

Brussels, 31<sup>th</sup> March 2008

Ms Stephanie Zangl  
Öko-Institut e.V.  
Merzhauser Str. 173  
79100 Freiburg  
Germany

**RE: ELC submission to RoHS exemptions review**

Dear Ms Zangl,

Hereby we would like to submit the European Lamp Companies Federation (ELC) contribution to the stakeholder consultation on adaptation to scientific and technical progress under Directive 2002/95/EC of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment for the purpose of a possible amendment of the Annex.

Our submission includes comments concerning the following exemptions: 1, 2, 3, 4, 5, 6, 7, 9a, 14, 15, 16, 17, 18, 19, 23, 24 and 26 (each exemption is attached in a separate file).

With kind regards,



Gerald Strickland  
Secretary General

## ELC submission to RoHS exemption #3

#	Question	Exemption #3
		Mercury in straight fluorescent lamps for special purposes
1	Please specify the different lamp types that use mercury, including the technology used, the amount of mercury contained (also mercury per burning hour), the function of mercury in the lamp, the lifetime of the lamp and its energy consumption.	<p>Lamps for Special purposes are needed where other, specific characteristics are prescribed. They generally have the following characteristics:</p> <ul style="list-style-type: none"> <li>- They are not marketed or commercialised primarily for the production of visible light.</li> <li>- They are marketed however: <ul style="list-style-type: none"> <li>- Where the non-visible radiation has highest importance.</li> <li>- Where different looking lamp designs are relevant for use.</li> <li>- Where different applications require specific lamps.</li> </ul> </li> </ul> <p>Fluorescent lamps for special purposes include for instance:</p> <ul style="list-style-type: none"> <li>- Black light lamps</li> <li>- Disinfection lamps</li> <li>- Medical/Therapy lamps</li> <li>- Food lighting applications, bakeries etc</li> <li>- Pet care lamps i.e. aquaria lamps</li> <li>- Lamps designed for UV emission like sun tanning lamps</li> <li>- Lamps with special components like integrated reflectors, external protective sleeve or with external ignition strip.</li> <li>- Lamps with special ignition features for example those designed for low temperatures.</li> <li>- Long length lamps (length &gt; 1800 mm)</li> <li>- Amalgam lamps</li> <li>- Cold Cathode Fluorescent Lamps</li> </ul>
	technology	low pressure mercury discharge
	amount of mercury and lifetime	average of 15 mg per lamp, life time between 500 and 10000 hours
	function of the mercury	<p>Electrons are emitted from a heated electrode colliding with mercury atoms and so transferring energy to the atoms which elevates them to an excited state. When these atoms fall back to their original status they emit photons (packages of energy), normally not in the range of visible light . Ultraviolet photons excite the fluorescent powders, which are coated on the inside of the tube, with a high degree of efficiency. As a result these emit visible radiation in a range of colours. Lamps based on these principles and operating at low internal gas pressure are called "fluorescent lamps".</p> <p>Fluorescent lamps are in the scope of Directive 2002/96/EC - WEEE. Take back system systems free of charge for endusers are available in all EU Member States. According legislation all mercury shall be removed of collected lamps.</p>
	energy consumption	1 Watt to 200 Watt
2	What is the total amount of mercury put on the market in the EU annually and currently in use for each of these different mercury-using lamp types?	0.6 ton per year without cold cathode lamps (not produced by ELC member companies)
3	For which of these lamp types is the use of mercury avoidable (e.g. through substitution of the substance itself or through use of other lamp technologies not containing mercury)?	none of the lamp types

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	Where has a reduction of the amount of mercury or a full substitution already begun or been completed? Please describe alternatives in (technical) detail.	Since 1980s the mercury amount was reduced from approx. 60 mg per lamp to 15 mg per lamp on average. Total substitution not possible.
4	Please specify the maximum amount of mercury contained in each lamp type today and how it will decrease over time due to technological progress. Support your statement with appropriate documentation such as a roadmap or results of tests and research activities. What is the currently best available technology with regard to lowest mercury content in each lamp type?	Due to broad application and product range, mercury content is up 15 mg on average for special purposes. Technological progress is company-specific and company-confidential.
5	Please provide appropriate information on the benefits of the use of mercury in lamps, compared to lamps not using mercury; especially with regard to energy savings and hence reduction of mercury emissions during electricity production.	Not applicable.
6	Assuming that in the EU a total phase-out of mercury is possible for the use in lamps, please specify until when such a phase-out would be completed for which application.	For some purposes (e.g. many scanners, copiers) mercury-free Xenon lamps are available. In other cases a technology change in the application could result in a change towards a different lamp technology, e.g. substitution by LED technology.
7	Assuming that the existing exemptions do not anymore reflect the status of best available technologies and that an exemption for the use of mercury in lamps in future Adaptation to scientific and technical progress under Directive 2002/95/EC Stakeholder consultation - Specific questions - would only be limited to very specific cases, please provide a wording proposal (which may also include an expiry date for the exemption of a certain application).	Mercury in straight fluorescent lamps for special purposes not exceeding 15 mg per lamp
8	Please provide an opinion on the recommendations for limits of mercury content included in the preparatory studies for implementing measures under the Ecodesign framework Directive (2005/32/EC, "EuP").	See above.