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COMMISSION DECISION

of 2 October 1998

establishing the ecological criteria for the award of the Community eco-label to bed mattresses

(notified under document number C(1998) 2919)

(Text with EEA relevance)

(98/634/EC)

(OJ L 302, 12.11.1998, p. 31)

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(98/634/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EEC) No 880/92 of 23 March 1992 on a Community eco-label award scheme [1], and in particular the second subparagraph of Article 5(1) thereof,

Whereas the first subparagraph of Article 5(1) of Regulation (EEC) No 880/92 provides that the conditions for the award of the Community eco-label shall be defined by product groups;

Whereas Article 10(2) of Regulation (EEC) No 880/92 states that the environmental performance of a product shall be assessed by reference to the specific criteria for product groups;

Whereas in accordance with Article 6 of Regulation (EEC) No 880/92 the Commission has consulted the principal interest groups within a consultation forum;

Whereas the measures provided for in this Decision are in accordance with the opinion of the committee set up pursuant to Article 7 of Regulation (EEC) No 880/92,

HAS ADOPTED THIS DECISION:

Article 1

The product group 'bed mattresses' (hereinafter referred to as 'the product group') shall mean:

Products providing a surface to sleep or rest upon, consisting of a strong cloth cover filled with materials, and that can be placed on an existing supporting bed structure.

This includes framed sprung mattresses, which are defined as an upholstered bed case consisting of springs, topped with fillings, on a rigid frame to be used in a bed frame or free standing, combined with a mattress pad which is not intended to be used separately.

Inflatable mattresses and water mattresses are excluded.

Article 2

The enviromental performance and the fitness for use of the product group as defined in Article 1 shall be assessed by reference to the specific ecological and fitness-for-use criteria set out in the Annex.

Article 3

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The product group definition and the criteria for the product group shall be valid from 2 October 1998 until 1 April 2003.

[1] OJ L 99, 11. 4. 1992, p. 1.

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Article 4

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

Article 5

This Decision is addressed to the Member States.

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ANNEX

In order to qualify for an eco-label, the product in the product group as defined in Article 1 must comply with the criteria of this Annex, with tests carried out on application as indicated in the criteria. Where no tests are mentioned, competent bodies should rely as appropriate on declarations and documentation provided by the applicant and/or independent verifications.

The competent bodies are recommened to take into account the implementation of recognised environmental management schemes, such as EMAS or ISO 14001, when assessing applications and monitoring compliance with the criteria in this Annex.

Functional unit

The functional unit, to which inputs and outputs should be related, is:

1 m² of mattress

A. ECOLOGICAL CRITERIA

A1. MATERIALS

Specific criteria are set in this section A1 for latex foam, polyurethane foam, wire and springs, coconut fibres and wood. Other materials for which no material-specific criteria are set are allowed. All of the materials used must comply with the criteria in section A2 on the use of dyes, pigments and flame retardants. The applicant shall supply detailed information as to the material composition of the mattresses.

The criteria specific for latex foam, polyurethane foam, or coconut fibres set in this section A1 need only be met if that material contributes to more than 5 % of the total weight of the mattress.

Latex foam

1. The concentrations in latex foam of the following substances must be less than the limit values indicated below:

1(a) pentachlorophenol (its salts and esters): 0,1 ppm

test method: Milling of 5 g sample, extraction of PCP or sodium salt.

Analysis by means of gas chromatography (GC), detection with mass spectrometer or ECD.

1(b) extractable heavy metals:

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

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 hydrid or cold vapour technique.

1(c) extractable formaldehyde: 50 ppm

test method: According to Japan Law 112 (1973) or PRENISO 14184-1.

Sample of 1 g with 100 g water heated to 40 ºC for one hour.
Formaldehyde in extract analysed with acetylacetone, photometric.

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1(d) butadiene: 1 ppm

test method: Milling and weighing of sample.

Sampling by headspace sampler.

Analysis by gas chromatography, detection by flame-ionisation detector.

Polyurethane (PUR) foam

2. The concentrations in PUR foam of the following substances must be less than the limit values indicated below:

2(a) extractable heavy metals:

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

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 hydrid or cold vapour technique.

2(b) The concentration of tin (in organic form) must not exceed 900 ppm.

test method: Sample treatment according to NEN 6465 or ISO-DIS (draft international standard) 11466 or equivalent (grinding of sample, followed by treatment for two hours with boiling HCl/HNO_3 (aqua regia)).

Analysis according to NEN 6465 or ISO-DIS (draft internationl standard) 11466 or equivalent, by atomic absorption spectroscopy (AAS), cold vapour (CVAAS) for Hg; atomic emission spectroscopy with inductive coupled plasma (ICP-AES) for other heavy metals.

3. CFCs, HCFCs, HFCs or methylene chloride shall not be used as blowing agents or as auxiliary blowing agents. The use of methylene chloride as an auxiliary blowing agent is nevertheless allowed in conjunction with the application of powdered flame retardants.

Wire and springs

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

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

Coconut fibres

6. If the coconut fibre material is rubberised, the latex used must comply with the criteria applicable to latex foam.

Wooden material

7. Any particle board used must be of class 1 quality with respect to formaldehyde as defined in EN 312-1.

Any fibreboard used must be of class A quality with respect to formaldehyde as defined in EN 622-1.

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A2. CHEMICALS AND PREPARATIONS

Glues

8. Any glues used must contain less than 10 % by weight of volatile organic compounds (VOCs). This criterion does not apply to glues used for occasional repairs.

   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.

9. Any glues used must be free of benzene and chlorobenzenes.

Dyes and pigments

10. No azo dyes shall be used that may cleave to any 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'-methylene-bis-(2-chloraniline)	(101-14-4)
4,4'-oxydianiline	(101-80-4)
4,4'-thiodianiline	(139-65-1)
o-toluidine	(95-53-4)
2,4-diaminotoluene	(95-80-7)
2,4,5-trimethylaniline	(137-17-7)
4-aminoazobenzene	(60-09-3)
o-anisidine	(90-04-0)

11. None of the following dyes that are carcinogenic (category 2 as defined in Council Directive 67/548/EEC [1], as last amended by Commission Directive 97/69/EEC [2]) shall be used:

    C.I. Solvent Yellow 1

    C.I. Solvent Yellow 2

    C.I. Solvent Yellow 3

    C.I. Basic Red 9

    C.I. Disperse Blue 1

12. The following potentially sensitising dyes shall only be used if the fastness to perspiration (acid and alkaline) is at least 4:

    C.I. Disperse Blue 3

    C.I. Disperse Blue 35

(1) OJ 196, 16. 8. 1967, p. 1.
(2) OJ L 343, 13. 12. 1997, p. 19.

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C.I. Disperse Blue 106

C.I. Disperse Blue 124

C.I. Disperse Yellow 3

C.I. Disperse Orange 3

C.I. Disperse Orange 37/76

C.I. Disperse Red 1

test method: ISO 105-E04: Colour fastness to perspiration (acid and alkaline), minimum level 4. Testing only required if these dyes are used.

13. No dyes or pigments shall be used that are based on chromium, copper, nickel or lead. Chrome mordant dyeing is not allowed.

14. The levels of ionic impurities in the dyes used must not exceed the following:

Arsenic	50 ppm
Cadmium	20 ppm
Chromium	100 ppm
Copper	250 ppm
Mercury	4 ppm
Nickel	200 ppm
Lead	100 ppm
Antimony	50 ppm
Tin	250 ppm
Zinc	1 500 ppm

15. The levels of ionic impurities in the pigments used must not exceed the following:

Arsenic	250 ppm
Cadmium	50 ppm
Chromium	100 ppm
Mercury	25 ppm
Lead	100 ppm
Antimony	250 ppm
Zinc	1 000 ppm

NB: All of the materials used in the mattress must comply with the criteria on dyes and pigments (criteria 10, 11, 12, 13, 14 and 15). Recycled materials used in the mattress may nevertheless contain the dyes and pigments excluded here, but only if added in the previous life-cycle of the material.

Flame retardants

16. No use is allowed of flame retardant substances or preparations containing substances that are classified or can be classified as dangerous for the environment according to Council Directive 67/548/EEC [1], as last amended by Commission Directive 97/69/EEC [2].

NB: All of the materials used in the mattress must comply with this criterion. Recycled materials used in the mattress may nevertheless contain the flame retardants excluded here, but only if added in their previous life-cycle.

[1] OJ 196, 16. 8. 1967, p. 1.
[2] OJ L 343, 13. 12. 1997, p. 19.

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B. **FITNESS FOR USE CRITERIA**

Durability

17. The loss of height must be less than 20 mm.

The loss of firmness (H_s) must be less than 20 %.

test method: prEN 1957 (final draft January 1997). 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.