Consultation Questionnaire for Renewal of Exemption 42 of RoHS Annex III

Table 1: Current wording of the exemption

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| --- | --- | --- |
| No. | Exemption | Scope and dates of applicability |
| III-42 | Lead in bearings and bushes of diesel or gaseous fuel-powered internal combustion engines applied in non-road professional use equipment:* with engine total displacement ≥ 15 litres;

or* with engine total displacement < 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications
 | Applies to category 11.Expires on 21 July 2024. |

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

EU European Union

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

NAM National Association of Manufacturers

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)

EUROMOT submitted a request the renewal of the above exemption for cat.11 with the wording, scope and validity period shown in the below table. The request is supported by the National Association of Manufacturers (NAM).

Table 2: Requested exemption renewal

|  |  |  |
| --- | --- | --- |
| No. | Requested exemption | Requested scope and dates of applicability |
| *III-42* | Lead in bearings and bushes of diesel or gaseous fuel-powered internal combustion engines applied in non-road professional use equipment:* with engine total displacement ≥ 15 litres;

or* with engine total displacement < 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications
 | Applies to category 11.Expires on 21 July 2029 (2024 + 5 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)

**We welcome your contribution to the stakeholder consultation and ask you to answer the below questions until 19 January 2024.**

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

In the application form the applicant explains that “Lead as an overlay coatings and alloying element is used in a number of bushings and bearings in specific non-road professional use engines. The engines which require the use of lead are ones which have:

* engine total displacement ≥ 15 litres to compensate for slight misalignments that often occur in extreme high load operations,
* engine total displacement < 15 litres and requires a quick (<10sec) signal to start to achieve good reliability as lead acts as the initial lubricant, or
* requires maintenance in harsh and dirty environments where contaminants can be introduced to the system.

Lead provides seizure resistance, resistance to damage, conformability, embeddability, fatigue strength, flexibility, chemical resistance, impact of manufacturing tolerances and tolerance to cold temperature and limited lubrication during start-up. […] Engine manufacturers in both their current engine designs and new designs are testing potential lead-free alternatives, with the types of testing they undertake being reflective of their own in-service applications. Currently, all testing undertaken by engine manufacturers identifies the lead-free alternative which they tested having significant loss of technical performance in at least one critical parameter. As such, none yet have been determined to be a viable alternative. […] Given current lead-free alternatives still cannot offer the same performance as lead-containing bushings and bearings, this exemption is therefore requested on the basis of the inferior reliability of lead-free substitutes.”

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. EUROMOT 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. In the exemption request EUROMOT state that lead is used as an overlay coating and alloying element. Therefore, the consultants proposed an adaptation of the current exemption wording (“Lead as an overlay coating and alloying element in bearings and bushes of diesel or gaseous fuel-powered internal combustion engines applied in non-road professional use equipment: (…)”). EUROMOT rejects this proposal on the following basis: “It is deemed that the suggested change to the wording may create misunderstanding on the substances covered by the exemption as lead is used as an alloying element as well and not in its pure form. A change of the wording to “Lead as an overlay coating and alloying element” might be misunderstood as applicable to only the use of 100% lead concentration in overlay coatings.”
	1. Do you agree with EUROMOTs concerns?
	2. Do you think the adaptation of the exemption wording according to Table 3 is more precise than the current and requested wording (Table 1, Table 2)? If not, please provide alternative suggestions or explain why the current wording is the most accurate.

Table 3: Proposed exemption renewal

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| --- | --- | --- |
| No. | Proposed exemption | Requested scope and dates of applicability |
| *III-42* | Lead used in overlay coatings and alloying elements in bearings and bushes of diesel or gaseous fuel-powered internal combustion engines applied in non-road professional use equipment:* with engine total displacement ≥ 15 litres;

or* with engine total displacement < 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications
 | Applies to category 11.Expires on 21 July 2029 (2024 + 5 years) |

1. 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.**

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)