Consultation Questionnaire for Renewal of Exemption 4 of RoHS Annex IV

Table 1: Current wording of the exemption

|  |  |  |
| --- | --- | --- |
| No. | Current exemption wording | Current scope and dates of applicability |
| IV-4 | Lead in glass frit of X-ray tubes and image intensifiers and lead in glass frit binder for assembly of gas lasers and for vacuum tubes that convert electromagnetic radiation into electrons | Applies to categories 8 and 9.  Expires on   * 21 July 2021 for category 8 other than in-vitro diagnostic medical devices and for category 9 other than industrial monitoring and control instruments. * 21 July 2023 for category 9 in-vitro diagnostic medical devices. * 21 July 2024 for category 9 industrial monitoring and control instruments. |

Acronyms and Definitions

Cat. Category, referring to the categories of EEE specified in Annex I of the current RoHS Directive 2011/65/EU

COM European Commission

EEA European Economic Area (EU 27 + Iceland, Liechtenstein and Norway)

EEE Electrical and electronic equipment

EU European Union

IMCI Industrial monitoring and control instruments

Lead-free Not containing lead in the applications in scope of the exemption to be reviewed

Pb Lead

1. Introduction
   1. **Background**

Bio Innovation Service, UNITAR and Fraunhofer IZM have been appointed[[1]](#footnote-2) by the European Commission through for the evaluation of applications for the review of requests for new exemptions and the renewal of exemptions currently listed in Annexes III and IV of the RoHS Directive 2011/65/EU. The stakeholder consultation is part of the review process. It addresses third parties – not the applicants – to provide and to evaluate information and evidence according to the criteria listed in Art. 5(1)(a) of Directive 2011/65/EU.[[2]](#footnote-3)

On 20 January 2022, TMC submitted a request the renewal of the above exemption for cat. 9 industrial monitoring and control instruments (IMCIs) with the wording, scope and validity period shown in the below table.

Table 2: Requested exemption renewal

|  |  |  |
| --- | --- | --- |
| No. | Requested exemption | Requested scope and dates of applicability |
| *IV-4* | *Lead in glass frit of X-ray tubes and image intensifiers and lead in glass frit binder for assembly of gas lasers and for vacuum tubes that convert electromagnetic radiation into electrons* | *Applies to category 9 monitoring and control instruments.*  *Expires on 21 July 2031 (2024 + 7 years)* |

The applicant was requested to respond to a clarification questionnaire prior to this stakeholder consultation to complete missing information. This questionnaire along with the exemption application and – if submitted – further information or supporting evidence from other stakeholders are accessible on the stakeholder consultation web page.[[3]](#footnote-4)

**To contribute to this stakeholder consultation, please answer the below questions until 19 January 2024.**

**Please also see the applicants’ renewal request form and – if submitted – further information on the consultation web page[[4]](#footnote-5).**

* 1. **Summary of the exemption request**

The applicant explains that exemption 4(IV) is used for a few critical applications. Precision lasers with high spectral purity are manufactured with a borosilicate glass rod with glass frit containing lead oxide (PbO) to connect this glass to the metal pieces of the assembly. PbO glass frit has a low melting point and excellent wetting characteristics, which achieves a thermally matched bond of the glass rod to other components in the manufacture of precision lasers without damaging or distorting the glass. The materials and heat cycle for attaching glass to metal must be precisely controlled to avoid stresses caused by thermal expansion differences.

As further outlined in the submission, the unique characteristics of lead make the substance a necessary part for the functioning of glass frit, which cannot be substituted with other substances. The Test & Measurement Coalition therefore applies for a renewal of exemption 4 (IV) for the maximum validity period.

A thorough Socio-Economic Analysis was conducted in addition to the technical assessment and attached to this submission, further illustrating the negative socio-economic impacts a non-renewal of exemption of exemption 4(IV) would have at this stage. Overall, the analysis concludes that the total impact of non-renewal of this exemption is monetized in the range of 15 million EUR and 40 million EUR (conservative lower bound estimate).

1. Questions
2. Please let us know whether you support or disagree with the wording, scope and requested duration of the exemption. To support your views, please provide detailed technical argumentation / evidence in line with the criteria4 in Art. 5(1)(a). If applicable, please suggest an alternative wording and/or duration and explain your proposal.
3. Exemption IV-4 includes the use of lead in (parts of) different devices, i.e. in the glass frits of X-ray tubes and image intensifiers, lead in glass frit binders for assembly of gas lasers, and for vacuum tubes that convert electromagnetic radiation into electrons (please also see the applicant’s answers to the clarification questionnaire).

Please provide information concerning potential substitution or elimination of lead at present or in the closer future for the use of the restricted substances in the above applications at hand.

1. Please provide information as to research to find alternatives that do not rely on the exemption under review (substitution or elimination), and which may cover part or all of the applications in the scope of the exemption request.
2. Please provide a roadmap of such on-going substitution/elimination and research (phases that are to be carried out), detailing the current status as well as the estimated time needed for further stages.
3. TMC claim that the exemption must remain available for used equipment. *Manufacturers in our sector produce equipment that is capable of being sold globally and is not regionalized like other market sectors. Due to the extended life and asset value of equipment, it is frequently procured back from customers when they no longer have a continued need for that application. The equipment is then refurbished and made available as used. Such equipment may not have been sourced from within the EU. Consequently, the continued application of the existing exemption definition is important to allow such equipment to meet the RoHS compliance obligations if it is to be capable of being placed on the EU market. If the exemption definition changes, used equipment from outside the EU would no longer be available for purchase in the EU.*

Do you share the view that used equipment sourced from outside the European Economic Area (EEA) could no longer be placed on the EU market without this exemption?

1. TMC provided a socioeconomic analysis related to the above exemption request. The document is available online in the consultation folder for this exemption.
   1. Do you agree with the underlying method, data and conclusions?
   2. Do you have different or additional information as to the socioeconomic impacts that might arise if exemption 8(b) would be renewed as exemption 8(b)(II) instead of 8(b)?
2. Any additional information which you would like to provide?

**Please note that answers to these questions will be published as part of the evaluation of this exemption 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. Additionally, please also add “confidential” to the file name.**

**Please do not forget to provide your contact details (Name, Organisation, e-mail and phone number) so that the project team can contact you in case there are questions concerning your contribution.**

**It would be helpful for the review process if you could kindly provide the information in formats that allow copying text, figures and tables to be included in the review report.**

1. Implemented through the specific contract 070201/2020/832829/ENV.B.3 under the Framework contract ENV.B.3/FRA/2019/0017 [↑](#footnote-ref-2)
2. Directive 2011/65/EU (RoHS) available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT> [↑](#footnote-ref-3)
3. C.f. consultation web page, <https://rohs.biois.eu/requests2b.html> [↑](#footnote-ref-4)
4. Consultation web page: <https://rohs.biois.eu/requests2b.html> [↑](#footnote-ref-5)