Consultation Questionnaire for Renewal of Exemption 34 of RoHS Annex III

Table 1: Current wording of the exemption

|  |  |  |
| --- | --- | --- |
| No. | Exemption | Scope and dates of applicability |
| III-34 | Lead in cermet-based trimmer potentiometer elements | Applies to categories 1 to 11.Expires on:* 21 July 2021 for categories 1-7 and 10,
* 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments,
* 21 July 2023 for category 8 in vitro diagnostic medical devices,
* 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
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Acronyms and Definitions

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

COM European Commission

EEE Electrical and electronic equipment

IMCI Industrial monitoring and control instrument

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

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)

TMC submitted a request the renewal of the above exemption for cat. 9 industrial monitoring and control instruments (IMCI) 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 |
| *III-34* | *Lead in cermet-based trimmer potentiometer elements* | *Applies to category 9 industrial monitoring and control instruments.**Expires on 21 July 2031 (= 2024 +7 years) for category 9 industrial monitoring and control instruments.* |

Exemption 34 was reviewed by Baron et al. (2022)[[3]](#footnote-4). They recommended its renewal as listed in the table below.

Table 3: Renewal of current exemption 34 recommended by Baron et al. (2022)



Source: Baron et al. (2022)

The European Commission (COM) have not yet officially published their decision as to the adoption of the above recommendation. The COM wish the consultants to assess in this current review round whether there are any substantial reasons in line with Art. 5(1)(a) against the adoption of recommendations resulting from previous reviews in 2020 to 2022 for EEE of categories 8, 9 and 11. 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.[[4]](#footnote-5)

**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[[5]](#footnote-6).**

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

The applicant explains that the cermet potentiometer is typically used to calibrate a specific measurement or control parameter so that the final product can meet that exacting measurement resolution or output control parameter that the application requires. Thick film is a resistive and conductive film greater than 0.0001” thick resulting from firing a paste or ink that has been deposited on a ceramic substrate. The PbO within the glass substrate with the resistive ink allows the thick film to be fired at lower temperatures. This makes the resultant cermet to have the thermal characteristics and resistive value stability of the ceramic material and enable the electric resistance of the material to remain stable under changing temperatures.

Of the alternates investigated, most were eliminated either because they were also toxic or had a melting point too high for current substrate materials and the manufacturing processes employed. Only Sodium Bismuth Titanate has the potential to be used but would require further investigation. Bismuth Oxide is another alternate though the toxicity needs to be assessed to see if it would be a regrettable substitution. However, in both cases we currently have not identified any alternates cermet resistor that employ these materials and are commercially available. 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 34 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 0.3 billion EUR and 1 billion EUR (public range; conservative lower bound stimate).

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. TMC discuss in their exemption request and in the clarification questionnaire potential substitutes for lead which they deem inappropriate or as requiring further research. Please provide information concerning these or possibly other technologies as to their potential to substitute or eliminate at present or in the closer future the use of the restricted substances in the application at hand so that the requested exemption could be restricted or revoked.
4. 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.
5. 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.
6. 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)?
7. 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.**

**We ask you to kindly provide the information in formats that allow copying text, figures and tables so that they can be included into the review report.**

**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.**

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. Öko-Institut, <https://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_24/RoHS_Pack-24_final_16022022.pdf> [↑](#footnote-ref-4)
4. C.f. consultation web page, <https://rohs.biois.eu/requests2b.html> [↑](#footnote-ref-5)
5. Consultation web page: <https://rohs.biois.eu/requests2.html> [↑](#footnote-ref-6)