

Questionnaire

“Lead and cadmium in optical and filter glass in monitoring and control instruments”

Background

The Öko-Institut together with Fraunhofer IZM has been appointed for the technical assistance in reviewing the requests for exemptions from the requirements of the RoHS Directive 2011/85/EU (RoHS II) by the European Commission. You have submitted the above mentioned request for exemption which has been subject to a first completeness and understandability check.

As a result we have identified that there is some information missing and a few questions to clarify before we can proceed with the online consultation on your request. Therefore we kindly ask you to reformulate your request taking the following points into consideration.

Questions

1. *Please provide test results/protocols that clearly indicate that optical filter glass containing lead and/or cadmium has significant technical advantages over lead- and cadmium-free substitutions.*

From the Öko-Institut report “Adaptation to scientific and technical progress under Directive 2002/95/EC” http://ec.europa.eu/environment/waste/weee/pdf/final_report1_rohs1_en.pdf

Data and information provided by various stakeholders give evidence that there are some applications where the use of lead and/or cadmium in optical glass will be necessary, as there are no viable substitutes. (SECTION 4.19.3)

2. *Please clarify the scope of the exemption request. Does it address solely lead and cadmium in optical filter glass? Or does it also cover mercury and hexavalent chromium?*

The Exemption request does not cover mercury or hexavalent chromium.

3. *For the case the request also addresses mercury and hexavalent chromium, please provide a written and easy understandable justification for these substances, including information on the technical applications in optical filter glasses and substitutes.*

The Exemption request does not cover mercury or hexavalent chromium.

4. *Please specify which substances or combinations of substances are used in lead- and cadmium-free optical filter glasses (information on substitutes). Give information on the application range (e.g. product type, temperature range, range of refractive index) in which these substitutes are already applied. Please provide this information for each substance covered in this proposal for exemption.*

The research into alternatives for applications covered by the old exemptions; testing and evaluation of available substitutes and defining of transition programmes; was not considered a priority as there was no apparent regulatory requirement since these applications were presumed to be available for the new categories brought into the RoHS scope. For further details see General comments Sections 1.1 and 2.

5. *Please give information on the research activities on substitutions for lead and cadmium in optical filter glass carried out by yourself and/or other sector players, including other companies in the supply chain.*

.The research into alternatives for applications covered by the old exemptions; testing and evaluation of available substitutes and defining of transition programmes; was not considered a priority as there was no apparent regulatory requirement since these applications were presumed to be available for the new categories brought into the RoHS scope. For further details see General comments Sections 1.1 and 2.

6. *Please give information on efforts carried out to evaluate research activities on substitutes (e.g. number of optical filter glass producers contacted in relation to the whole market).*

The research into alternatives for applications covered by the old exemptions; testing and evaluation of available substitutes and defining of transition programmes; was not considered a priority as there was no apparent regulatory requirement since these applications were presumed to be available for the new categories brought into the RoHS scope. For further details see General comments Sections 1.1 and 2.

7. *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.*

The research into alternatives for applications covered by the old exemptions; testing and evaluation of available substitutes and defining of transition programmes; was not considered a priority as there was no apparent regulatory requirement since these applications were presumed to be available for the new categories brought into the RoHS scope. For further details see General comments Sections 1.1 and 2.

8. *If mercury and hexavalent chromium shall also be covered by the proposal for exemption, please also provide information on substitutes and research activities for these substances.*

The Exemption request does not cover mercury or hexavalent chromium.

9. *The proposal for exemption states that the company Schott already offers lead-free alternatives. Please specify the range of use of these alternatives and their possible limitations. Please also provide this information for other lead- and cadmium-free products on the market.*

No additional information is available in advance of the public consultation.

10. *The proposal for exemption states that lead-free alternatives are only available with low refractive index. Please further specify the range of the refractive index in which no lead-free alternatives of sufficient quality are on the market or in development.*

No additional information is available in advance of the public consultation.

11. *Would it be possible to limit an exemption for optical glasses for a certain refractive index range?*

No, since refractive index is not the only factor involved, as noted in the original submission. Detailed technical information is not available at this stage. The reason is that this exemption was presumed to be available for category 9 and therefore no detail assessment and investigation has been performed so far. Our supply chains are very complex as our products are made of thousands of parts and we deal with a substantial number of suppliers. For further details see General comments Sections 1 and 2.2. 8

12. *The proposal for exemption states that substitutes have lower quality than lead- or cadmium-containing optical filter glasses. Please provide an objective definition of quality aspects of optical filter glasses, including quality aspect (e.g. thermal stability),*

indicators (e.g. maximum variation over a certain temperature range) and threshold values for the applications included in this proposal for exemption.

This request is inconsistent with scope of Exemptions 13a and 13b of Annex III. No additional information is available in advance of the public consultation. For further details see General comments Section 2.

13. *Please provide a common definition of the applications that shall be covered by a possible exemption. The definition should specify functions and typical application ranges (e.g. optical precision measurement instruments for laboratory use with a refractive index larger than...). In addition, product lists can be added.*

This request is inconsistent with scope of Exemptions 13a and 13b of Annex III.

From the Öko-Institut report "Adaptation to scientific and technical progress under Directive 2002/95/EC" http://ec.europa.eu/environment/waste/wEEE/pdf/final_reportl_rohs1_en.pdf

"Although stakeholder could provide an enumeration and list of application examples, this list would be by no means fully exhaustive, because applications which make use of these glasses would be possibly several hundreds in number." (Section 4.18.3)

No additional information is available in advance of the public consultation.

14. *You are proposing an exemption valid until 2021 and claim that in many products, substitution is impractical as the design and qualification effort required is equivalent to that for a wholly new product introduction. How are the forecasts for substitutions over the next ten years? Will research and market penetration of alternatives, as well as innovation cycle in optical measurement instruments allow a complete substitution after 2021? (It is clear that you cannot give perfect forecast for the technical and market developments for the next ten years. Nevertheless, a sound and justified outlook could help in the evaluation and stakeholder process).*

The research into alternatives for applications covered by the old exemptions; testing and evaluation of available substitutes and defining of transition programmes; was not considered a priority as there was no apparent regulatory requirement since these applications were presumed to be available for the new categories brought into the RoHS scope. The European Commission and ERA confirmed the need of continuation of the exemptions for category. 9. For more details see General comments, Section 1.1

The path to finding a proven reliable alternative is unknown at this time and we cannot predict if such a substitute can be found far less widely available in ten years.

It is important to stress that many products have been already transitioned to RoHS compliant products, with the assumption that existing RoHS exemptions continue to apply.

Test and Measurement producers do not rely on continued availability of material on the market that utilize the exemptions requested. Our supply chain management is extremely complex. For more details see General comments Section 2.2.10

There are a large number of contributing factors why complete substitution in the timeframes proposed is impractical; see General comments Section 2.