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**COMMISSION DECISION**

**of 6 June 2011**

**on establishing the ecological criteria for the award of the EU Ecolabel for light sources**

*(notified under document C(2011) 3749)*

**(Text with EEA relevance)**

(2011/331/EU)

(OJ L 148, 7.6.2011, p. 13)

Amended by:

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Commission Decision 2013/295/EU of 17 June 2013

Official Journal

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**COMMISSION DECISION****of 6 June 2011****on establishing the ecological criteria for the award of the EU Ecolabel for light sources***(notified under document C(2011) 3749)***(Text with EEA relevance)**

(2011/331/EU)

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 <sup>(1)</sup>, 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 those products with 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) Commission Decision 2002/747/EC <sup>(2)</sup> has established the ecological criteria and the related assessment and verification requirements for light bulbs. Those criteria are valid until 31 August 2011.
- (4) Those criteria have been reviewed in the light of technological developments. In the light of the review, it is appropriate to modify the definition of the product and to change the name of the product group. Those new criteria, as well as the related assessment and verification requirements, should be valid for 2 years from the date of adoption of this Decision.
- (5) Decision 2002/747/EC should be replaced for reasons of clarity.
- (6) A transitional period should be allowed for producers whose products have been awarded the Ecolabel for light bulbs on the basis of the criteria set out in Decision 2002/747/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 based on the criteria set out in Decision 2002/747/EC or on the criteria set out in this Decision until the lapse of validity of that Decision.

<sup>(1)</sup> OJ L 27, 30.1.2010, p. 1.

<sup>(2)</sup> OJ L 242, 10.9.2002, p. 44.

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- (7) 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,

HAS ADOPTED THIS DECISION:

*Article 1*

1. The product group 'light sources' shall comprise all light sources of a luminous flux  $\geq 60$  and  $\leq 12\,000$  lumens for general lighting applications with direct or indirect connection to the public electricity supply equipped with a lamp cap listed in EN 60061 and made in order to produce a visible radiation.

2. The following types of light sources are not included in the product group: directional lamps, high-intensity discharge lamps, coloured lamps, projector lamps, photographic lighting, solarium tubes, battery driven systems and other light sources that are not intended for general lighting applications. The following types of light sources are not included in the product group if they are not supplied directly from the mains: integral compact fluorescent lamps, filament lamps, LED lamps.

*Article 2*

In order to be awarded the EU Ecolabel under Regulation (EC) No 66/2010, an item of light source shall fall within the product group 'light sources' 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.

**▼M1***Article 3*

The criteria for the product group 'light sources', as well as the related assessment and verification requirements, shall be valid until 31 December 2014.

**▼B***Article 4*

For administrative purposes the code number assigned to the product group 'light sources' shall be '008'.

*Article 5*

Decision 2002/747/EC is repealed.

*Article 6*

1. By derogation from Article 5, applications for the EU Ecolabel for products falling within the product group 'light bulbs' submitted before the date of adoption of this Decision shall be evaluated in accordance with the conditions laid down in Decision 2002/747/EC.

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2. Applications for the EU Ecolabel for products falling within the product group 'light sources' submitted from the date of adoption of this Decision but by 31 August 2011 at the latest may be based either on the criteria set out in Decision 2002/747/EC or on the criteria set out in this Decision.
3. Those applications shall be evaluated in accordance with the criteria on which they are based.
4. Where the EU Ecolabel is awarded on the basis of an application evaluated in accordance with the criteria set out in Decision 2002/747/EC, that EU Ecolabel may be used for 12 months from the date of adoption of this Decision.

*Article 7*

This Decision is addressed to the Member States.

*ANNEX***FRAMEWORK****The aims of the criteria**

These criteria aim in particular at promoting the reduction of environmental damage or risks related to the use of energy (global warming, acidification, depletion of non-renewable resources) by reducing energy consumption, to the use of resources in both the manufacture and treatment/disposal of a light source by increasing its average lifetime and to the use of mercury by reducing the total emissions of mercury during the lifetime of a light source.

The criteria also encourage the implementation of best practice (optimal environmental use) and enhance consumers' environmental awareness. The criteria are set at levels that promote the labelling of light sources that are produced with low environmental impact.

**CRITERIA**

Criteria are set for each of the following aspects:

- (1) energy efficiency, lifetime, lumen maintenance and mercury content;
- (2) switch on/off;
- (3) colour rendering index;
- (4) colour consistency;
- (5) hazardous substances and mixtures;
- (6) substances listed in accordance with Article 59(1) of Regulation (EC) No 1907/2006 of the European Parliament and of the Council <sup>(1)</sup>;
- (7) plastic parts;
- (8) packaging;
- (9) user instructions;
- (10) social accountability;
- (11) information appearing on the EU Ecolabel.

**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, it is understood that these may originate from the applicant and/or his supplier(s) and/or their supplier(s), as appropriate.

Where possible, the testing should be performed by laboratories that meet the general requirements of EN ISO 17025 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.

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

<sup>(1)</sup> OJ L 396, 30.12.2006, p. 1.



## EU ECOLABEL CRITERIA

### Criterion 1 — Energy efficiency, lifetime, lumen maintenance and mercury content

Light sources shall meet the following requirements:

|                   | Single ended   | Double ended   |
|-------------------|--|--|
| Energy Efficiency | 10 % better than the lumen per watt value according to Class A | 10 % better than the lumen per watt value according to Class A |
| Life time (hours) | 15 000   | 20 000   |
| Lumen Maintenance | 80 % at 9 000 hours  | 90 % at 16 000 hours   |
| Mercury (mg)      | < 1,5  | < 3,0  |

*Note:*

Energy efficiency is as defined in Annex IV to Commission Directive 98/11/EC <sup>(1)</sup>.

*Assessment and verification:* the applicant shall provide a test report stating that the energy efficiency, lifetime and lumen maintenance of light sources other than LEDs have been determined using the test procedures referred to in EN 50285.

For the efficiency, lifetime and lumen maintenance of LED light sources, and for the mercury content of fluorescent light sources, the applicant shall provide test reports using reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state of the art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the *Official Journal of the European Union*. The report shall state the energy efficiency, lifetime, lumen maintenance and mercury content of the light source. If the appropriate lifetime test has not been completed, the operational lifetime as stated on the packaging is acceptable pending the result of the test. However, the result of the test must be provided within 12 months of the date of application for the EU Ecolabel. For the lifetime test, 75 % of the test sample shall meet the requirement.

### Criterion 2 — Switch on/off

For compact fluorescent lamps (CFLs) and LEDs, the number of switch on/off cycles that the light source can withstand before premature failure shall be greater than the lamp life time expressed in hours.

For lamps claiming to withstand frequent switching, this number shall be higher than 60 000 switch on/off cycles.

*Assessment and verification:* for CFLs the applicant shall provide a test report stating that the number of switch on/off cycles for a CFL has been determined using a rapid cycle test (1 minute on, 3 minutes off) and the test procedures for lifetime referred to in EN 50285.

<sup>(1)</sup> OJ L 71, 10.3.1998, p. 1.

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For LEDs the applicant shall provide a test report using reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state of the art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the *Official Journal of the European Union*.

The report shall state the number of switch on/off cycles achieved when 50 % of CFLs or LEDs tested meet the requirements for lamp lifetime referred to in the respective standards.

**Criterion 3 — Colour rendering index**

The colour rendering (Ra) index of the light source shall be greater than 85.

*Assessment and verification:* the applicant shall provide a test report stating that the colour rendering index of the light source has been determined using the test procedure referred to in CIE-document 13.3. The report shall state the colour rendering index of the light source.

**Criterion 4 — Colour consistency**

The light source shall have a Correlated Colour Temperature (CCT) spread within a 3-step MacAdam ellipse or better.

*Assessment and verification:* the applicant shall provide a test report stating that the correlated colour temperature (CCT) spread is within a 3-step MacAdam ellipse or better using reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state of the art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the *Official Journal of the European Union*.

**Criterion 5 — Hazardous substances and mixtures**

In accordance with Article 6(6) of Regulation (EC) No 66/2010, the product or any part of it shall not contain substances referred to in Article 57 of Regulation (EC) No 1907/2006 nor substances or mixtures which may be or have been assigned the following hazard statements or risk phrases.

*List of hazard statements and risk phrases:*

| 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             |

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| Hazard Statement <sup>(1)</sup>  | Risk Phrase <sup>(2)</sup> |
|--|----------------------------|
| 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 through prolonged or repeated exposure            | R48/25/24/23               |
| H373 May cause damage to organs through prolonged or repeated exposure         | 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                     |

<sup>(1)</sup> As provided for in Regulation (EC) No 1272/2008 of the European Parliament and of the Council (OJ L 353, 31.12.2008, p. 1).

<sup>(2)</sup> As provided for in Council Directive 67/548/EEC (OJ 196, 16.8.1967, p. 1).

The use of substances or mixtures which upon processing change their properties (e.g. become no longer bioavailable, undergo chemical modification) in a way that the identified hazard no longer applies are exempted from the above requirement.



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Concentration limits for substances or mixtures meeting the criteria for classification with the above mentioned hazard classes or categories, and for substances meeting the criteria of Article 57(a), (b) or (c) of Regulation (EC) No 1907/2006, shall not exceed the generic or specific concentration limits determined in accordance with the Article 10 of Regulation (EC) No 1272/2008. If specific concentration limits are determined they should prevail against the generic ones.

Concentration limits for substances meeting criteria of Article 57(d), (e) or (f) of Regulation (EC) No 1907/2006 shall not exceed 0,1 % weight by weight.

The following substances/uses of substances are specifically derogated from this requirement:

|  |   |
|--|---|
| Homogenous parts with weight below 5 g | All hazard statements and risk phrases listed above |
|--|---|

*Assessment and verification:* for each part above 5 g the applicant shall provide a declaration of compliance with this criterion, together with related documentation, such as declarations of compliance signed by the suppliers of substances and copies of relevant Safety Data Sheets in accordance with Annex II to Regulation (EC) No 1907/2006 for substances or mixtures. Concentration limits shall be specified in the Safety Data Sheets in accordance with Article 31 of Regulation (EC) No 1907/2006 for substances and mixtures.

**Criterion 6 — Substances listed in accordance with Article 59(1) of Regulation (EC) No 1907/2006**

No derogation from the exclusion in Article 6(6) shall be given concerning substances identified as substances of very high concern and included in the list set out in Article 59 of Regulation (EC) No 1907/2006, present in mixtures, in an article or in any homogenous part of a complex article in concentrations higher than 0,1 %. Specific concentration limits determined in accordance with Article 10 of Regulation (EC) No 1272/2008 shall apply in case it is lower than 0,1 %.

*Assessment and verification:* the list of substances identified as substances of very high concern and included in the candidate list in accordance with Article 59 of Regulation (EC) No 1907/2006 can be found on the website:

[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)

Reference to the list shall be made on the date of application.

The applicant shall provide a declaration of compliance with this criterion, together with related documentation, such as declarations of compliance signed by the suppliers of substances and copies of relevant Safety Data Sheets in accordance with Annex II to Regulation (EC) No 1907/2006 for substances or mixtures. Concentration limits shall be specified in the Safety Data Sheets in accordance with Article 31 of Regulation (EC) No 1907/2006 for substances and mixtures.

**Criterion 7 — Plastic parts**

- (a) If any plasticizer substance in the manufacturing process is applied, it must comply with the requirements on hazardous substances set out in Criteria 5 and 6.

Additionally, DNOP (di-n-octyl phthalate), DINP (di-isononyl phthalate) and DIDP (di-isodecyl phthalate) shall not intentionally be added to the product.

- (b) Plastic parts shall not contain a chlorine content greater than 50 % by weight.

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*Assessment and verification:* a certificate signed by the manufacturer declaring compliance with these requirements shall be submitted to the awarding competent body. A declaration of compliance signed by the plastic suppliers and copies of relevant safety data sheets about materials and substances shall also be provided to the awarding competent body.

**Criterion 8 — Packaging**

Laminates and composite plastics shall not be used.

Where cardboard boxes are used, they shall be made of 80 % post-consumer recycled material.

Where plastic materials are used they shall be made of at least 50 % post-consumer recycled material.

*Assessment and verification:* a sample of the product packaging shall be provided on application, together with a corresponding declaration of compliance with this criterion. Only primary packaging, as defined in European Parliament and Council Directive 94/62/EC <sup>(1)</sup>, is subject to the criterion.

**Criterion 9 — User instructions**

The product shall be sold with relevant user information either on the packaging or in a separate leaflet sold with the product, providing advice on its proper environmental use. In particular:

- (a) for lamps having E27, E14, B22 or B15 caps, the relative size and shape of the light source compared to a conventional incandescent lamp shall be indicated on the packaging;
- (b) for double-ended light sources: information on the packaging shall indicate that the environmental performance of the light source is improved when it is used with high frequency electronic control equipment;
- (c) clean-up guidelines for a broken fluorescent light source listed on the packaging;
- (d) the proper maintenance of lamps, such as cleaning, to maintain lumen output;
- (e) turning off lights saves energy and money.

*Assessment and verification:* the applicant shall declare the compliance of the product with these requirements, and shall provide a copy of the packaging or leaflet to the competent body assessing the application.

**Criterion 10 — Social accountability**

Fundamental principles and rights regarding working conditions must be fulfilled during the production of the Ecolabelled light source.

The licensee must ensure that the production of the light source follows the ILO conventions <sup>(2)</sup> regarding child labour, forced labour, health and safety, discrimination, discipline, hours of work, wages, freedom of association and collective bargaining.

*Assessment and verification:* the applicant shall declare compliance with this requirement and provide a specification of contracts with inspection authorities and either a code of conduct regarding ILO conventions or a SA8000 certification.

<sup>(1)</sup> OJ L 365, 31.12.1994, p. 10.

<sup>(2)</sup> <http://www.ilo.org/>

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**Criterion 11 — Information appearing on the EU Ecolabel**

Optional label with text box shall contain the following text:

- ‘— High energy efficiency — saves money,
- Long life time,
- Performance tested’.

If the light source does not contain mercury, the optional label may state that the light source does not contain mercury.

The guidelines for the use of the optional label with text box can be found in the ‘Guidelines for use of the Ecolabel logo’ on the website: [http://ec.europa.eu/environment/ecolabel/promo/logos\\_en.htm](http://ec.europa.eu/environment/ecolabel/promo/logos_en.htm)

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