

1st Questionnaire (Clarification Questionnaire) Exemption No. 32 (renewal request)

Exemption for „Lead Oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes“

Acronyms and Definitions

Background

The Oeko-Institut and Fraunhofer IZM have been appointed within a framework contract¹ for the evaluation of applications for the renewal of exemptions currently listed in Annexes III of the new RoHS Directive 2011/65/EU (RoHS 2) by the European Commission.¹

JDSU submitted a request for the renewal of the above mentioned exemption, which has been subject to a first evaluation. The information you have referred has been reviewed and as a result we have identified that there is some information missing and have formulated a few questions to clarify some aspects concerning your request before we can start the online consultation.

Please answer the below questions until 24 August 2015 latest or otherwise let us know until when you can provide the requested information.

Questions

- 1) You indicate the use of lead entering the EU under the requested exemption with around 17 g, with a worldwide use of around 230 g. Those figure related to JDSU shipments only. Can you please give a rough calculation for the total use?

Lumentum Operations LLC, formerly the Communications and Commercial Optical Products business segment of JDS Uniphase Corporation, produces highly specialized low-power argon-ion laser products with very few direct competitors worldwide. Other companies produce larger and much higher-power argon-ion laser products that sell in substantially different volumes than Lumentum's products. Regretfully, Lumentum does not have the market volume data to share on those non-competing argon-ion laser products.

- 2) Besides substitution, elimination is a way to avoid the use of lead.
 - a) Please provide information on alternative laser technologies that would not depend on the above requested exemption.

Alternate laser technologies that could potentially replace argon and krypton gas lasers are solid-state in nature and include a variety of semiconductor based products from many man-

¹ Contract is implemented through Framework Contract No. ENV.C.2/FRA/2011/0020 led by Eunomia

ufacturers. However, these technologies result in optical operational characteristics that are not compatible with instrumentation designed to be used with gas laser products.

b) Where could they replace the argon and krypton laser tubes using exemption 32?

Solid-state lasers are usually well suited for modern instrumentation designed specifically to accommodate their characteristic electrical and optical performance. For some applications, modern solid-state lasers do not provide the required optical characteristics necessary to achieve required results, e.g. specific wavelengths or groups of wavelengths combined with narrow linewidth. As an example, for some DNA sequencing and flow cytometry applications, three or more exotic (uncommon) wavelengths, often ultraviolet, are necessary. Solid-state sources may not be available for these wavelengths or are otherwise unreliable. Substituting solid-state sources for these applications would require several solid state lasers in place of a single gas laser and thus significantly increase the use of natural resources and the environmental impact of the equipment manufacturing in order to perform the same analyses with solid state lasers.

Please note that answers to these questions are to be published as part of the available information relevant for the stakeholder consultation to be carried out in the course of the evaluation of this 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. Please take into account that any recommendation on the continuation or revocation of exemption can be based on publicly available information only.

Reference

(Gensch, Carl-Otto [Öko-Institut e.V.], et al. 2006) "Adaptation to scientific and Technical progress under Directive 2002/95/EC: Final Report - final version,";
http://ec.europa.eu/environment/waste/weee/pdf/rohs_report.pdf

(Zangl, Stéphanie, Öko-Institut e.V. 30 May 2011) Adaptation to Scientific and Technical Progress under Directive 2002/95/EC: Evaluation of New Requests for Exemptions and/or Review of Existing Exemptions. With the assistance of Otmar Deubzer, Fraunhofer IZM, Ran Liu, Öko-Institut e.V., and Katja Moch, Öko-Institut e.V. Adaptation to Scientific and Technical Progress under Directive 2002/95/EC; RoHS Exemption Reviews. Freiburg: . Final Report.
http://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_IV/RoHS_final_report_May_2011_final.pdf.