall be valid for four years from the date of adoption of this Decision .

Article 5

For administrative purposes, the code number assigned to the product group "bed mattresses" shall be "014".

Article 6

Decision 2009/598/EC is repealed.

Article 7

1. By derogation from Article 6, applications for the EU Ecolabel for products falling within the product group 'bed mattresses' submitted before the date of adoption of this Decision shall be evaluated in accordance with the conditions laid down in Decision 2009/598/EC.

2. Applications for the EU Ecolabel for products falling within the product group 'bed mattresses' submitted from the date of adoption of this Decision but by xxxxx at the latest may be based either on the criteria set out in Decision 2009/598/EC or on the criteria set out in this Decision.

Those applications shall be evaluated in accordance with the criteria on which they are based.

3. Where the Ecolabel is awarded on the basis of an application evaluated in accordance with the criteria set out in Decision 2009/598/EC, that Ecolabel may be used for 12 months from the date of adoption of this Decision.

Article 8

This Decision is addressed to the Member States.

Done at Brussels, [insert date - the date of adoption of this Decision]

For the Commission
Janez POTOČNIK
Member of the Commission

ANNEX

FRAMEWORK

The aims of the criteria [to be completed if needed]

CRITERIA

Criteria for awarding the EU Ecolabel to bed mattresses:

A. Materials assembling the product

1. Latex foam
2. PUR foam
3. Spring and wires
4. Coconut fibres
5. Textiles (fabrics and fibres used as ticking or padding)
6. Glues and adhesives
7. Flame retardants
8. Biocides
9. Plasticizers

B. Use of the product

10. Restrictions on hazardous substances and mixtures in the final product
11. Emission of Volatile Organic Compounds (VOCs) from the mattress
12. Technical performance

C. End of life

13. Design for disassembly and recovery of materials

D. Consumer information

14. Information appearing on the EU Ecolabel
15. Additional information to consumers

Assessment and verification requirements

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

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

Where possible, the testing shall be performed by laboratories that meet the general requirements of EN ISO 17025[3] or equivalent.

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

[3] ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories

Where appropriate, competent bodies may require supporting documentation and may carry out independent verifications.

As pre-requisite, the product must meet all respective legal requirements of the country (countries) in which the product is intended to be placed on the market. The applicant shall declare the product's compliance with this requirement.

CRITERIA AREA "A": Materials assembling the product

Criterion 1. Latex foam

Note: The following requirements need to be met only if latex foam contributes to more than 5% of the total weight of the mattress

(a) Restricted substances

The concentrations of the substances listed below shall not exceed the following values:

Group of substances	Substance	Limit value (ppm)	Assessment and verification conditions
Chlorophenols	mono- and di-chlorinated phenols (salts and esters)	1.0	A
	Other chlorophenols	0.10	A
Heavy metal	As (Arsenic)	0.50	B
	Cd (Cadmium)	0.10	B
	Co (Cobalt)	0.50	B
	Cr (Chromium), total	1.0	B
	Cu (Copper)	2.0	B
	Hg (Mercury)	0.020	B
	Ni (Nickel)	1.0	B
	Pb (Lead)	0.50	B
	Sb (Antimony)	0.50	B
Pesticides*	Aldrin	0.040	C
	o,p-DDE	0.040	C
	p,p-DDE	0.040	C
	o,p-DDD	0.040	C
	p,p-DDD	0.040	C
	o,p-DDT	0.040	C
	p,p-DDT	0.040	C
	Diazinone	0.040	C
	Dichlorfenthion	0.040	C

	Dichlorvos	0.040	C
	Dieldrin	0.040	C
	Endrin	0.040	C
	Heptachlor	0.040	C
	Heptachlorepoxide	0.040	C
	Hexachlorbenzene	0.040	C
	Hexachlorcyclohexane	0.040	C
	Lindane	0.040	C
	Malathion	0.040	C
	Methoxichlor	0.040	C
	Mirex	0.040	C
	Parathion-ethyl	0.040	C
	Parathion-methyl	0.040	C
Others	Butadiene	1.0	D
* Only for foams composed of natural latex for at least 20% by weight			

Assessment and verification:

A. The applicant shall provide a test report presenting the results of the test procedure described in the EuroLatex ECO-Standard Version 14.02.02-english, available at http://www.eurolatex.com/EuroLatexECOStandard.pdf. 5 g of sample shall be milled and clorophenols shall be extracted in the form of phenol (PCP), sodium salt (SPP) or esters. The extracs shall be analysed by means of gas chromatography (GC). Detection shall be made with mass spectrometer or electron capture detector (ECD).

B. The applicant shall provide a test report presenting the results of the test described in the EuroLatex ECO-Standard Version 14.02.02-english, available at http://www.eurolatex.com/EuroLatexECOStandard.pdf. Milled sample material is eluted in accordance with DIN 38414-S4 in a ratio of 1:10. The resultant filtrate shall be passed through a 0.45 µm membrane filter (if necessary by pressure filtration). The solution obtained shall be examined for the content of heavy metals by atomic emission spectrometry with inductively coupled plasma (ICP-OES) or by atomic absorption spectrometry using a hydride or cold vapour process.

C. The applicant shall provide a test report presenting the results of the test described in the EuroLatex ECO-Standard Version 14.02.02-english, available at http://www.eurolatex.com/EuroLatexECOStandard.pdf. 2 g of sample is extracted in an ultrasonic bath with a hexane/dichloromethane mixture (85/15). The extract is cleaned up by acetonitrile agitation or by adsorption chromatography over florisil. Measurement and quantification are determined by gas chromatography with detection on an electron capture detector or by coupled gas chromatography/mass spectrometry. The testing on pesticides is requested for latex foams with a content of at least 20% natural latex.

D. The applicant shall provide a test report presenting the results of the test described in the EuroLatex ECO-Standard Version 14.02.02-english, available at http://www.eurolatex.com/EuroLatexECOStandard.pdf. Following milling and weighing of the foam, headspace sampling shall be performed. Butadiene content shall be determined by gas chromatography with detection by flame ionisation. Alternatively a certificate of the raw material supplier can be requested.

(b) Emission of Volatile Organic Compounds (VOCs)

The room concentrations of the substances reported below, calculated through the test chamber method, shall not exceed the following values after a period of 30 hours.

Substance	**Limit value (mg/m³)**
1,1,1 – trichloroethane	0.20
4-Phenylcyclohexene	0.020
Carbon Disulphide	0.020
Formaldehyde*	0.0050
Nitrosamines**	0.00050
Styrene	0.010
Tetrachloroethylene	0.150
Toluene	0.10
Trichlorethylene	0.050
Vinyl chloride	0.00010
Vinyl cyclohexene	0.0020
Aromatic hydrocarbons (total)	0.30
VOCs (total)	0.50
* Alternatively, the concentration of formaldehyde shall not exceed 20 ppm as measured with EN ISO 14184-1.	
** n-nitrosodimethylamine (NDMA), n-nitrosodiethylamine (NDEA), n-nitrosomethylethylamine (NMEA), n-nitrosodi- i-propylamine (NDIPA), n-nitrosodi- n-propylamine (NDPA), n-nitrosodi- n- butylamine (NDBA), n-nitrosopyrrolidinone (NPYR), n-nitrosopiperidine (NPIP), n-nitrosomorpholine (NMOR)	

Assessment and verification: The applicant shall provide a test report presenting the results of the test described in the EuroLatex ECO-Standard Version 14.02.02-english, available at http://www.eurolatex.com/EuroLatexECOStandard.pdf. A test chamber analysis shall be performed in accordance with the standard EN ISO 16000-9. The wrapped sample should be stored at room temperature at least for 24 hours. After this period the sample will be unwrapped and immediately transferred into the test chamber. The sample will be placed on a sample holder, which allows air access from all sides. The climatic factors should be adjusted according to EN ISO 16000-9. For comparison of test results, the area specific ventilation rate

(q=n/l) should be 1. The ventilation rate should be between 0,5 and 1. The air sampling will be started 24 hours after chamber loading and finished latest 30 hours.

The analysis of formaldehyde and other aldehydes shall comply with the standard EN ISO 16000-3. Alternatively, formaldehyde emissions shall be determined following the test method EN ISO 14184-1. 5 g of sample shall be sunk into 100 g of water and heated to 40°C for 1 hour. Formaldehyde shall be extracted with acetylacetone and analysed colorimetrically.

The analysis of nitrosamines shall comply with Hauptverband der gewerblichen Berufsgenossenschaften ZH 1/120.23 (or equivalent). The following nitrosamines shall be tested: n-nitrosodimethylamine (NDMA), n-nitrosodiethylamine (NDEA), n-nitrosomethylethylamine (NMEA), n-nitrosodi- i-propylamine (NDIPA), n-nitrosodi- n-propylamine (NDPA), n-nitrosodi- n- butylamine (NDBA), n-nitrosopyrrolidinone (NPYR), n-nitrosopiperidine (NPIP), n-nitrosomorpholine (NMOR).

The analysis of the other VOCs shall comply with the standard EN ISO 16000-6.

(c) Dyes and pigments

Criterion 5(e) shall be respected

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion, together with supporting documentation.

Criterion 2. PUR foam

Note: The following requirements need to be met only if PUR foam contributes to more than 5% of the total weight of the mattress

(a) Restricted substances

The concentrations of the substances listed below shall not exceed the following values:

Group of substances	Substance (acronym, CAS number, element symbol)	Limit value	Assessment and verification conditions
Biocides	Substances meeting requirement of criterion 8	Not added intentionally	A
Heavy Metals	As (Arsenic)	0.20 ppm	B
	Cd (Cadmium)	0.10 ppm	B
	Co (Cobalt)	0.50 ppm	B
	Cr (Chromium), total	1.0 ppm	B
	Cr VI (Chromium VI)	0.010 ppm	B
	Cu (Copper)	2.0 ppm	B
	Hg (Mercury)	0.020 ppm	B
	Ni (Nickel)	1.0 ppm	B

	Pb (Lead)	0.20 ppm	B
	Sb (Antimony)	0.50 ppm	B
	Se (Selenium)	0.50 ppm	B
Isocyanates	Total chlorine content	0.070 % w/w	tbc
Plasticizers	Di-iso-nonylphthalate (DINP, 28553-12-0)	-	-
	Di-n-octylphthalate (DNOP, 117-84-0)	-	-
	Di (2-ethylhexyl)-phthalate (DEHP, 117-81-7)	-	-
	Di-iso-decylphthalate (DIDP, 26761-40-0)	-	-
	Butylbenzylphthalate (BBP, 85-68-7)	-	-
	Dibutylphthalate (DIBP, 84-74-2)	-	-
	Sum	0.010 % w/w	C
	Phthalate plasticizers	Not added intentionally	A
TDA and MDA	2,4 Toluenediamine (2,4 TDA, 95-80-7)	5.0 ppm	D
	4,4" Diaminodiphenylmethane (4,4" MDA, 101-77-9)	5.0 ppm	D
Tinorganic substances	Tributyltin (TBT)	50 ppb	E
	Dibutyltin (DBT)	100 ppb	E
	Monobutyltin (MBT)	100 ppb	E
	Tetrabutyltin (TeBT)	-	-
	Monooctyltin (MOT)	-	-
	Dioctyltin (DOT)	-	-
	Tricyclohexyltin (TcyT)	-	-
	Triphenyltin (TPhT)	-	-
	Sum	500 ppb	E
Others	Chlorinated or brominated dioxines or furans	Not added intentionally	A
	Chlorinated hydrocarbons (1,1,2,2-Tetrachloroethane, Pentachloroethane, 1,1,2-	Not added intentionally	A

	Trichloroethane, 1,1-Dichloroethylene)		
	Chlorinated phenols (PCP, TeCP, 87-86-5)	Not added intentionally	A
	Hexachlorocyclohexane (58-89-9)	Not added intentionally	A
	Monomethyldibromo–Diphenylmethane (99688-47-8)	Not added intentionally	A
	Monomethyldichloro-Diphenylmethane (81161-70-8)	Not added intentionally	A
	Nitrites	Not added intentionally	A
	Polybrominated Biphenyls (PBB, 59536-65-1)	Not added intentionally	A
	Pentabromodiphenyl Ether (PeBDE, 32534-81-9)	Not added intentionally	A
	Octabromodiphenyl Ether (OBDE, 32536-52-0)	Not added intentionally	A
	Polychlorinated Biphenyls (PCB, 1336-36-3)	Not added intentionally	A
	Polychlorinated Terphenyls (PCT, 61788-33-8)	Not added intentionally	A
	Tri-(2,3-dibromo-propyl)-phosphate (TRIS, 126-72-7)	Not added intentionally	A
	Trimethylphosphate (512-56-1)	Not added intentionally	A
	Tris-(aziridinyl)-phosphinoxide (TEPA, 5455-55-1)	Not added intentionally	A
	Tris(2-chloroethyl)-phosphate (TCEP, 115-96-8)	Not added intentionally	A
	Dimethyl methylphosphonate (DMMP, 756-79-6)	Not added intentionally	A

Assessment and verification:

A. The applicant shall declare that the substance was not added intentionally to the foam formulation.

B. The applicant shall provide a test report presenting the results of the test described in the EuroLatex ECO-Standard Version 14.02.02-english, available at http://www.eurolatex.com/EuroLatexECOStandard.pdf. Milled sample material is eluted in accordance with DIN 38414-S4 in a ratio of 1:10. The resultant filtrate shall be passed

through a 0.45 µm membrane filter (if necessary by pressure filtration). The solution obtained shall be examined for the content of heavy metals by atomic emission spectrometry with inductively coupled plasma (ICP-OES) or by atomic absorption spectrometry using a hydride or cold vapour process.

C. The applicant shall provide a test report presenting the results of the test described in the CertiPUR Technical Requirements for the CertiPUR label, available at http://www.europur.com/uploads/DocumentsLibrary/documents/CertiPUR_Technical_Paper_11.05.2011.pdf. The sampling procedure outlined there will be followed. The sample must be a composite of 6 pieces to be taken from beneath each samples face (to a maximum of 2 cm from the surface). Extraction shall be performed with dichloromethane using validated method and followed by analysis with GC/MS or HPLC/UV.

D. The applicant shall provide a test report presenting the results of the test described in the CertiPUR Technical Requirements for the CertiPUR label, available at http://www.europur.com/uploads/DocumentsLibrary/documents/CertiPUR_Technical_Paper_11.05.2011.pdf. The sampling procedure outlined there will be followed. The sample must be a composite of 6 pieces to be taken from beneath each samples face (to a maximum of 2 cm from the surface). Extraction shall be performed with 1% aqueous acetic acid solution. Four repeat extractions of the same foam sample shall be performed maintaining the sample weight to volume ratio of 1:5 in each case. The extracts shall be combined, made up to a known volume, filtered and analysed by HPLC-UV or HPLC-MS. If HPLC-UV shall be performed and interference shall be suspected, reanalysis with HPLC-MS should be performed.

E. The applicant shall provide a test report presenting the results of the test described in the CertiPUR Technical Requirements for the CertiPUR label, available at http://www.europur.com/uploads/DocumentsLibrary/documents/CertiPUR_Technical_Paper_11.05.2011.pdf. The sampling procedure outlined there will be followed. The sample must be a composite of 6 pieces to be taken from beneath each sample face (to a maximum of 2 cm from the surface). Extraction shall be performed for 1 hour in an ultrasonic bath at room temperature. The extracting agent shall be a mixture composed as it follows: 1750 ml methanol + 300 ml acetic acid + 250 ml buffer (pH 4.5). The buffer shall be a solution of 164 g of sodium acetate in 200 ml of water and 165 ml acetic acid, to be diluted with water to a volume of 2000 ml. After extraction the alkyl tin species shall be derivatized by adding sodium tetraethylborate solution in THF. The derivative shall be extracted with n-hexane and the sample shall be submitted to a second extraction procedure. Both hexane extracts shall be combined and further used to determine the organotin compounds by gas chromatography with mass selective detection in SIM modus.

(b) Emission of Volatile Organic Compounds (VOCs)

The room concentrations of the substances reported below, calculated through the test chamber method, shall not exceed the following values after a period of 30 hours.

Substance (CAS number)	**Limit value (mg/m³)**
Formaldehyde (50-00-0)	0.0050
Toulene (108-88-3)	0.10
Styrene (100-42-5)	0.0050
Each CMR substances class 1a or 1b	0.0050

Sum of all CMR substances class 1a or 1b*	0.040
Aromatic hydrocarbons	0.50
VOCs (total)	0.50
* According to EU legislation: http://www.dguv.de/ifa/de/fac/kmr/kmr_neue_bezeichnungen.pdf	

Assessment and verification: The applicant shall provide a test report presenting the results of the test described in the CertiPUR Technical Requirements for the CertiPUR label, available at http://www.europur.com/uploads/DocumentsLibrary/documents/CertiPUR_Technical_Paper_11.05.2011.pdf. The sampling procedure outlined there will be followed. The foam sample is placed on the bottom of an emission test chamber and is conditioned for 3 days at 23°C, applying an air exchange rate n of 0.5 per hour and a chamber loading L of 0.4 m^2/m^3 (= total exposed surface of sample in relation to chamber dimensions without sealing edges and back) in accordance with EN ISO 16000-9 and EN ISO 16000-11. Sampling will be done 72 ± 2 h after loading of the chamber during 1 hour on Tenax TA and DNPH cartridges for respectively VOC and formaldehyde analysis. The emissions of volatile organic compounds (VOC) are being trapped on Tenax TA sorbent tubes and subsequently analysed by means of thermo-desorption-GC-MS in accordance to EN ISO 16000-6. Results are semi-quantitatively expressed as toluene equivalents. All specified individual components are reported from a concentration limit ≥ 1 µg/m^3. TVOC value is the sum of all components with a concentration ≥ 1µg/m^3 and eluting within the retention time window from n-hexane (C6) to n-hexadecane (C16) inclusive. The sum of all CMR substances class 1a & 1b is the sum of all these substances with a concentration ≥ 1 µg/m^3. In case the test results exceed the standard limits, substance specific quantification needs to be performed. Formaldehyde can be determined by collection of the sampled air onto DNPH cartridge and subsequent analysis by HPLC/UV in accordance to EN ISO 16000-3.

Note:

- Chamber volume has to be 0.5 or 1 m^3.
- 1 sample (25 cm x 20 cm x 15 cm) is used in a test chamber of 0.5 m^3 standing vertically on one 20 cm x 15 cm side.
- 2 samples (25 cm x 20 cm x 15 cm) are used in a 1 m^3 test chamber standing vertically on one 20 cm x 15 cm side; in this case both samples are placed in the test chamber with 15 cm distance in between.

(c) Dyes and pigments

Criterion 5(e) shall be respected

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion, together with supporting documentation.

(d) Blowing agents

Halogenated organic compounds shall not be used as blowing agents or as auxiliary blowing agents.

Assessment and verification: The applicant shall provide a declaration that these blowing agents have not been used.

Criterion 3. Wire and springs

Note: The following requirements need to be met only if wire and springs contribute to more than 5% of the total weight of the mattress.

(a) Degreasing

If degreasing and/or cleaning of wire and/or springs is carried out with organic solvents, use shall be made of a closed cleaning/degreasing system.

Assessment and verification: The applicant shall provide a corresponding declaration.

(b) Galvanisation

The surface of springs shall not be covered with a galvanic metallic layer.

Assessment and verification: The applicant shall provide a corresponding declaration.

Criterion 4. Coconut fibres

The following requirement needs to be met only if coconut fibre contribute to more than 5% of the total weight of the mattress.

Note: If coconut fibre material is rubberised, it shall comply with the criteria applicable to latex foam.

Assessment and verification: The applicant shall either provide a declaration that rubberised coconut fibres are not used, or provide the test reports required in criterion 1 for latex foam.

Criterion 5. Textiles (fabrics and fibres used as ticking, padding or removeable covers)

Ticking materials must respect the following sub-criteria

5(a) on hazardous substances,

5(b) on auxiliary chemicals,

5(c) on detergents, fabric softeners and complexing agents,

5(d) on bleaching agents,

5(e) on dyes and pigments,

5(f) on wastewater discharges from dyeing processes,

5(g) on wastewater discharges from wet processing,

5(h) on durability,

5(i) on dimensional change.

Padding materials made of fibres must respect criteria 5(a), 5(d), 5(e) 5(g). In addition to these, criteria 5(b) and 5(g) must also be respected if wool is used as padding material.

a) General requirements on hazardous substances (including flame retardants, biocides and plasticizers)

Criteria 7 (flame retardants), 8 (biocides) 9 (plasticizers) and 10 (hazardous substances) shall be respected.

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion, together with supporting documentation.

(b) Auxiliary chemicals

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:

- Alkylphenols:
  - 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
- ~~linear alkylbenzene sulfonates (LAS),~~
- 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)

Assessment and verification: The applicant shall provide a declaration of non-use. Oeko-tex 100 shall be accepted as demonstrating compliance with non-use of alkylphenols.

(c) Detergents, fabric softeners and complexing agents

At each dyeing, printing and finishing stage in production of the mattress ticking, at least 95 % by weight of fabric softeners, complexing agents and detergents by weight shall be readily biodegradable under aerobic conditions.

All non-ionic and cationic surfactants present in detergents and fabrics softeners must also be readily biodegradable under anaerobic conditions.

Assessment and verification: The applicant shall provide appropriate documentation, safety data sheets, test reports and/or declarations, indicating the test methods and results as above, and showing compliance with this criterion for all detergents, fabric softeners and complexing agents used.

The Detergents Ingredients Database shall be used as the reference point for verifying the ready biodegradability of detergents, fabric softeners and complexing agents. The DID can be consulted here:

http://ec.europa.eu/environment/ecolabel/documents/did_list/didlist_part_a_en.pdf

(d) Bleaching agents

Chlorine agents shall not be used for the bleaching of any yarns, fabrics or end-products with the exception of man-made cellulose fibres.

For man-made cellulose fibres, the level of organically bound halogens (OX) in the fibres shall not exceed 150 ppm.

Assessment and verification: The applicant shall provide a declaration of non-use of chlorinated bleaching agents. For man-made cellulose fibres, the applicant shall provide a test report, using the following test method: EN ISO 11480.97 (controlled combustion and microcoulometry).

(e) Dyes and pigments

The following sub-criteria apply to the use of dyes used on the mattress ticking and cover. Additional requirements are also contained within derogation conditions for dyes under sub-criteria 10 on hazardous substances. These conditions relate to the handling of dyes in the dye house and colour removal from wastewater from dye houses.

<table>
<tr><th>Group of substances</th><th>Criterion</th><th>Assessment and verification</th></tr>
<tr><td>i.Chrome mordant dyes</td><td>Chrome mordant dyes shall not be used</td><td>A</td></tr>
<tr><td>ii.Metal complex dyes</td><td>Metal complex dyes based on cadmium, mercury and lead shall not be used.

Metal complex dyes based on copper, chromium and nickel shall only be permitted for dyeing: wool, polyamide or blends of these fibres with man-made cellulose fibres (e.g. viscose, modal, lyocell, cupro).</td><td>B</td></tr>
<tr><td>iii. Azo dyes</td><td>Azo dyes shall not be used that may cleave to one of the following aromatic amines. An indicative list of dyes is provided to assist with self-declaration (see annex x)

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

2,4-diaminotoluene	95-80-7	
2,4,5-trimethylaniline	137-17-7	
o-anisidine (2-Methoxyanilin)	90-04-0	
2,4-Xylidine	95-68-1	
2,6-Xylidine	87-62-7	
4-aminoazobenzene	60-09-3	

iv. Dyes that are carcinogenic, mutagenic or toxic to reproduction

The following dyes shall not be used:

Dyes that are carcinogenic, mutagenic or toxic to reproduction	**CAS number**
C.I. Acid Red 26	3761-53-3
C.I. Basic Red 9	569-61-9
C.I. Basic Violet 14	632-99-5
C. I. Direct Black 38	1937-37-7
C. I. Direct Blue 6	2602-46-2
C. I. Direct Red 28	573-58-0
C.I. Disperse Blue 1	2475-45-8
C.I. Disperse Orange 11	82-28-0
C. I. Disperse Yellow 3	2832-40-8

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v. Potentially sensitising dyes

The following dyes shall not be used:

Disperse dyes that are potentially sensitising	**CAS number**
C.I. Disperse Blue 1	2475-45-8
C.I. Disperse Blue 3	2475-46-9
C.I. Disperse Blue 7	3179-90-6
C.I. Disperse Blue 26	3860-63-7
C.I. Disperse Blue 35	12222-75-2
C.I. Disperse Blue 102	12222-97-8
C.I. Disperse Blue 106	12223-01-7
C.I. Disperse Blue 124	61951-51-7
C.I. Disperse Brown 1	23355-64-8
C.I. Disperse Orange 1	2581-69-3
C.I. Disperse Orange 3	730-40-5
C.I. Disperse Orange 37	12223-33-5
C.I. Disperse Orange 76	13301-61-6

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	C.I. Disperse Red 1	2872-52-8	
	C.I. Disperse Red 11	2872-48-2	
	C.I. Disperse Red 17	3179-89-3	
	C.I. Disperse Yellow 1	119-15-3	
	C.I. Disperse Yellow 3	2832-40-8	
	C.I. Disperse Yellow 9	6373-73-5	
	C.I. Disperse Yellow 39	12236-29-2	
	C.I. Disperse Yellow 49	54824-37-2	
vi. Extractable heavy metals in the final fabric	The following limit values apply to mattress covers intended for babies and children under 3 years old: Antimony (Sb) Arsenic (As) 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) The following limit values apply to all other mattress covers: 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 mg/kg 30.0 0.2 0.1 1.0 0.5 1.0 25.0 0.2 1.0 0.5 0.02 All mg/kg 30.0 1.0 0.1 2.0 1.0 4.0	D

	- All other textiles	1.0	
	Copper (Cu)	50.0	
	Lead (Pb)	1.0	
	Nickel (Ni)	1.0	
	Mercury (Hg)	0.02	

Assessment and verification:

A. The applicant shall provide a declaration of non use

B. The applicant shall provide a declaration of non-use

C. The applicant shall provide a declaration of non-use of dyes that may cleave to these amines. Should this declaration be subject to verification the following standard shall be used: BS EN 14362-1 and 2. (Note: false positives may be possible with respect to the presence of 4-aminoazobenzene, and confirmation is therefore recommended)

D. The applicant shall provide final product testing as verification for the limit values. The tests used should be 1) *Extraction:* DIN EN ISO 105-E04-2009 (Acid sweat solution) and 2) *Detection:* GC-ICP-MS.

For sub-criteria iii/iv/v/vi Oeko-tex 100 certification shall be accepted as demonstrating compliance.

~~**(f) Wastewater discharges from dyeing processes**~~

~~Emissions to water after treatment shall not exceed: Cr 50 mg/kg; Cu 75 mg/kg; Ni 75 mg/kg~~

~~***Assessment and verification:*** The applicant shall provide a declaration of non-use or documentation and test reports using the following test methods: EN ISO 8288 for Cu and Ni, BS EN 1233 for Cr.~~

(f) Wastewater discharges from wet processing

Wastewater from wet-processing sites shall be subject to the following requirements which apply to discharges to sewer prior to municipal wastewater treatment and to final discharges to the environment. All wet processing sites must comply with the requirement for final discharges which must be verified based on an annual average.

Receiving body	**Criteria requirement**
Discharges to sewer	85% reduction in COD from untreated effluent.
Discharges to the environment	20 g/kg COD

Assessment and verification: The applicant shall provide detailed documentation and test reports, using EN ISO 6060, showing compliance with this criterion, together with a declaration of compliance.

If the effluent is treated on site and discharged directly to surface waters, it shall also have a pH between 6 and 9 (unless the pH of the receiving water is outside this range) and a temperature of less than 40°C (unless the temperature of the receiving water is above this value).

(g) Durability (Mechanical resistance)

Mattress ticking must achieve satisfactory mechanical properties, which are defined by the following testing standards:

Property	Requirement	Test method
Tear strength	Woven fabrics ≥ 15 N Nonwoven fabrics ≥ 20 N Knitted fabrics: not applicable	EN ISO 13937-2 (woven fabrics) EN ISO 9073-4 (nonwoven)
Seam slippage	Woven fabrics ≥ 16 picks: maximum 6 mm Woven fabrics < 16 picks: maximum 10 mm Knitted fabrics and nonwovens: not applicable	EN ISO 13936-2 (under a load of 60 N for all woven fabrics)
Tensile strength	Woven fabrics ≥ 15 N Knitted fabrics and nonwovens: not applicable	EN ISO 13934-1

Assessment and verification: The applicant shall provide reports describing the results of the tests performed according to EN ISO 13937-2 or EN ISO 9073-4 for tear strength, EN ISO 13936-2 (under a load of 60 N) for seam slippage and EN ISO 13934-1 for tensile strength.

(h) Dimensional change

The dimensional changes after washing and drying shall not exceed +/- 2% for mattress ticking or additional covers that are washable and removable.

This criterion does not apply to products clearly labelled "dry clean only" or equivalent (insofar as it is normal practice for such products to be so labelled).

Assessment and verification: For mattress covers to be cleaned in a domestic washing machine applicants shall provide test reports describing the results of the tests performed according to the standards EN ISO 6330, EN ISO 5077 and as follows: 3 washes at temperatures as indicated on the product, with tumble drying after each washing cycle unless other drying procedures are indicated on the product. For mattress covers that are to be washed in industrial laundries ISO 15797 shall be used at a minimum of 75 °C or as indicated on the product.

Criterion 6. Glues and adhesives

Glues containing organic solvents shall not be used. Glues and adhesives used for assembling shall also respect Criterion 10 on hazardous substances.

Assessment and verification: The applicant shall provide a declaration that glues and adhesives used comply with this criterion, together with supporting documentation.

Criterion 7. Flame retardants

Criterion 10 on hazardous substances shall be respected. In addition, the following flame retardants shall not be added intentionally to the product or to any homogeneous part of it:

Name	CAS number	Acronym
Decabromodiphenlyether	1163-19-5	decaBDE
Hexabromocyclododecane	25637-99-4	HBCDD
Octabromodiphenylether	32536-52-0	octaBDE
Pentabromodiphenylether	32534-81-9	pentaBDE
Polybrominated biphenyls	59536-65-1	PBB
Short chain chlorinated paraffins (C10-C13)	85535-84-8	SCCP
Tri-(2,3-dibromopropyl)-phosphate	126-72-7	TRIS
Tris(2-chloroethyl)phosphate	115-96-8	TCEP
Tris-(aziridinyl)-phosphinoxide	545-55-1	TEPA

Assessment and verification: The applicant shall provide a declaration supported by declarations from manufacturers of substances, as appropriate, confirming that the listed substances have not been included in the product. A list of substances added to enhance the flame retarding properties of the mattress is to be provided with concentrations and related H statements / R phrases. Oeko-tex 100 certification shall be accepted as demonstrating compliance.

Criterion 8. Biocides

Criterion 10 on hazardous substances shall be respected. In addition, the following biocides shall not be added intentionally to the product or to any homogeneous part of it:

1. Biocidal products that do not contain biocidal active substances authorised under Biocides Directive 98/8/EC and Biocides Regulation (EC) No 528/2012. Applicants should consult the following listing of authorised biocides:

http://ec.europa.eu/environment/biocides/annexi_and_ia.htm

2. Chlorophenols (their salts and esters), polychlorinated biphenyl (PCB), organo-tin compounds and diemthyl fumarate (DMFu).

3. Biocides included in the following list:

Name	CAS number	Name	CAS number
2,4,5-T	93-76-5	Fenvalerate	51630-58-1
2,4-D	94-75-7	Heptachlor	76-44-8
Azinophosmethyl	86-50-0	Heptachloroepoxide	1024-57-3
Azinophosethyl	2642-71-9	Hexachlorobenzene	118-74-1
Aldrine	309-00-2	Hexachlorcyclohexane, α-	319-84-6
Bromophos-ethyl	4824-78-6	Hexachlorcyclohexane, β-	319-85-7
Captafol	2425-06-1	Hexachlorcyclohexane, δ-	319-86-8
Carbaryl	63-25-2	Isodrine 6	465-73-
Chlordane	57-74-9	Kelevane 1	4234-79-
Chlordimeform	6164-98-3	Kepone	143-50-0
Chlorfenvinphos	470-90-6	Lindane	58-89-9
Coumaphos	56-72-4	Malathion	121-75-5
Cyfluthrin	68359-37-5	MCPA	94-74-6
Cyhalothrin	9 1465-08-6	MCPB	94-81-5
Cypermethrin	52315-07-8	Mecoprop	93-65-2
DEF	78-48-8	Metamidophos	10265-92-6
Deltamethrin	52918-63-5	Methoxychlor	72-43-5
DDD	53-19-0, 72-54-8	Mirex	2385-85-5
DDE	3424-82-6, 72-55-9,	Monocrotophos	6923-22-4
DDT	50-29-3, 789-02-6	Parathion	56-38-2
Diazinon	333-41-5	Parathion-methyl	298-00-0
Dichlorprop	120-36-2	Phosdrin/Mevinphos	7786-34-7
Dicrotophos	141-66-2	Perthane	72-56-0
Dieldrine	60-57-1	Propethamphos	31218-83-4
Dimethoate	60-51-5	Profenophos	41198-08-7
Dinoseb and salts	88-85-7	Quinalphos	13593-03-8
Endosulfan, α-	959-98-8	Strobane	8001-50-1
Endosulfan, β-	33213-65-9	Telodrine	297-78-9
Endrine	72-20-8	Toxaphene	8001-35-2
Esfenvalerate	66230-04-4	Trifluralin	1582-09-8

***Assessment and verification**:* The applicant shall provide a declaration supported by declarations from manufacturers of substances, as appropriate, confirming that the listed substances have not been included in the product. A list of biocidal products added is to be provided with concentrations and related H statements / R phrases. Additional verification tests may be required:

- for Chlorophenols (their salts and esters), polychlorinated biphenyl (PCB), organo-tin compounds by derivatisation with acetic anhydride, determination by capillary gas-liquid chromatography with an electron capture detector (sum limit value: 0.05 mg/kg).

for diemthyl fumarate (DMFu) by solvent extraction and gas chromatography–mass spectrometry (limit value: 0.1 mg/kg).

Oeko-tex 100 certification shall be accepted as demonstrating compliance.

Criterion 9. Plasticizers

Criterion 10 on hazardous substances shall be respected. In addition, the following plasticizers shall not be added intentionally to the product or to any homogeneous part of it:

Name	CAS number	Acronym
Di-iso-nonylphtalate (*)	28553-12-0 68515-48-0	DINP
Di-n-octylphthalate	117-84-0	DNOP
Di(2-ethylhexyl)-phthalate	117-81-7	DEHP
Diisodecylphthalate (*)	26761-40-0 68515-49-1	DIDP
Butylbenzylphthalate	85-68-7	BBP
Dibutuylphthalate	84-74-2	DBP
Di-iso-butylphthalate	84-69-5	DIBP
Di-C6-8-branched alkyphthalates	71888-89-6	DIHP
Di-C7-11-branched alkylphthalates	68515-42-4	DHNUP
Di-n-hexylphthalate	84-75-3	DHP
Di-(2-methoxyethyl)-phthalate	117-82-8	DMEP

(*) only for baby mattresses

The sum of the prohibited plasticizers shall be lower than 0.1% by weight.

Assessment and verification: The applicant shall provide a declaration supported by declarations from manufacturers of substances based on SDS for the formulation of the polymer, as appropriate, confirming that the listed substances have not been included in the product. A list of plasticizers added is to be provided with concentrations and related H statements / R phrases. Additional verification tests may be required: extraction form a

sample shall be performed with dichloromethane using validated method and followed by analysis with GC/MS or HPLC/UV. Oeko-tex 100 certification shall be accepted as demonstrating compliance.

CRITERIA AREA "B": The final product and its use

Criterion 10. Hazardous substances

10a. Substances of Very High Concern that may be contained within the bed mattress

The mattress or any homogenous components of the mattress shall not contain substances that meet the criteria in Article 57 of Regulation (EC) No 1907/2006 and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) or have been identified according to the procedure described in Article 59(1) which establishes the Candidate List for Substances of Very High Concern.

No derogation shall be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006, or substances meeting criteria of Article 57 of Regulation (EC) No 1907/2006, which are present in an article or in any homogenous part of a complex article in concentrations higher than 0.1 % w/w. The specific concentration limits of substances determined in accordance with Article 10 of Regulation (EC) No1272/2008 shall be applied when they are lower than 0.1 %.

Assessment and verification: Applicants shall screen the Candidate List that is current at the time of application for substances that may be present in the final product. The applicant shall provide a declaration of non-use for relevant Candidate List and SVHC substances. The list of substances identified as substances of very high concern in accordance with Article 59 of Regulation (EC) No 1907/2006 are included in the Candidate List is available at:

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

Criterion 10b. Hazardous substances in the mattress structure, padding and textile coverings. The mattress and any homogenous components of the mattress (including substances applied to padding, mattress ticking and removeable covers during textile dyeing, printing and finishing processes) shall not contain substances or mixtures that meet the criteria for classification in accordance with Regulation (EC) No 1272/2008 with the listed hazard classes or risk phrases.

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Concentration limits for substances or mixtures meeting the criterion for classification in the hazard classes shall not exceed the generic or specific concentration limits determined in accordance with the Article 10 of Regulation (EC) No1272/2008 unless specified otherwise in a derogation listed within this criteria. Where specific concentration limits are determined they shall prevail against the generic ones.

Hazard Statement [1]	**Risk Phrase** [2]
H300 Fatal if swallowed	R28
H301 Toxic if swallowed	R25
H304 May be fatal if swallowed and enters airways	R65
H310 Fatal in contact with skin	R27
H311 Toxic in contact with skin	R24
H330 Fatal if inhaled	R23/26
H331 Toxic if inhaled	R23
H340 May cause genetic defects	R46
H341 Suspected of causing genetic defects	R68
H350 May cause cancer	R45
H350i May cause cancer by inhalation	R49
H351 Suspected of causing cancer	R40
H360F May damage fertility	R60
H360D May damage the unborn child	R61
H360FD May damage fertility. May damage the unborn child	R60/61/60-61
H360Fd May damage fertility. Suspected of damaging the unborn child	R60/63
H360Df May damage the unborn child. Suspected of damaging fertility	R61/62
H361f Suspected of damaging fertility	R62
H361d Suspected of damaging the unborn child	R63
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.	R62-63
H362 May cause harm to breast fed children	R64
H370 Causes damage to organs	R39/23/24/25/26/27/28
H371 May cause damage to organs	R68/20/21/22

H372 Causes damage to organs	R48/25/24/23
H373 May cause damage to organs	R48/20/21/22
H400 Very toxic to aquatic life	R50
H410 Very toxic to aquatic life with long-lasting effects	R50-53
H411 Toxic to aquatic life with long-lasting effects	R51-53
H412 Harmful to aquatic life with long-lasting effects	R52-53
H413 May cause long-lasting effects to aquatic life	R53
EUH059 Hazardous to the ozone layer	R59
EUH029 Contact with water liberates toxic gas	R29
EUH031 Contact with acids liberates toxic gas	R31
EUH032 Contact with acids liberates very toxic gas	R32
EUH070 Toxic by eye contact	R39-41
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled	R42
H317: May cause allergic skin reaction	R43

Notes

1. According to Regulation (EC) No 1272/2008 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

2. According to Directive 67/548/EEC and the REACH Directive 2006/121/EC and Directive 1999/45/EC as amended

The hazard classes and risk phrases generally apply to substances. However, where information on substances cannot be obtained, the classification rules for mixtures shall be applied. The use of substances or mixtures in the manufacturing of a mattress which upon processing change their properties in a way that the identified hazard no longer applies is exempted from the above requirement.

The following substances are specifically derogated from the requirements of this criteria:

Substance / Group of substances (hazard statements of concern)	Derogation conditions
Antimony Trioxide - ATO (H351)	The substance must be used as catalyst in polyester or as flame retardant synergist in textiles
Nickel (H317, H351, H372)	The substance must be contained in stainless steel
Functional substances used in textiles. Specific derogations relate to: - Dyes (H411, H412, H413, H300-331, H317 and H334). Concentration limit: 3.0% - Flame retardants (H317, H373, H411, H412, H413). Concentration limit: 20.0% - Stain repellents (H411, H412, H413). Concentration limit: 0.3% *The relevance/need for further textile derogations for brighteners, softeners and cross linking agents is to be checked.* Process residues that may remain on the textile material. These may include carriers, leveling agents and surfactants: - Hazard classes in Category B are derogated. Concentration limit: 1.0%	These derogations are subject to the maximum concentration limits stipulated and the derogation conditions listed under Textile Criteria 14. *Manufacturers have expressed concern about the difficulty of being able to comply with the textile criteria. It is therefore for discussion/agreement whether to apply or omit the textile derogation conditions for dyes, flame retardants and stain repellents. These conditions relate to handling and control of emissions from hazardous substances at production sites.*
Glues and adhesives	The substances must not be classified as H351, H350, H340, H350i, H360F, H360D, H361f, H361d H360FD, H361fd, H360Fd, H360Df, H331, H330, H311, H301, H310, H300, H370, H372

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

The applicant shall provide a listing of all the main components of the mattress. The applicant shall screen the composition of each component for substances that may be classified with hazards in the criteria. Applicants shall select the appropriate form of verification for each component. The main forms of verification are foreseen as follows:

- Components manufactured according to a formulation (eg. latex foam, PUR foam, glues and adhesives, plasticizers): SDS shall be compiled for the substances and mixtures used in the formulation which remain in the final product, either as an intrinsic part of the components structure or as a process residue.
- Chemical recipes used to impart function to a textile component (eg. mattress ticking, padding, flame retardants, biocides, plasticizers, textile auxiliaries and detergents, bleaching agents, dyes and pigments): SDS shall be compiled for the substances and mixtures used in textile recipes and formulations which remain in the final product from the dyeing, printing and/or finishing stages.
- Homogenous materials that have received some form of treatment or may contain contaminants or impurities (eg. springs and wires, coconut fibres): SDS shall be compiled for the substances and mixtures used in the formulation of treatments applied to materials. Chemical impurities and contaminants that are present above a cut-off limit of 0.1% w/w shall be identified and characterised.

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

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

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

Criterion 11. Emission of Volatile Organic Compounds (VOCs) from the mattress

The contribution of mattresses to the VOC content of the indoor air shall not exceed the final values reported below, for a period of 7 days or, alternatively, 28 days.

Values are calculated with the emission test chamber method and with reference to the European Reference Room, by analogy with the procedure specified in the 'Health-related Evaluation Procedure for Volatile Organic Compounds Emissions from Building Products' developed by the AgBB (2012 version available at http://www.umweltbundesamt.de/produkte-e/bauprodukte/archive/agbb_evaluation_scheme_2012.pdf).

Substance	**Final value 7th day**	**Final value 28th day**
Formaldehyde	< 60 µg/m^3 (< 0.05 ppm)	< 60 µg/m^3 (< 0.05 ppm)
Other aldehydes	< 60 µg/m^3 (< 0.05 ppm)	< 60 µg/m^3 (< 0,05 ppm)
VOCs with retention range within C6-C16 (total)	< 500 µg/m^3	< 200 µg/m^3
VOCs with retention range above C16 (total)	< 100 µg/m^3	< 40 µg/m^3
Each detectable compound classified as categories C1A or C1B according to the Regulation (EC) No 1272/2008	< 1 µg/m³	< 1 µg/m³

Assessment and verification: The applicant shall perform a test chamber analysis based on the standard EN ISO 16000-9.

The analysis of formaldehyde and other aldehydes shall comply with the standard ISO 16000-3; the analysis of the other VOCs shall comply with the standard ISO 16000-6.

Test results shall be calculated for an area specific ventilation rate "q" = 0.5 m³/m²h, corresponding to a loading factor "L" of 1 m²/m³ and an air change rate "n" of 0.5 per hour. In all these cases, the total surface of all surfaces (upside, downside, and edges) of the mattress determine the area used for calculation of the loading factor. The test shall be performed on an entire mattress. Should this not be possible for any reason, any of the following alternative procedures of testing may be applied:

1. Performing the test on a representative sample of the mattress (i.e. one half, one quarter or one eighth); cut edges shall be closed airtight by appropriate means. In order to provide a conservative estimation of the concentration values expected from the entire mattress, concentrations registered with the sample shall be scaled-up by volume (i.e. emissions will be multiplied by a factor 2, 4 or 8);

2. Performing the test for each separate element forming part of the mattress. In order to provide a conservative estimation of the concentration values expected from the entire mattress, contributions registered with single components will be combined using this formula $C_M = \Sigma\ \omega_i \cdot C_i$; where:

- "C_M" (µg·m^{-3}) is the overall contribution from the entire mattress;

- "C_i" ($\mu g \cdot m^{-3} \cdot kg_i^{-1}$) is the contribution per unit of mass given by each-element "i" forming part of the mattress;
- "ω_i"(kg_i) is the weight of the element "i" in the entire mattress.

The emissions of all elements of the mattress are summed up without taking into account any adsorption or barrier effects (worst-case approach).

Criterion 12. Technical performance

(a) Quality

The mattress is designed in a way that a quality product meeting the needs of the consumer is placed on the market.

Assessment and verification: The applicants shall provide a report describing the approach followed and the actions taken in order to ensure the quality of the product, the fulfillment of specific functional characteristics and the respect of thermo-hygrometric wellness requirements. The following aspects should be taken into consideration: research and development, selection of materials, internal testing and verification procedures for demonstrating the fulfillment of functional characteristics and the respect of of thermo-hygrometric wellness requirements.

(b) Durability

The lifetime of a household mattress is expected to be 10 years; this can vary depending on application. Mattresses shall present the following functional characteristics:

- Loss of height < 15%
- Loss of firmness < 20%

Assessment and verification: The applicant shall provide a test report describing the results obtained following the test method BS EN 1957. The losses of height and firmness refer to the difference between the measurements made initially (at 100 cycles) and after the completion (30 000 cycles) of the durability test

(c) Warranty

A list of recommendations on how to use, maintain and dispose the mattress shall be reported in the warranty documentation. The warranty for the mattress must be valid for a period of at least 10 years. This prescription shall not be required for baby mattresses.

Assessment and verification: The applicant shall provide documentation attesting the implementation of the warranty scheme.

CRITERIA AREA "C": End of life

Criterion 13. Design for disassembly and recovery of materials

The manufacturer shall demonstrate that the mattress can be dismantled for the purpose of:

- undertaking repairs and replacements of worn-out parts,

- upgrading older or obsolete parts, and

- separating parts and materials for the potential recycle of them.

Assessment and verification: A report shall be submitted with the application detailing the dismantling of the mattress and the possible disposal of each part. For instance, the following actions could facilitate the dismantling of the mattress: preferring sewing to the application of glue; using removable covers; using single and recyclable materials for each homogeneous part. The report shall include an exploded diagram of the mattress, labelling the main parts of the product as well as identifying any hazardous substances.

CRITERIA AREA "D": Consumer information

Criterion 14. Information appearing on the EU Ecolabel

The EU Ecolabel can be applied both on the packaging and on the product. Box 2 of the EU Ecolabel shall contain the following text:

- 'Durable and high quality product'

- 'It restricts hazardous substances and minimises indoor air pollution'

- 'Environmental issues taken into account in the design stage'

The following text shall moreover appear:

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

Assessment and verification: The applicant shall provide a declaration of compliance and visual evidence.

Criterion 15. Additional information to consumers

The applicant shall provide consumers in written or audiovisual form with a list of recommendations on how to use, maintain and dispose the mattress.

Assessment and verification: The applicant shall provide a declaration of compliance and visual evidence.