Consultation Questionnaire Exemption No. 29 (renewal request)

Exemption for „Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC (1)“

Abbreviations and Definitions

EDG	European Domestic Glass
LCG	Lead crystal glass
LEU	LightingEurope
Pb	Lead

Background

The Oeko-Institut and Fraunhofer IZM have been appointed within a framework contract[1] for the evaluation of applications for the renewal of exemptions currently listed in Annexes III of the new RoHS Directive 2011/65/EU (RoHS 2) by the European Commission.[1]

European Domestic Glass (EDG) and LightingEurope (LEU) have submitted a joint request for the renewal of the above mentioned exemption, which has been subject to a first completeness and plausibility check. The applicant has been requested to answer additional questions and to provide additional information, available on the request webpage of the stakeholder consultation (http://rohs.exemptions.oeko.info/index.php?id=228).

According to the applicant, crystal is a substance characterized by a continuous and essentially non-crystalline or vitreous inorganic macromolecular structure, which is highly insoluble and inert. Obtained by a mineralogical process, resulting in a chemical network (matrix), crystal constituents are closely linked together and are in a specific chemical environment, totally different from the initial state (raw materials). Therefore it does not occur in simple compounds such as metals or oxides. Leaching tests performed demonstrate that crystal is classified as non-hazardous waste according to criteria from Council Decision 2003/33/EC. EDG and LEU[2]

According to the EDG and LEU[3] crystal glass is a component of high quality lighting and decoration applications. It is used for the production of various articles such as luminaires and lamps otherwise impossible to manufacture, for enhancing light distribution or transparency thereof and for specific decoration such as shape and finish (see further detail in document). Lead oxides (PbO or Pb_3O_4), are used as an intermediate for the chemical synthesis of lead crystal glass (LCG), as required by Council Directive 15 December 1969 on the approximation of the laws of the Member States relating to crystal glass (69/493/EEC). The amount of Pb in the lead crystal glass has to be at a minimum of 24%

[1] Contract is implemented through Framework Contract No. ENV.C.2/FRA/2011/0020 led by Eunomia

[2] EDG and LEU (2015), Answers to 1st Clarification Questions Regarding Request for Renewal of Exemption 29 in Annex III of Directive 2011/65/EU, submitted by the European Domestic Glass Association and by LightingEurope on 18.8.2015

[3] EDG and LEU (2014), Original Dossier Requesting the Extension of Exemption 29 in Annex III of Directive 2011/65/EU, submitted by the European Domestic Glass Association and by LightingEurope on 16.1.2014 to the EU COM

expressed as PbO for the glass to be called “crystal glass”... articles made of LCG actually contain no elemental Pb or PbO as such.

Section 4(A) “*Description of the concerned application*” of the exemption request dossier, details various applications of relevance for which the exemption renewal is requested:

- “Fixed/portable luminaires
- Lamps
- Electrified mirrors
- Horology (clocks, watches etc.)
- Display cases
- Digital photo frames
- Tablet and smart phone docking stations
- Furniture and home décor items (carrousel, tables etc.)
- Building materials (illuminated bricks)”

From a later communication it can be understood that for some of these groups not all products would be considered to be EEE, for example fixed and portable luminaires are also available for use with (non-electrical) candles. EDG and LEU further provide information as to the nature of the manufacture of such articles, which are explained to be at least partially hand-crafted.

EDG and LEU explain that the addition of lead oxide enables:

- better energy efficiency in terms of light flow transmission;
- better workability of the material during manufacture;
- unique optical properties;
- unique mechanical and refinement process possibilities; and
- decorative properties;

EDG and LEU provide further details in their answers to clarification questions as to some of these aspects.

Substitutes are said to have been sought over the latest two decades without success. The performance of alternative materials is worse and does not allow the production of the same articles, notably because of the insufficient workability time made possible by the lead oxide component.

For further details, please check the applicant’s exemption request at:
http://rohs.exemptions.oeko.info/index.php?id=254

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 can be found under:

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 applicants have requested the renewal of Ex. 29 of Annex III, with the same wording formulation and with the maximum possible duration.

    a. Do you agree with the scope of the exemption as proposed by the applicant?
    b. Please suggest an alternative wording and explain your proposal, if you do not agree with the proposed exemption wording.
    c. Please explain why you either support the applicant's request or object to it. To support your views, please provide detailed technical argumentation / evidence in line with the criteria in Art. 5(1)(a) to support your statement.

2. Please provide information concerning possible substitutes or developments that may enable reduction, substitution or elimination, at present or in the future, of lead in crystal glass;

    a. In this regard, please provide information as to alternatives that may cover part or all of the applicability range of lead in crystal glass;

    b. Please provide quantitative data as to application specifications to support your view, particularly explaining how suggested substitutes provide comparable workability to that of Pb based crystal glass or how this problem is solved through alternative manufacture practices. In this respect, please also provide quantitative specifications to allow a comparison of substitutes and Pb based crystal glass in relation to their aesthetic properties in end-products.

3. Please provide information as to research initiatives which are currently looking into the development of possible alternatives for some or all of the application range of Pb based crystal glass.

    a. Please explain what part of the application range is of relevance for such initiatives (in what applications substitution may be possible in the future).

    b. Please provide a roadmap of such on-going research (phases that are to be carried out), detailing the current status as well as the estimated time needed for further stages.

Please note that answers to these questions are to be published as part of the available information relevant for the stakeholder consultation to be carried out as part of the evaluation of this request. If your answers contain confidential information, please provide a version that can be made public along with a confidential version, in which proprietary information is clearly marked.