Questionnaire 1 (Clarification) for Exemption III-7(c)(I) (EUROMOT)

Current wording of exemption 7(c)(I)

Table 1: Currently valid exemption wordings

No.	*Exemption*	*Scope and dates of applicability*
III-7(c)(I)	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	Applies to categories 1 to 11 (except applications covered under point 34) and expires on - 21 July 2021 for categories 1-7 and 10, and for category 8 other than in vitro diagnostic medical devices and cat. 9 other than 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

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

1. Background

Bio Innovation Service, UNITAR and Fraunhofer IZM have been appointed[1] 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.

EUROMOT 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:

[1] Implemented through the specific contract 070201/2020/832829/ENV.B.3 under the Framework contract ENV.B.3/FRA/2019/0017

Table 2: Requested exemption renewal

No.	*Requested exemption*	*Requested scope and dates of applicability*
III-7(c)(I)	*Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezo-electronic devices, or in a glass or ceramic matrix compound used in engines, engine components and ancillary components and in end-products*	Applies to category 11 Expires on 21 July 2029 (= 2024 + 5 years)

As result of a first review we identified that some information is missing. Against this background the questions below are intended to clarify some aspects concerning the request at hand.

We ask you to kindly answer the below questions until 17 September 2023 latest.

2. Questions

1. Could you please confirm that Table 2 correctly reflects the requested renewal of the exemption?

The proposed exemption renewal as outlined in Table 2 correctly reflects the requested renewal of the exemption.

2. Exemption 7(c)(I) was reviewed by Baron et al. (2022)[2]. They recommended specifying exemption 7(c)(I) like listed in Table 3 below.

[2] C.f. Öko-Institut, https://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_22/RoHS_Pack-22_final_report_amended_February_2022.pdf

Table 3: Renewal of current exemption 7(c)(I) recommended by Baron et al. (2022)

Ex. No	Exemption formulation	Duration
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	Expires on 21 July 2024 for all categories
7(c)-V	Electrical and electronic components containing lead in a glass or glass matrix compound that fulfils the following functions: 1) protection and electrical insulation in glass beads of high voltage diodes and glass layers for wafer on the basis of a lead-zinc-borate or a lead-silica-borate glass body,* 2) for hermetic sealings between ceramic, metal and/or glass parts 3) for bonding purposes in a process parameter window for < 500°C combined with a viscosity of $10^{13,3}$ dPas (so called "glass-transition temperature") 4) used as resistance materials such as ink, with a resistivity range from 1 Ohms/square to 1 Mega Ohms/square, excluding trimmer potentiometers** 5) used in chemically modified glass surfaces for Microchannel Plates (MCPs), Channel Electron Multipliers (CEMs) and Resistive Glass Products (RGPs).	Expires on 21 July 2026 for all categories
7(c)-VI	Electrical and electronic components containing lead in a ceramic that fulfils the following functions (excluding items covered under item 7(c)-II, 7(c)-III and 7(c)-IV of this annex): 1) piezoelectric lead zirconium titanate (PZT) ceramics 2) providing ceramics with a positive temperature coefficient (PTC)	Expires on 21 July 2026 for all categories

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.

If the review shows that EUROMOT's arguments justify the renewal of the exemption, the consultants would recommend the below wordings, scopes and expiry dates. These expiry dates may be adapted to the specific situation of cat. 11 in the scope of EUROMOT's renewal request. **Error! Reference source not found.** reflects the resulting wordings, scopes and validity periods in consistency

with the state of science and technology assessed by Baron et al. (2022) and with their recommendations.

Table 4: Renewal of current exemption 7(c)(I) like recommended by Baron et al. (2022) (modified)

No.[3]	Recommended Exemption	Recommended scope and dates of applicability
III-7(c)(I)	Lead in high melting temperature type solders (i.e., lead-based alloys containing 85 % by weight or more lead)	Expires on 21 July 2024 for all categories
III-7(c)(V)	Electrical and electronic components containing lead in a glass or glass matrix compound that fulfils the following functions: 1. protection and electrical insulation in glass beads of high voltage diodes and glass layers for wafer on the basis of a lead-zinc-borate or a lead-silica-borate glass body,* 2. for hermetic sealings between ceramic, metal and/or glass parts 3. for bonding purposes in a process parameter window for < 500°C combined with a viscosity of 10 13,3 dPas (so called “glass-transition temperature”) 4. used as resistance materials such as ink, with a resistivity range from 1 Ohms/square to 1 Mega Ohms/square, excluding trimmer potentiometers** 5. used in chemically modified glass surfaces for Microchannel Plates (MCPs), Channel Electron Multipliers (CEMs) and Resistive Glass Products (RGPs).	Applies to all categories from 22 July 2024 on Expires on - 21 July 2026 for categories 1 to 10 - 21 July [2026 + **X**] for cat. 11
III-7(c)(VI)	Electrical and electronic components containing lead in a ceramic that fulfils the following functions (excluding items covered under item 7(c)-II, 7(c)-III and 7(c)-IV of this annex): 1. piezoelectric lead zirconium titanate (PZT) 2. ceramics 3. providing ceramics with a positive 4. temperature coefficient (PTC)	Applies to all categories from 22 July 2024 on Expires on - 21 July 2026 for categories 1 to 10 - 21 July [2026 + **X**] for cat. 11

X can be maximum 3 years (2026 + 3 years = 2024 + 5 years)

Please comment on this proposal explaining clearly any obstacles you see if you do not agree to the proposal.

The original scope of 7(c-I), rather than the proposed 7(c-V) and 7(c-VI) is required for internal combustion engines, associated components, and end-products in which these are used. The proposed scope of 7(c-V) and 7(c-VI) are too restrictive and will likely preclude to necessary technical use of components containing lead in glass or ceramic in applications not listed. EUROMOT members are not able to determine if all lead in glass or ceramic in applications are captured by the proposed 7(c-V) and 7(c-VI) and to differentiate them, as they use a wide variety of electronic components utilising

[3] The numbering is introduced in the current review to facilitate addressing the various exemption parts

exemption 7(c-I), but electronics suppliers do not provide information as to whether this is covered by the proposed 7(c-V) or 7(c-VI). As such, it is essential that sufficient time is required where the 7(c-I) scope remains valid for EUROMOT members, to engage with their supply chain to identify which exemption would be applying to their uses. Without the continued provision of 7(c-I) engine and end-product manufacturers will be forced to stop selling products that do not comply with RoHS. At this stage, it is not known which EUROMOT products would be affected, but could affect many types of end-users in the EU.

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.

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

3. References

Baron et al. (2022): Study to assess requests for a renewal of nine (-9-) exemptions 6(a), 6(a)-I, 6(b), 6(b)-I, 6(b)-II, 6(c), 7(a), 7(c)-I and 7 (c)-II of Annex III of Directive 2011/65/EU (Pack 22) – Final Report (Amended Version). Under the Framework Contract: Assistance to the Commission on technical, socio-economic and cost-benefit assessments related to the implementation and further development of EU waste legislation. Author(s): Yifaat Baron, Carl-Otto Gensch, Andreas Köhler, Ran Liu, Clara Löw, Katja Moch, Oeko-Institut e. V. (Pack 22). retrieved from https://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_22/RoHS_Pack-22_final_report_amended_February_2022.pdf.