

EU consultation on the continued use of mercury-containing UV lamps

As users of UV systems based on mercury-containing UV gas discharge lamps, we would like to motivate you to participate in the current consultation of the institutes commissioned by the EU in the interest of the continued availability of UV lamps for industrial applications. Participation is voluntary, the following sample formulations - insofar as they serve as a basis for your answers - are to be adapted to the respective individual case.

You can find the consultation here:

<https://rohs.biois.eu/requests3.html>

Participation in the consultation is possible until 27 May 2021.

The **background to this** are political efforts to completely ban mercury from the market. For UV lamps containing mercury, there is currently still an exemption in the RoHS Directive, which is, however, limited in time and must be extended every 5 years if required by the industry (as a rule).

In 2015 and 2020, the VDMA industry association, together with manufacturers of machinery and UV components, submitted extension applications to the EU Commission for this exemption 4(f), of Annex III of the RoHS II Directive: "Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex".

The VDMA proposal describes in detail the known applications of mercury-containing UV lamps in industrial processes, including curing of ink and varnish layers and adhesives, but also disinfection of air and surfaces. It also describes the situation regarding the availability of alternatives based on UV LEDs. Substitution by UV LEDs is desirable for many applications, but according to the VDMA's experience can so far only be implemented safely and economically in some industrial applications.

The reason for this is the usually still very low efficiency and long-term durability of UVC LEDs and, in the case of curing (polymerisation), also restrictions on the availability of chemistry (including photoinitiators).

The study participants (Institute Bio Innovation Service, UNITAR and Fraunhofer IZM) have prepared a **questionnaire** (see document "**Consultation Questionnaire**" under the above link) which, in our view, generally calls the applications into question.

However, from our point of view, it is important to have statements from the industry that present what we perceive to be the widespread use of UV lamps, the situation with alternative technologies and how we believe companies would be affected if UV lamps were no longer available on the market in the future.

To make it easier for you to answer the questionnaire (voluntarily), we would like to give you some advice on how you as an industry representative can answer the questions. The sample formulations can be used as a guide, but must be adapted to the specific situation of your company. If it is not possible for you to respond to the questions in detail, you could submit a general statement (see further down in the text). (The text modules are to be understood as suggestions. Please check the contents and formulate your answer individually and with reference to your company).

Question 1a is about whether you agree that the wording of the exemption should be maintained and whether the period of validity should be extended for another 5 years.

RESPONSE 1a: The wording should be maintained and the extension requested at least until 2026 and beyond. If possible, please give technical reasons for this.

Question 1b is about whether you propose to further shorten the requested period of validity and to limit the exemption to certain applications (alternative wording desired).

RESPONSE 1b: A shortening of the period of validity does not make sense from the industry's point of view, since the development on the basis of UV LEDs requires a lot of time and especially the development in the UVC sector still faces great challenges. It can also be assumed that not all specific UV applications are known. The current wording of the exemption: "Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex" should therefore be retained unchanged.

If applicable, point out and describe current and future developments for which mercury-containing UV lamps are indispensable for your company (e.g. air disinfection, specific curing processes, surface treatment).

Questions 2 a-c refer to cases where UV lamps can be dispensed with altogether or where mercury-containing UV lamps can be replaced by alternative technologies.

RESPONSE 2a: List alternatives that you know of and give an assessment of their suitability/unsuitability for your applications. Are there any other negative effects on the process, environment, health to be considered when using alternatives?

RESPONSE 2b: If applicable, you can describe your experience of using alternatives.

Question 2c refers to available research and a roadmap for the development of alternatives.

ANSWER 2c: It is difficult for users to answer, the question is more directed at research institutes.

Question 3: This question is about naming manufacturers who offer alternative systems that do not contain mercury and other hazardous substances regulated under RoHS.

RESPONSE 3: Name any manufacturers you know of that have comparable functionalities in terms of curing or disinfection.

It is important to point out that it might not be possible to simply replace UV lamps with mercury-free products. It depends on the respective applications whether alternative systems (e.g. UV-LED) can be used and which changes have to be made to the process (e.g. materials, handling) and the design of the overall system.

Regarding **questions 4 a-d**: This is about statements on the socio-economic aspects.

Question 4a deals with the quantity of equipment placed on the market under exemption 4(f)

RESPONSE 4a: Statistical data accurately describing the total market 4(f) is not available. The lamp quantities were estimated on the basis of studies. Please feel free to refer to studies you are familiar with.

Question 4b asks about the amount of waste resulting from a ban on UV lamps.

RESPONSE 4b: If UV lamps are no longer available, processes and even entire machines may no longer be usable. Please describe what impact this would have on your company, i.e. what would happen to stored UV materials and replacement lamps or would equipment have to be scrapped?

With **questions 4c and 4d**, the study participants ask about the effects on the employment situation and additional costs if the exemption is removed.

RESPONSE 4c and 4d: Please describe the impact on your company. In individual cases, this can mean, for example, discontinuing a business area, relocating production to countries outside EU or finding alternatives with certain imponderables. Alternatives can be significantly expensive, less reliable or not practical.

Proposal for a **General Statement** without answering the questions in detail

We are a manufacturer of with headquarters inand employ people. We manufacture the following products We use UV lamps for the following applications (if applicable, share of UV-based products in total production, consumption of lamps annually, number and type of machines/appliances with UV). Our experience with alternatives to UV lamps is as follows: UV lamps are still needed for the following reasons (e.g. unsuitability for certain applications, investments made ...)

Even if you do not answer the questions in detail, your support for the application is very helpful. General statements such as "We support the VDMA's application ... because we still need mercury-containing UV lamps for our processes ..." are not helpful. Rather, it is about your specific situation and the availability of and experience with the use of alternative technologies as well as the effects on your company if mercury-containing UV gas discharge lamps were no longer available.

Please note that the comments will be published. Therefore, please mark confidential information and competition-relevant information. Describe them preferably in a separate marked document. Information marked confidential will not be published.

Please send your position statements with contact details to rohs@biois.eu.

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