

Questionnaire Exemption Request No. 7

“Mercury in single capped (compact) fluorescent lamps not exceeding (per burner)”

Background

The Öko-Institut together with Fraunhofer IZM has been appointed within a framework contract for the evaluation of applications for granting, renewing or revoking an exemption to be included in or deleted from Annexes III and IV of the new RoHS Directive 2011/65/EU (RoHS 2) by the European Commission.

The European Lamp Companies Federation (ELC) has applied for an exemption for “Mercury in single capped (compact) fluorescent lamps not exceeding (per burner) - for long-life lamps <30W (specified with a lifetime of >15 khrs)”

The exemption request is extremely similar to the previous evaluation of existing exemption no. (1a) listed in the Annex III Directive 2011/65/EU (RoHS 2). This exemption was evaluated and reviewed by Öko-Institut together with Fraunhofer IZM in the past (see Gensch et al. 2009¹).

The applicant puts forward the following main arguments.

1. The applicant states that the use of Long life lamps is directed to areas where lamp replacement is difficult and expensive due to high ceilings, special luminaire design for critical application requirements or too much disturbance of running processes during long operating hours. Also applications where safety of people is at stake e.g. heavy duty industry halls, chemical industry and oil platforms requiring very reliable long life specifications.
2. The current exemption states that 2,5 mg shall be used per burner after 31 December 2012. This is suitable for lamps <30W with life time's < 20 khrs, However, according to the applicant, for long life lamps 3.5 mg mercury is needed to avoid light output

¹ Gensch et al. 2009

Gensch, C.; Zangl, S.; Groß, R.; Weber, A. K.; Deubzer, O.; Adaptation to scientific and technical progress under Directive 2002/95/EC; Final Report, Öko-Institut e. V. und Fraunhofer IZM, February 2009;
http://ec.europa.eu/environment/waste/wEEE/pdf/report_2009.pdf

- failures during life of the product. The current ROHS requirement of 2.5 mg max after 31 Dec 2012 is therefore scientifically impracticable.
3. As no specific category for long-life lamps is available in RoHS for single-capped (compact) fluorescent lamps, the applicant requests a new exemption for these lamps: For long-life lamps <30W, 3.5 mg may be used after 31 December 2012
 4. According to the applicant, suitable substitutes do not exist at this time. In this respect, the alternative at present for the use of long life lamps would be to install multiple normal standard lamps, throughout the lifespan of a long life lamp, instead of using 1 long life lamp. Assuming 2 lamps would be used, the total amount of mercury dosed for 2 lamps during lifetime would then be 5 mg. the applicant therefore states that the total environmental impact is lower when one long life lamp is used with a total of 3.5 mgr of mercury.

For details, please check the applicant's exemption request at <http://rohs.exemptions.oeko.info/index.php?id=137>. This exemption request has been subject to a first completeness and plausibility check. The applicant has been requested to answer additional questions and to provide additional information (c.f. link above).

The objective of this consultation and the review process is to collect and to evaluate information and evidence according to the criteria listed in Art. 5 (1) (a) of Directive 2011/65/EU (RoHS II), which you can download from here:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT>.

If you would like to contribute to the stakeholder consultation, please answer the following questions:

Questions

1. Please state whether you either support the applicant's request or whether you would like to provide argumentation against the applicant's request. In both cases please provide detailed technical argumentation / evidence in line with the criteria in Art. 5 (1) (a) to support your statement.
2. The applicant mentions that long life lamps are used for specific applications. Could you provide information referring to the specific applications in which long life lamps are used?
3. The scope of the exemption request must be clarified so as to express the differentiation between long life and short life lamps. Could you please provide technical standards or other generally accepted documents to define long life and short life in khrs, respectively?

4. Please provide further detailed elaboration concerning the difference between the quantities of 3.5mg and 2.5 mg mercury and their function and light output.
5. Why is the requirement of max. 3.5 mg mercury more practicable?
6. Have any lifecycle studies been carried out?
7. What is the influence of the application production technology on the amount of mercury needed for the lamp? How does the amount of mercury used in lamp production compare with the amount of mercury in the final product (lamp).
8. The applicant claims a 60.000 hours lifetime is characteristic of long life lamps? Are there any corresponding test results available? Is there any third party verification for this information?
9. The applicant mentioned continuous R&D with a view to reducing the mercury content. Please provide evidence on reduction efforts and timeframes where available.
10. Please provide detailed technical evidence why there is no LED-technology-based alternative as LEDs are known to have a high efficiency as well as a very long lifetime
11. Should you want to use socio-economic arguments for the duration of the requested exemption, please provide detailed figures to support your argumentation.

Finally, please do not forget to provide **your contact details** (Name, Organisation, e-mail and phone number) so that Öko-Institut/Fraunhofer IZM can contact you in case there are questions concerning your contribution.