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COMMISSION DECISION

of 9 July 2009

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

(Notified under document C(2009) 4597)

(Text with EEA relevance)

(2009/598/EC)

(OJ L 203, 5.8.2009, p. 65)

Amended by:

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COMMISSION DECISION

of 9 July 2009

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

(Notified under document C(2009) 4597)

(Text with EEA relevance)

(2009/598/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Regulation (EC) No 1980/2000 of the European Parliament and of the Council of 17 July 2000 on a revised Community eco-label award scheme [1], and in particular the second subparagraph of Article 6(1) thereof,

After consulting the European Union Ecolabelling Board,

Whereas:

(1) Under Regulation (EC) No 1980/2000 the Community Ecolabel may be awarded to a product possessing characteristics which enable it to contribute significantly to improvements in relation to key environmental aspects.

(2) Regulation (EC) No 1980/2000 provides that specific Ecolabel criteria, drawn up on the basis of the criteria drafted by the European Union Ecolabelling Board, are to be established according to product groups.

(3) It also provides that the review of the Ecolabel criteria, as well as of the assessment and verification requirements related to those criteria, is to take place in due time before the end of the period of validity of the criteria specified for the product group concerned.

(4) Pursuant to Regulation (EC) No 1980/2000, a timely review has been carried out of the ecological criteria, as well as of the related assessment and verification requirements established by Commission Decision 2002/740/EC of 3 September 2002 establishing revised ecological criteria for the award of the Community eco-label to bed mattresses [2]. Those ecological criteria and the related assessment and verification requirements are valid until 31 March 2010.

(5) In the light of that review, it is appropriate, in order to take account of scientific and market developments, to modify the definition of the product group and to establish new ecological criteria.

[1] OJ L 237, 21.9.2000, p. 1.
[2] OJ L 236, 4.9.2002, p. 10.

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(6) The ecological criteria, as well as the related assessment and verification requirements, should be valid for four years from the date of adoption of this Decision.

(7) Decision 2002/740/EC should therefore be replaced.

(8) A transitional period should be allowed for producers whose products have been awarded the Ecolabel for bed mattresses based on the criteria contained in Decision 2002/740/EC, so that they have sufficient time to adapt their products to comply with the revised criteria and requirements. Producers should also be allowed to submit applications set out under the criteria set in Decision 2002/740/EC or set out under the criteria set in this Decision until the lapse of validity of that Decision.

(9) Measures provided for in this Decision are in accordance with the opinion of the Committee instituted by Article 17 of Regulation (EC) No 1980/2000,

HAS ADOPTED THIS DECISION:

Article 1

1. The product group ‘bed mattresses’ shall comprise:

(a) bed mattresses, which are defined as products that provide a surface to sleep or rest upon for indoor use. The products consist of a cloth cover that is filled with materials, and that can be placed on an existing supporting bed structure;

(b) the materials filling the bed mattresses, which may include: latex form, polyurethane foam and springs;

(c) wooden bed bases that support the bed mattresses.

2. The product group shall include spring mattresses, which are defined as an upholstered bed base consisting of springs, topped with fillings, as well as mattresses fitted with removable and/or washable covers.

3. The product group shall not comprise inflatable mattresses and water mattresses, as well as mattresses classified under Council Directive 93/42/EEC ([1]).

Article 2

In order to be awarded the Community Ecolabel for products falling within the product group bed mattresses under Regulation (EC) No 1980/2000, a bed mattress shall comply with the criteria set out in the Annex to this Decision.

([1]) OJ L 169, 12.7.1993, p. 1.

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Article 3

The ecological criteria for the product group ‘bed mattresses’, as well as the related assessment and verification requirements, shall be valid until 30 June 2014.

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Article 4

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

Article 5

Decision 2002/740/EC is repealed.

Article 6

1. Applications for 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 2002/740/EC.

2. Applications for Ecolabel for products falling within the product group bed mattresses submitted from the date of adoption of this Decision but by 31 March 2010 at the latest may be based either on the criteria set out in Decision 2002/740/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 according to the criteria set out in Decision 2002/740/EC, that Ecolabel may be used for twelve months from the date of adoption of this Decision.

Article 7

This Decision is addressed to the Member States.

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ANNEX

FRAMEWORK

The aims of the criteria

These criteria aim in particular at:

— the use of materials produced in a more sustainable way (considering a life cycle analysis approach),

— limiting the use of eco-toxic compounds,

— limiting the levels of toxic residues,

— limiting the contribution of mattresses to indoor air pollution,

— promoting a more durable product and one that follows the six RE principles (UNEP 2007):

  — RE-think the product and its functions. For example, the product may be used more efficiently,

  — RE-duce energy, material consumption and socio-economic impacts throughout a product's life cycle,

  — RE-use. Design the product for disassembly so parts can be reused,

  — RE-cycle. Select materials that can be recycled,

  — RE-pair. Make the product easy to repair e.g. via modules that can easily be changed,

  — RE-place harmful substances with safer alternatives.

The criteria are set at levels that promote the labelling of bed mattresses that are produced with a low environmental impact.

Assessment and verification requirements

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

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

Where possible, conformity assessment should be performed by appropriate accredited laboratories that meet the general requirements of EN ISO 17025.

Where appropriate, Competent Bodies may require supporting documentation and may carry out independent verifications.

The Competent Bodies are recommended to take into account the implementation of recognised environmental management schemes, such as EMAS or ISO 14001, and Environmental Product Declarations when assessing applications and monitoring compliance with the criteria (*note:* it is not required to implement these declarations and management schemes).

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ECOLOGICAL CRITERIA

Note: Specific criteria are set for the following materials: latex and polyurethane foam, wire and springs, coconut fibres, wood and textile fibres and fabrics. Other materials for which no material specific criteria are set are allowed. The criteria for latex foam, polyurethane foam, or coconut fibres need only be met if that material contributes to more than 5 % of the total weight of the mattress.

Assessment and verification: The applicant shall supply detailed information as to the material composition of the mattresses.

1. **Latex foam**

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

1.1. **Extractable heavy metals**

The concentrations of the following metals shall not exceed the following values:

— Antimony 0,5 ppm

— Arsenic 0,5 ppm

— Lead 0,5 ppm

— Cadmium 0,1 ppm

— Chromium (total) 1,0 ppm

— Cobalt 0,5 ppm

— Copper 2,0 ppm

— Nickel 1,0 ppm

— Mercury 0,02 ppm

Assessment and verification: The applicant shall provide a test report, using the following test method: Milled sample extracted according to DIN 38414-S4, L/S = 10. Filtration with 0,45 μm membrane filter. Analysis by means of atomic emission spectroscopy with inductive coupled plasma (ICP-AES) or with hydride or cold vapour technique.

1.2. **Formaldehyde**

The concentration of formaldehyde shall not exceed 20 ppm as measured with EN ISO 14184-1. Alternatively, it shall not exceed 0,005 mg/m^3 as measured with the chamber test.

Assessment and verification: The applicant shall provide a test report, using the following test method: EN ISO 14184-1. Sample of 1 g with 100 g water heated to 40 °C for 1 hour. Formaldehyde in extract analysed with acetylacetone, photometric.

Alternatively, the emission chamber test may be used: ENV 13419-1, with EN ISO 16000-3 or VDI 3484-1 for air sampling and analysis. The sample shall be taken less than one week after production of the foam. Packaging of sample: air tight wrapped, individually, in aluminium foil and PE foil. Conditioning: The wrapped sample shall be stored at room temperature for at least 24 hours, after which the sample is unwrapped and immediately transferred into the test chamber. Testing conditions: sample placed on sample holder which allows access of air from all sides; climatic factors as in ENV 13419-1; for comparison of test results the area specific ventilation rate (q = n/l) shall be 1; the ventilation rate shall be between 0,5 and 1; the air sampling shall be started 24 hours after chamber loading and finished at the latest 30 hours after loading.

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1.3. **Volatile organic compounds (VOCs)**

The concentration of VOCs shall not exceed 0,5 mg/m^3. In this context, VOCs are any organic compound having at 293,15 K, a vapour pressure of 0,01 kPa or more, or having a corresponding volatility under the particular conditions of use.

Assessment and verification: The applicant shall provide a test report, using the following test method: chamber test (with the same conditions as in the criterion set out in point 1(2) on formaldehyde) with DIN ISO 16000-6 for air sampling and analysis.

1.4. **Dyes, pigments, flame retardants and auxiliary chemicals**

Any dyes, pigments, flame retardants and auxiliary chemicals used shall comply with the corresponding criteria (listed below):

(a) *Impurities in dyes: Colour matter with fibre affinity (soluble or insoluble)*

The levels of ionic impurities in the dyes used shall not exceed the following: Ag 100 ppm; As 50 ppm; Ba 100 ppm; Cd 20 ppm; Co 500 ppm; Cr 100 ppm; Cu 250 ppm; Fe 2 500 ppm; Hg 4 ppm; Mn 1 000 ppm; Ni 200 ppm; Pb 100 ppm; Se 20 ppm; Sb 50 ppm; Sn 250 ppm; Zn 1 500 ppm.

Any metal that is included as an integral part of the dye molecule (e.g. metal complex dyes, certain reactive dyes, etc.) shall not be considered when assessing compliance with these values, which only relate to impurities.

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

(b) *Impurities in pigments: Insoluble colour matter without fibre affinity*

The levels of ionic impurities for pigments used shall not exceed the following: As 50 ppm; Ba 100 ppm, Cd 50 ppm; Cr 100 ppm; Hg 25 ppm; Pb 100 ppm; Se 100 ppm Sb 250 ppm; Zn 1 000 ppm.

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

(c) *Chrome mordant dyeing*

Chrome mordant dyeing is not allowed.

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

(d) *Azo dyes*

Azo dyes shall not be used that may cleave to any one of the following aromatic amines:

4-aminodiphenyl	(92-67-1)
Benzidine	(92-87-5)
4-chloro-o-toluidine	(95-69-2)
2-naphthylamine	(91-59-8)
o-amino-azotoluene	(97-56-3)

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2-amino-4-nitrotoluene	(99-55-8)
p-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′-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	
2,6-Xylidine	

Assessment and verification: The applicant shall provide a declaration of non-use of these dyes. Should this declaration be subject to verification the following standard shall be used = EN 14 362-1 and 2. (*Note:* false positives may be possible with respect to the presence of 4-aminoazobenzene, and confirmation is therefore recommended.)

(e) *Dyes that are carcinogenic, mutagenic or toxic to reproduction*

The following dyes shall not be used:

— C.I. Basic Red 9,

— C.I. Disperse Blue 1,

— C.I. Acid Red 26,

— C.I. Basic Violet 14,

— C.I. Disperse Orange 11,

— C.I. Direct Black 38,

— C.I. Direct Blue 6,

— C.I. Direct Red 28,

— C.I. Disperse Yellow 3.

Assessment and verification: The applicant shall provide a declaration of non-use of such dyes.

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No use is allowed of dye substances or of dye preparations containing more than 0,1 % by weight of that at the time of application fulfil the classification criteria of any of the following risk phrases (or combinations thereof):

— R40 (limited evidence of a carcinogenic effect),

— R45 (may cause cancer),

— R46 (may cause heritable genetic damage),

— R49 (may cause cancer by inhalation),

— R60 (may impair fertility),

— R61 (may cause harm to the unborn child),

— R62 (possible risk of impaired fertility),

— R63 (possible risk of harm to the unborn child),

— R68 (possible risk of irreversible effects),

as laid down in Council Directive 67/548/EEC ([1]).

Alternatively, classification may be considered according to Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 ([2]). In this case no substances or preparations may be added to the raw materials that are assigned, or may be assigned at the time of application, with and of the following hazard statements (or combinations thereof): H351, H350, H340, H350i, H360F, H360D, H361f, H361d H360FD, H361fd, H360Fd, H360Df, H341.

Assessment and verification: The applicant shall provide a declaration of non-use of such dyes.

(f) *Potentially sensitising dyes*

The following dyes shall not be used:

— C.I. Disperse Blue 3	C.I. 61 505
— C.I. Disperse Blue 7	C.I. 62 500
— C.I. Disperse Blue 26	C.I. 63 305
— C.I. Disperse Blue 35	
— C.I. Disperse Blue 102	
— C.I. Disperse Blue 106	
— C.I. Disperse Blue 124	
— C.I. Disperse Brown 1	
— C.I. Disperse Orange 1	C.I. 11 080
— C.I. Disperse Orange 3	C.I. 11 005

([1]) OJ 196, 16.8.1967, p. 1.
([2]) OJ L 353, 31.12.2008, p. 1.

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— C.I. Disperse Orange 37

— C.I. Disperse Orange 76
(previously designated Orange 37)

— C.I. Disperse Red 1 C.I. 11 110

— C.I. Disperse Red 11 C.I. 62 015

— C.I. Disperse Red 17 C.I. 11 210

— C.I. Disperse Yellow 1 C.I. 10 345

— C.I. Disperse Yellow 9 C.I. 10 375

— C.I. Disperse Yellow 39

— C.I. Disperse Yellow 49

Assessment and verification: The applicant shall provide a declaration of non-use of these dyes.

1.5. **Metal complex dyes**

Metal complex dyes based on copper, lead, chromium or nickel shall not be used.

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

1.6. **Chlorophenols**

No chlorophenol (salts and esters) shall be present in concentrations exceeding 0,1 ppm, except mono- and di-chlorinated phenols (salts and esters) which shall not exceed 1 ppm.

Assessment and verification: The applicant shall provide a test report, using the following test method: Milling of 5 g sample, extraction of the chlorophenol or sodium salt. Analysis by means of gas chromatography (GC), detection with mass spectrometer or ECD.

1.7. **Butadiene**

The concentration of butadiene shall not exceed 1 ppm.

Assessment and verification: The applicant shall provide a test report, using the following test method: Milling and weighing of sample. Sampling by headspace sampler. Analysis by gas chromatography, detection by flame-ionisation detector.

1.8. **Nitrosamines**

The concentration of N-nitrosamines shall not exceed 0,0005 mg/m^3 as measured with the chamber test.

Assessment and verification: The applicant shall provide a test report, using the following test method: the chamber test (with conditions as in criterion 1(2) on formaldehyde) with Hauptverband der gewerblichen Berufsgenossenschaften ZH 1/120.23 (or equivalent) for air sampling and analysis.

2. **PUR Foam**

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

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2.1. **Extractable heavy metals**

The concentrations of the following metals shall meet the corresponding requirement for latex foam detailed in the criterion set out in point 1(1).

Assessment and verification: same requirements as in the criterion set out in point 1(1).

2.2. **Formaldehyde**

The concentration of formaldehyde shall meet the corresponding requirement for latex foam detailed in the criterion set out in point 1(2).

Assessment and verification: same requirements as in the criterion set out in point 1(2).

2.3. **Volatile organic compounds (VOCs)**

PUR foam shall meet the corresponding requirement for latex foam detailed in the criterion set out in point 1(3).

Assessment and verification: same requirements as in the criterion set out in point 1(3).

2.4. **Dyes, pigments, flame retardants and auxiliary chemicals**

PUR foam shall meet the corresponding requirement for latex foam detailed in the criterion set out in point 1(4).

Assessment and verification: same requirements as in the criterion set out in point 1(4).

2.5. **Metal complex dyes**

PUR foam shall meet the corresponding requirement for latex foam detailed in the criterion set out in point 1(5).

Assessment and verification: same requirements as in the criterion set out in point 1(5).

2.6. **Organic tin**

Mono and di-organic, tri-organic tin compounds shall not be used.

Assessment and verification: The applicant shall provide a declaration of non-use. Testing is not required. Should, however (e.g. for purposes of verification or monitoring), testing be carried out, the following test method shall be used: any method that specifically measures an organic tin compound without measuring the presence of any inorganic tin compound such as tin octoate.

2.7. **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.

3. **Wire and springs**

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

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3.1. **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.

3.2. **Galvanisation**

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

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

4. **Coconut fibres**

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

Note: This criterion only needs to be met if coconut fibres contribute to more than 5 % of the total weight of the mattress.

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

5. **Wooden material**

5.1. **Sustainable forest management**

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.

(a) All virgin solid wood from forests shall originate from forests that are managed so as to implement the principles and measures aimed at ensuring sustainable Forest management. In Europe, the principles and measures referred to above shall at least correspond to the definition of sustainable forest management (SFM) that was adopted in Resolution 1 of the 2nd Ministerial Conference on the Protection of Forests in Europe (Helsinki, 16-17 June 1993), the Pan-European Operational Level Guidelines for Sustainable Forest Management, as endorsed by the 3rd Ministerial Conference on the Protection of Forests in Europe (Lisbon, 2-4 June 1998) and the Improved Pan-European Indicators for SFM, adopted at the MCPFE Expert Level Meeting of 7-8 October 2002 that were endorsed at 4th Ministerial Conference on the Protection of Forests in Europe (Vienna, 28-30 April 2003). Outside Europe they shall at least correspond to the UNCED Forest Principles (Rio de Janeiro, June 1992) and, where applicable, to the criteria or guidelines for sustainable Forest management as adopted under the respective international and regional initiatives (ITTO, Montreal Process, Tarapoto Process, UNEP/FAO Dry-Zone Africa Initiative).

(b) At least 60 % of the virgin solid wood from forests, as specified under the criterion set out in point (a), shall originate from sustainably managed forests which are certified by independent third party forest certification schemes based on the criteria listed in paragraph 15 of the Council Resolution of 15 December 1998 on a Forestry Strategy for the EU and further development thereof.

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(c) Wood from forests that are not certified as being sustainably managed forests shall not originate from:

— disputed land-rights or primary old growth forests,

— illegal harvesting: wood that is harvested, traded or transported in a way that is in breach of applicable national regulations and international treaties (such regulations can for example address CITES species, money laundering, corruption and bribery [1]), and other relevant national regulations),

— uncertified high conservation value forests: forests designated for nature protection where forestry activities may not be practiced, i.e. forests where forestry cannot be practiced due to some regimes of protection.

Assessment and verification: The applicant shall indicate types, quantities and origins of the wood used in the Ecolabelled product. The origin of virgin solid wood shall be indicated with sufficient precision to allow checks, where appropriate.

— For virgin solid wood from certified sustainably managed forests the control of a chain of custody is required as a proof of supply of sustainable forestry resources. The manufacturer shall provide evidence that measures have been taken to obtain a credible certificate of chain of custody, i.e. a traceability procedure, letter of application for membership of a scheme, letter of control chain request with third part audit.

— For virgin solid wood from uncertified sustainably managed forests, the applicant and/or his supplier shall indicate the species, quantity and origin of the timber used. The origin shall be indicated with sufficient precision to verify that the timber is from well managed forests. The appropriate declarations, charter, code of conduct or statement, providing evidence that the requirements of the criterion set out in points (a) and (c) are met shall be made available. References from existing forestry certification schemes, showing implementation of requirements intended to avoid the use of raw material from controversial sources shall be supplied.

5.2. **Formaldehyde emission from untreated raw wood-based materials**

Wood-based materials are allowed in a mattress if they comply with the following requirements:

— Particleboard: the emission of formaldehyde from particle boards in their raw state, i.e. prior to machining or coating, shall not exceed 50 % of the threshold value that would allow it to be classified as E1 according to standard EN 312-1.

Assessment and verification: The applicant and/or his supplier shall provide evidence that the wood-based materials comply with this requirement according to the European standard EN 312-1.

— Fibreboard: The formaldehyde measured in any fibreboard used shall not exceed 50 % of the threshold value that would allow it to be classified as class A quality according to EN 622-1. However fibreboards classified as Class A will be accepted if they do not represent more than 50 % of the total wood and wood-based materials used in the product.

[1] These are the topics addressed in the Commission communication on the EU Action plan on Forest Law Enforcement, Governance and Trade (FLEGT).

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Assessment and verification: The applicant and/or his supplier shall provide evidence that the wood-based materials comply with this requirement according to the European standard EN 13986 (April 2005).

6. **Textiles (fibres and fabric)**

Textiles used to cover the mattress shall meet the following criteria for dyes and other chemical products as well as for fitness for use (textiles which have been awarded the Community Ecolabel are in compliance with these criteria):

6.1. **biocides**

Chlorophenols (their salts and esters), PCB and organotin compounds shall not be used during transportation or storage of mattresses and semi-manufactured mattresses.

Assessment and verification: The applicant shall provide a declaration of non-use of these substances or compounds on the yarn, fabric and final product. Should this declaration be subject to verification the following test method and threshold shall be used: extraction as appropriate, derivatisation with acetic anhydride, determination by capillary gas-liquid chromatography with electron capture detection, limit value 0,05 ppm.

6.2. **Auxiliary chemicals**

Alkylphenolethoxylates (APEOs), 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), and diethylene triamine penta acetate (DTPA) shall not be used and shall not be part of any preparations or formulations used.

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

6.3. **Detergent, fabric softeners and complexing agents**

At each wet-processing site, at least 95 % by weight of fabric softeners, complexing agents and detergents by weight shall be sufficiently degradable or eliminable in wastewater treatment plants.

This is with the exception of surfactants in detergents at each wet processing site, which shall be ultimately aerobically biodegradable.

Assessment and verification:'Sufficiently biodegradable or eliminable' is as defined above in the criterion related to auxiliaries and finishing agents for fibres and yarns. 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.

'Ultimate aerobic biodegradation' has to be interpreted as laid down in Annex III to Regulation (EC) No 648/2004 of the European Parliament and of the Council [1]. 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.

[1] OJ L 104, 8.4.2004, p. 1.

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6.4. **Bleaching agents**

Chlorine agents are excluded for bleaching yarns, fabrics and end products.

This requirement does not apply to the production of man-made cellulose fibres.

Assessment and verification: The applicant shall provide a declaration of non-use of chlorinated bleaching agents.

6.5. **Impurities in dyes**

Colour matter with fibre affinity (soluble or insoluble).

The levels of ionic impurities in the dyes used shall not exceed the following: Ag 100 ppm; As 50 ppm; Ba 100 ppm; Cd 20 ppm; Co 500 ppm; Cr 100 ppm; Cu 250 ppm; Fe 2 500 ppm; Hg 4 ppm; Mn 1 000 ppm; Ni 200 ppm; Pb 100 ppm; Se 20 ppm; Sb 50 ppm; Sn 250 ppm; Zn 1 500 ppm.

Any metal that is included as an integral part of the dye molecule (e.g. metal complex dyes, certain reactive dyes, etc.) shall not be considered when assessing compliance with these values, which only relate to impurities.

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

6.6. **Impurities in pigments**

Insoluble colour matter without fibre affinity.

The levels of ionic impurities for pigments used shall not exceed the following: As 50 ppm; Ba 100 ppm, Cd 50 ppm; Cr 100 ppm; Hg 25 ppm; Pb 100 ppm; Se 100 ppm Sb 250 ppm; Zn 1 000 ppm.

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

6.7. **Chrome mordant dyeing**

Chrome mordant dyeing is not allowed.

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

6.8. **Metal complex dyes**

If metal complex dyes based on copper, chromium or nickel are used:

— In case of cellulose dyeing, where metal complex dyes are part of the dye recipe, less than 20 % of each of those metal complex dyes applied (input to the process) shall be discharged to waste water treatment (whether on-site or off-site).

  In case of all other dyeing processes, where metal complex dyes are part of the dye recipe, less than 7 % of each of those metal complex dyes applied (input to the process) shall be discharged to waste water treatment (whether on-site or off-site).

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

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— The emissions to water after treatment shall not exceed: Cu 75 mg/kg (fibre, yarn or fabric); Cr 50 mg/kg; Ni 75 mg/kg.

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

6.9. **Azo dyes**

Azo dyes shall not be used that may cleave to any one of the following aromatic amines:

4-aminodiphenyl	(92-67-1)
Benzidine	(92-87-5)
4-chloro-o-toluidine	(95-69-2)
2-naphthylamine	(91-59-8)
o-amino-azotoluene	(97-56-3)
2-amino-4-nitrotoluene	(99-55-8)
p-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′-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	
2,6-Xylidine	

Assessment and verification: The applicant shall provide a declaration of non-use of these dyes. Should this declaration be subject to verification the following standard shall be used = EN 14 362-1 and 2. (*Note*: false positives may be possible with respect to the presence of 4-aminoazobenzene, and confirmation is therefore recommended.)

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6.10. **Dyes that are carcinogenic, mutagenic or toxic to reproduction**

(a) The following dyes shall not be used:

— C.I. Basic Red 9,

— C.I. Disperse Blue 1,

— C.I. Acid Red 26,

— C.I. Basic Violet 14,

— C.I. Disperse Orange 11,

— C.I. Direct Black 38,

— C.I. Direct Blue 6,

— C.I. Direct Red 28,

— C.I. Disperse Yellow 3.

Assessment and verification: The applicant shall provide a declaration of non-use of such dyes.

(b) No use is allowed of dye substances or of dye preparations containing more than 0,1 % by weight of substances that at the time of application fulfil the classification criteria of any of the following risk phrases (or combinations thereof):

— R40 (limited evidence of a carcinogenic effect),

— R45 (may cause cancer),

— R46 (may cause heritable genetic damage),

— R49 (may cause cancer by inhalation),

— R60 (may impair fertility),

— R61 (may cause harm to the unborn child),

— R62 (possible risk of impaired fertility),

— R63 (possible risk of harm to the unborn child),

— R68 (possible risk of irreversible effects),

as laid down in Directive 67/548/EEC.

Alternatively, classification may be considered according to Regulation (EC) No 1272/2008. In this case no substances or preparations may be added to the raw materials that are assigned, or may be assigned at the time of application, with and of the following hazard statements (or combinations thereof): H351, H350, H340, H350i, H360F, H360D, H361f, H361d H360FD, H361fd, H360Fd, H360Df, H341.

Assessment and verification: The applicant shall provide a declaration of non-use of such dyes.

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6.11. **Potentially sensitising dyes**

The following dyes shall not be used:

— C.I. Disperse Blue 3	C.I. 61 505
— C.I. Disperse Blue 7	C.I. 62 500
— C.I. Disperse Blue 26	C.I. 63 305
— C.I. Disperse Blue 35	
— C.I. Disperse Blue 102	
— C.I. Disperse Blue 106	
— C.I. Disperse Blue 124	
— C.I. Disperse Brown 1	
— C.I. Disperse Orange 1	C.I. 11 080
— C.I. Disperse Orange 3	C.I. 11 005
— C.I. Disperse Orange 37	
— C.I. Disperse Orange 76 (previously designated Orange 37)	
— C.I. Disperse Red 1	C.I. 11 110
— C.I. Disperse Red 11	C.I. 62 015
— C.I. Disperse Red 17	C.I. 11 210
— C.I. Disperse Yellow 1	C.I. 10 345
— C.I. Disperse Yellow 9	C.I. 10 375
— C.I. Disperse Yellow 39	
— C.I. Disperse Yellow 49	

Assessment and verification: The applicant shall provide a declaration of non-use of such dyes.

6.12. **Colour fastness to perspiration (acid, alkaline)**

The colour fastness to perspiration (acid and alkaline) shall be at least level 3-4 (colour change and staining).

A level of 3 is nevertheless allowed when fabrics are both dark coloured (standard depth > 1/1) and made of regenerated wool or more than 20 % silk.

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

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

6.13. **Colour fastness to web rubbing**

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

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

Assessment and verification: The applicant shall provide test reports using the following standard EN: ISO 105 X12.

6.14. **Colour fastness to dry rubbing**

The colour fastness to dry rubbing shall be at least level 4.

A level of 3-4 is nevertheless allowed for indigo dyed denim.

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

Assessment and verification: The applicant shall provide test reports using the following standard EN: ISO 105 X12.

7. **Glues**

The glues containing organic solvents shall not be used. (This criterion does not apply to glues used for occasional repairs). In this context, VOCs are any organic compound having at 293,15 K, a vapour pressure of 0,01 kPa or more, or having a corresponding volatility under the particular conditions of use.

The adhesive shall not be used that at the time of application fulfil the classification criteria of any of the following risk phrases (or combinations thereof):

— Carcinogenic (R45, R49, R40),

— Harmful to the reproduction system (R46, R40),

— Genetically harmful (R60-R63),

— Toxic (R23-R28),

in accordance with regulations on classification and labelling of hazardous chemicals in any EU's classification system Directive 1999/45/EC of the European Parliament and of the Council ([1]).

Alternatively, classification may be considered according to Regulation (EC) No 1272/2008. In this case no substances or preparations may be added to the raw materials that are assigned, or may be assigned at the time of application, with and of the following hazard statements (or combinations thereof): H351, H350, H340, H350i, H360F, H360D, H361f, H361d H360FD, H361fd, H360Fd, H360Df, H331, H330, H311, H301, H310, H300, H370, H372.

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

8. **VOC and SVOCs on the entire mattress**

The VOC emission of the entire mattress shall not exceed the following emissions values in the test chamber by analogy with the 'health risk assessment process for emissions of volatile organic compounds (VOC) from building products' developed in 2005 by the AgBB. (available on www.umweltbundesamt.de/building-products/agbb.htm).

([1]) OJ L 200, 30.7.1999, p. 1.

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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)
Total Organic Compounds (retention range: C6-C16)	< 500 μg/m^3	< 200 μg/m^3
Total Organic Compounds (retention range above C16)	< 100 μg/m^3	< 40 μg/m^3

Assessment and verification: The applicant shall provide a test chamber analysis, based on the standards EN 13419-1 and EN 13419-2. The analysis of the VOC should comply with the ISO 16000-6.

9. **Flame retardants used in the entire mattress**

Only flame retardants that are chemically bound into mattress materials or onto the materials surfaces (reactive flame retardants) may be used in the product. If the flame retardants used have any of the R-phrases listed below, these reactive flame retardants should, on application, change their chemical nature to no longer warrant classification under any of these R-phrases. (Less than 0,1 % of the flame retardant may remain in the form as before application.)

— R40 (limited evidence of a carcinogenic effect),

— R45 (may cause cancer),

— R46 (may cause heritable genetic damage),

— R49 (may cause cancer by inhalation),

— R50 (very toxic to aquatic organisms),

— R51 (toxic to aquatic organisms),

— R52 (harmful to aquatic organisms),

— R53 (may cause long-term adverse effects in the aquatic environment),

— R60 (may impair fertility),

— R61 (may cause harm to the unborn child),

— R62 (possible risk of impaired fertility),

— R63 (possible risk of harm to the unborn child),

— R68 (possible risk of irreversible effects),

as laid down in Council Directive 67/548/EEC.

Flame retardants which are only physically mixed into the mattress materials or coatings are excluded (additive flame retardants).

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Alternatively, classification may be considered according to Regulation (EC) No 1272/2008. In this case no substances or preparations may be added to the raw materials that are assigned, or may be assigned at the time of application, with and of the following hazard statements (or combinations thereof): H351, H350, H340, H350i, H400, H410, H411, H412, H413, H360F, H360D, H361f, H361d H360FD, H361fd, H360Fd, H360Df, H341.

Assessment and verification: The applicant shall provide a declaration that additive flame retardants have not been used and indicate which reactive flame retardants, if any, have been used and provide documentation (such as safety data sheets) and/or declarations indicating that those flame retardants comply with this criterion.

10. **Biocides in the final product**

Only biocidal products containing biocidal active substances included in Annex I, IA and IB to Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market [1], and only those where the active substance is authorised for use in bed mattresses according to Annex V to Directive 98/8/EC, shall be allowed.

Assessment and verification: The applicant shall provide a declaration of non-use of biocidal products or a list of biocidal products used.

11. **Durability**

The lifetime of a household bed mattress is expected to be 10 years. The life expectancy of a mattress will vary though for bed mattresses used in other applications i.e. prisons, hotels.

— Adult mattress:

  — loss of height: < 15 %

  — loss of firmness: < 20 %

— Baby mattress:

  — loss of height: < 15 %

  — Loss of firmness: < 20 %

Assessment and verification: The applicant shall provide a test report using the following test method: 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.

12. **Packaging requirements**

The packaging used shall be:

— made from recyclable material,

— marked to identify plastic type in accordance with ISO 11469.

The following text shall appear on the packaging:

> ‘For more information as to why this product has been awarded the Flower, please visit the website: http://www.ecolabel.eu
>
> Please consult your local authority on the best way to dispose of your old mattress.’

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

[1] OJ L 123, 24.4.1998, p. 1.

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13. **Information appearing on the Ecolabel**

Box 2 of the Ecolabel shall contain the following text:

— ‘Minimises indoor air pollution’,

— ‘Hazardous substances restricted’,

— ‘Durable and high quality’.

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