

Questionnaire Exemption Request No. 5

“Decorative ceramic lamp bases or other ceramic components of luminaires containing lead and/or cadmium in the glaze/colouring”

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 Federation of National Manufactures Associations for Luminaires and Electrotechnical Components for Luminaires in the European Union (CELMA) has applied for an exemption for “Exemption Request “Decorative ceramic lamp bases or other ceramic components of luminaires containing lead and/or cadmium in the glaze/colouring”.

The applicant puts forward the following main arguments.

- Decorative lighting products are, as their name suggests, a decorative item where the aesthetics are equally important. Without the aesthetic ability of the luminaire (lamp base/components) to match corresponding items of a decorative nature (e.g. vases, jugs, plates etc.) the luminaire may be less suitable to consumer taste. The aesthetic quality of the product is achieved through using the same glazes, colourings and processes used for other ceramic items.
- Lead lowers the glaze melting point and as a silicate glaze gives a smooth, glossy, bright finish as lead provides special effects (reactive glazes). Cadmium provides bright red/orange colours.
- It is at present impossible to reproduce the aesthetic effects currently possible without the use of lead and cadmium in the glaze. Many colours, decorative finishes etc would no longer be possible for luminaires even though the same finishes would remain available and totally acceptable for other ceramic products.

For details, please check the applicant’s exemption request at <http://rohs.exemptions.oeko.info/index.php?id=135>.

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 2), 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. The applicant could not provide any information concerning the quantities of lead and cadmium used for the mentioned application. Can you contribute information and/or data that may enable the quantification of how much cadmium and lead is used in the application for which the exemption has been requested? Please submit information relevant for quantification of these values for the EU, if possible. Estimation is fine in case exact data is not available.
2. According to the applicant due to aesthetical reasons, existing substitutes are not equivalent, as some glazes and colours cannot be produced with a quality comparable to the available lead and cadmium counter products. The substitution or the elimination of lead and cadmium would then be technically impracticable with respect to the aesthetic outcome. However, as the aesthetic qualities do not contribute to functionality, it can be argued that other materials than ceramic materials can provide the functionality of the ceramic parts for lamp bases. Under such presumptions, if ceramic parts are used in these applications, they could be used either without lead and cadmium colours, or with the use of lead and cadmium-free glazes and colours. The substitution or elimination of lead and cadmium in this application would thus be technically practicable.
 - a. Please indicate in more detail the functionality and technical necessity of lead and cadmium in **decorative ceramic lamp or ceramic components**.
 - b. Which technical properties of the substances are needed for the specific applications?
 - c. Could you please provide technical or scientific based criteria representing the aesthetic ability of the luminaire, for example, opacity etc.?
3. The applicant indicated that for the mentioned applications, lead and cadmium cannot be replaced in glazes or colourings.
 - a. Please provide test results/protocols (e.g. from different brands mentioned by the applicant such as Meissen, Delft etc.) that clearly indicate that decorative ceramic lamp or ceramic components containing lead have significant technical advantages over substitutes.

- b. Please provide further detailed elaboration concerning the efforts which have been made to develop alternative glazes or colourings during the last three years?
 - c. If possible, please provide a timeline for the next five years concerning the development of possible substitutes? Which technical and/or market developments are expected for the next five years?
 - d. The applicant stated that cadmium is used only for bright red/orange colour. Could you provide a typical layout design for decorative ceramic lamps? Are there design options available to reduce cadmium?
4. Please provide data concerning elution or leaching of RoHS substances from the application, especially during waste management operations if available.
5. Please indicate if the negative environmental, health and/or consumer safety impacts caused by substitution are likely to outweigh the environmental, health and/or consumer safety benefits. If existing, please refer to relevant studies on negative impacts caused by substitution.
6. The wording suggested by the applicant for this exemption would be **“Decorative ceramic lamp bases or other ceramic components of luminaires containing lead and/or cadmium in the glaze/colouring”**
 - a. Do you agree with the scope of the exemption as proposed by the applicant? Please suggest an alternative wording and explain your proposal, if you do not agree with the proposed exemption wording.
 - b. 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 provide detailed technical argumentation / evidence in line with the criteria in Art. 5 (1) (a) to support your statement.

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.