

Adaption to scientific and technical progress under Directive 2002/95/EC

Results previous evaluation
Exemption No. 20

“Lead oxide in glass used for bonding front
and rear substrates of flat fluorescent
lamps used for Liquid Crystal Displays
(LCD)”

(Excerpt from Öko-Institut Report 2007;
Annex 1 Monthly Report 6)

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- Furthermore, the applicant's argument is comprehensible that a change of such a nearly identical component typically only requires qualification at the first level of device manufacture.

5.3.3 Draft final recommendation

Against the above mentioned background and with regard to the criteria given in Article 5 (1) (b) the existing exemption for "Lead as impurity in RIG (rare earth iron garnet) Faraday rotators used for fibre optic communications systems" should be revoked. Also taking into account that the environmental impact of granting or not granting the exemption request is negligible the existing exemption should be revoked in order to support innovation and to promote early efforts for substitution.

5.4 Explanation concerning set 1 request no. 16, set 2 request no. 9 and set 4 request no. 15 (former contract)

During the last contract with the Commission on the revision of RoHS exemption requests, the Öko-Institut has reviewed three requests referring to the same area of application (i.e. the use of lead in certain lamps):

1. Mercury free flat panel lamps – Osram (set 1 request no. 16)
2. PbO (Lead in Seal Frit) used for making BLU (Back Light Unit Lamp) for LCD televisions – Samsung (set 2 request no. 9)
3. Mercury free flat panel lamps – Osram (set 4 request no. 15)

In a first step a recommendation was given in monthly report 4 with regard to the first two requests on granting an exemption with the following wording: "Lead oxide in glass used for bonding front and rear glass substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCD)."

This wording was adopted in the further process and incorporated into the RoHS Annex as entry no. 20.

Since Osram had initially intended to get an exemption for any kind of application for its mercury free flat panel lamps, it put forward the third request mentioned above. The Öko-Institut reviewed the request and gave the recommendation to grant the exemption with the following wording: "Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)".

The Commission has now informally consulted Member States on taking over this proposed wording for a replacement of exemption no. 20 of the RoHS Annex. This was not the intention of Öko-Institut when giving its recommendation with regard to set 4 request no. 15. The intention had been to add a new exemption to the Annex explicitly referring to mercury free flat fluorescent lamps in diverse applications (not only LCDs).

In order to clarify this issue Commission and Öko-Institut exchanged their views which included the following points:

- Öko-Institut's recommendation given in the Final Report to the last service contract (p. 119) does not include a replacement of point 20 of Commission Decision 2006/310/EC. What it intended with the recommendation was to include a new entry into the Annex to the RoHS Directive explicitly referring to the use of lead in mercury free flat fluorescent lamps (whereas entry 20 of the Annex does not mention whether the lamps contain mercury or not).
- The background to this is that Öko-Institut considers the use of lead in (not mercury free) flat fluorescent lamps restricted to the use in LCD displays as different to the use of lead in (explicitly mercury free) flat fluorescent lamps in diverse applications.
- According to Öko-Institut's understanding, the use of mercury in LCD backlights and in other lamps is exempted from the restriction of use due to entries 3 and 4 of the Annex thus meaning that the exemption request did only refer to the use of lead in the applications independently of the use of mercury:
- Explanation on entry 3 of the Annex² ("Mercury in straight fluorescent lamps for special purposes") by UK RoHS Guidance from June 2006: "Examples of such lamps are LCD back light lamps, disinfection lamps, medical/therapy lamps, pet care lamps (e.g. aquaria lamps), lamps with special components (e.g. integrated reflectors or external protection sleeves), lamps with special ignition features (e.g. designed for low temperatures), long length lamps (length > 1800mm) and amalgam lamps. In this context, there is no restriction on the quantity of mercury in these lamps."
- According to Osram / ELCF "Typically, so-called cold cathode straight fluorescent lamps with very small diameter are used as LCD backlight lamps. These lamps should be seen as straight fluorescent lamps for special purposes".
- Furthermore, there are two different interpretations of entry 4 of the RoHS Annex ("Mercury in other lamps not specifically mentioned in this Annex"):
 1. "if a mercury lamp is not within the scope of items 1 - 3 of the Annex, it will be covered by item 4" (statement ERA Technology in their exemption review study from 2004).
 2. "Examples of "other lamps" containing mercury are high intensity discharge (HID) lamps (e.g. sodium lamps and metal halide lamps), circular fluorescent lamps and U-shaped fluorescent lamps." (Extract from UK DTI RoHS Regulations - Government Guidance Notes from June 2006). This statement would be interpreted as restricting the scope of entry 4 of the Annex to those examples.

² "Technical adaptation under Directive 2002/95/EC (RoHS) - Investigation of exemptions", ERA Technology, December 2004.

- Öko-Institut as well as Osram / ELCF work with possibility 1 as working hypothesis. ELCF statement: “The flat fluorescent backlight lamp should be seen with regard to entry No 4 of the RoHS Annex”.

Concluding on the above mentioned points, Öko-Institut would like to state the following:

- No common valid interpretation of entry 4 of the RoHS Annex exists. Industry is interpreting the entry as exempting the use of mercury in “other lamps” not specifically mentioned in the Annex. This also includes flat fluorescent lamps used in LCDs.
- Thus, Samsung’s request covered the use of lead in mercury-containing flat fluorescent lamps used in LCDs.
- Osram’s requests covered the use of lead in mercury-free flat fluorescent lamps in diverse applications.
- Öko-Institut – also assuming that the use of mercury in lamps is exempted from the RoHS Directive - thus recommends two different wordings since the use of lead in flat fluorescent lamps containing mercury should be explicitly limited to LCDs while the use of lead in mercury free flat fluorescent lamps can also be exempted for other applications.
- However, legally binding decisions with regard to legislation in force – including the RoHS Annex – can only be done by the European Court of Justice. Öko-Institut’s recommendation is therefore only based on assumptions and common understanding of technical and scientific aspects.

6 Further proceeding

The next step will be to finalise to finally clarify open issues concerning withdrawals, scope issues and necessary technical clarifications with applicants. Furthermore, recommendations for remaining requests will be finalised.

The next monthly report is scheduled for 24 May 2007.