Consultation Questionnaire for Exemption Request III-2022-1 (New Exemption) (BBT)

Table 1: Wording and scope of the requested exemption

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| --- | --- | --- |
| No. | Exemption | Scope and dates of applicability |
| *Annex III* | *Optical components made of mercurous chloride monocrystal (Calomel)* | *Applies to categories 9 industrial monitoring and control instruments and to category 11* *Expires on* * *21 July[[1]](#footnote-2) 2029 (= 2022 + 7 years) for category 9 industrial monitoring and control instruments*
* *21 July 2027 (= 2022 + 5 years) 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 2011/65/EU

COM European Commission

EEE Electrical and electronic equipment

EU European Union

Hg Mercury

IMCIs Industrial monitoring and control instruments

Hg-free Not containing mercury in the applications in scope of the exemption to be reviewed

# Introduction

## Background

Bio Innovation Service, UNITAR-SCYCLE and Fraunhofer IZM have been appointed[[2]](#footnote-3) by the European Commission for the evaluation of applications for new exemptions and the renewal of exemptions currently listed in Annexes III and IV of the RoHS Directive 2011/65/EU.

On 19 January 2022, BBT submitted a request for a new exemption (c.f. Table 1). 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.

The stakeholder consultation is part of the review process for the exemption request at hand. 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.[[3]](#footnote-4)

## Summary of the exemption request

Products made of mercurous chloride monocrystals (solid state, stable crystal) represents a unique, synthetically prepared optical components with extraordinary properties, especially in the infra-red part of the electromagnetic spectrum. Nowadays, there are no other materials that can offer such a strong birefringence (Δn = 0,6) and simultaneously broadband transparency reaching from visible (0.38 μm) up to mid-thermal IR region (17 μm). These extraordinary properties will find application mainly in ground sector applications such as polarization optics and, spectroscopy, acousto-optics, microscopy, etc., as well as in the space environment sector, too. Calomel is only crystal transparent in MWIR and birefringent too, what makes him a great candidate for a polarization optics with many technical advantages over the wire-grid systems used today. Even if the optical products made of mercurous chloride monocrystals are not directly electronic devices, many of the final Calomel based components is used as a subcomponent for the electronic devices. Calomel windows, prisms, cubes, plates and other forms of products are usually mounted into the protective housing for its particular use and then distributed to the final customers reaching from private companies and corporates, up to technology institutes, universities and scientific centres producing or using corresponding electronic devices.

Even though Calomel is mercurous based compound, handling represents no health risk1 since the mercury molecules are firmly bonded in the crystal lattice. The material is insoluble in water and no harmful substances can be absorbed through the skin or mucous membranes.

**To contribute to this stakeholder consultation, please answer the below questions until 11 December 2023.**

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

# Questions

1. Please let us know whether you support or disagree with the wording, scope and re-quested duration of the requested 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.
2. The applicants discuss potential alternatives whether and how they are (not) alternatives to the application in the scope of the requested exemption. 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.
3. Status of research
	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.
4. As part of the evaluation, socio-economic impacts shall also be compiled and evaluated. For this purpose, if you have additional information on socioeconomic aspects that are expected to arise if the exemption is not granted as requested, please provide details in respect of the following:
	1. What are the volumes of EEE in the scope of the requested exemptions which are placed on the market per year?
	2. What are the volumes of additional waste to be generated should the requested ex-emption not be renewed or not be renewed for the requested duration?
	3. What are estimated impacts on employment in total, in the EU and outside the EU, should the requested exemption not be renewed or be renewed for less than the re-quested time period? Please detail the main sectors in which possible impacts are expected – manufacturers of equipment in the scope of the exemption, suppliers, re-tail, users of MRI devices, etc.
	4. Please estimate additional costs associated should the requested exemption not be renewed, and how this is divided between various sectors (e.g. private, public, industry: manufacturers, suppliers, retailers).
5. Any additional information which you would like to provide?

**Please note that answers to these questions can be published on the stakeholder consultation website and in the review report. 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.**

**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. The expiry data was assimilated to the expiry of most other exemptions on Annex III. [↑](#footnote-ref-2)
2. It is implemented through the specific contract 070201/2020/832829/ENV.B.3 under the Framework contract ENV.B.3/FRA/2019/0017 [↑](#footnote-ref-3)
3. Directive 2011/65/EU (RoHS) available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT> [↑](#footnote-ref-4)
4. Consultation web page: <https://rohs.biois.eu/requests2.html> [↑](#footnote-ref-5)