

Brussels, 31th 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 #2

#	Question	Exemption #2		
		Mercury in straight fluorescent lamps for general purposes not exceeding:		
		halophosphate 10 mg	triphosphate [<i>triband phosphor</i>] with normal lifetime 5 mg	triphosphate [<i>triband phosphor</i>] with long lifetime 8 mg
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.	double-capped fluorescent lamps like in EN60081	double-capped fluorescent lamps like in EN60081	double-capped fluorescent lamps like in EN60081
	technology	low pressure mercury discharge	low pressure mercury discharge	low pressure mercury discharge
	amount of mercury and lifetime	10 mg of mercury per lamp, life time 9000 hours	5 mg of mercury per lamp, standard life time between 10000 and 20000 hours	8 mg of mercury per lamp, standard life time above 25000 hours
	function of the mercury	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". 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.	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". 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.	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". 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.
	energy consumption	energy consumption: 14 Watt to 125 Watt	energy consumption: 14 Watt to 80 Watt	energy consumption: 14 Watt to 80 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?	1.5 tons per year	1 ton per year together	
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	none of the lamp types	none of the lamp types
	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 10 mg per lamp and below. Total substitution not possible.	Since 1980s the mercury amount was reduced from approx. 60 mg per lamp to 5 mg per lamp and below. Total substitution not possible.	Since 1980s the mercury amount was reduced from approx. 60 mg per lamp to 8 mg per lamp and below. 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?	Maximum amount is 10 mg per lamp. New technological process is not feasible.	Maximum amount is 5 mg per lamp. Technological progress is company-specific and company-confidential.	Maximum amount is 8 mg per lamp. Technological progress is company-specific and company-confidential.

ELC submission to RoHS exemption #2

5	<p>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.</p>	<p>Luminous efficiency is very high compared to filament technologies. For FL no mercury-free alternatives are available to be used as retrofit technology. Taking into account the amount of mercury released during electricity generation mainly from coal fired power stations, fluorescent lamps, do reduce the total amount of mercury from a life cycle perspective compared to filament lamps which themselves are mercury free. This is due to the fact that the former use less electricity to produce the same amount of light. In practice, this is applicable to other gas discharge lamp types too. The electricity that is wasted powering an inefficient GLS lamp, and the mercury emitted by the power station, may account for more than double that contained in an energy saving fluorescent lamp.</p> <p>FL are in the scope of EU Directive 2002/96/EC - WEEE. Take back systems are installed in all EU Member States, end users can bring back the lamps free of charge. According legislation the mercury shall be removed of gas discharge lamps.</p> <p>See also documents related to EUP directive and office lighting on www.eup4light.net.</p>	<p>Luminous efficiency is very high compared to filament technologies. For FL no mercury-free alternatives are available to be used as retrofit technology. Taking into account the amount of mercury released during electricity generation mainly from coal fired power stations, fluorescent lamps, do reduce the total amount of mercury from a life cycle perspective compared to filament lamps which themselves are mercury free. This is due to the fact that the former use less electricity to produce the same amount of light. In practice, this is applicable to other gas discharge lamp types too. The electricity that is wasted powering an inefficient GLS lamp, and the mercury emitted by the power station, may account for more than double that contained in an energy saving fluorescent lamp.</p> <p>FL are in the scope of EU Directive 2002/96/EC - WEEE. Take back systems are installed in all EU Member States, end users can bring back the lamps free of charge. According legislation the mercury shall be removed of gas discharge lamps.</p> <p>See also documents related to EUP directive and office lighting on www.eup4light.net.</p>	<p>Luminous efficiency is very high compared to filament technologies. For FL no mercury-free alternatives are available to be used as retrofit technology. Taking into account the amount of mercury released during electricity generation mainly from coal fired power stations, fluorescent lamps, do reduce the total amount of mercury from a life cycle perspective compared to filament lamps which themselves are mercury free. This is due to the fact that the former use less electricity to produce the same amount of light. In practice, this is applicable to other gas discharge lamp types too. The electricity that is wasted powering an inefficient GLS lamp, and the mercury emitted by the power station, may account for more than double that contained in an energy saving fluorescent lamp.</p> <p>FL are in the scope of EU Directive 2002/96/EC - WEEE. Take back systems are installed in all EU Member States, end users can bring back the lamps free of charge. According legislation the mercury shall be removed of gas discharge lamps.</p> <p>See also documents related to EUP directive and office lighting on www.eup4light.net.</p>
6	<p>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.</p>	<p>Switch to triband phospor (see information on eco-profiles on http://www.elcfd.org/uploads/Publication/sXtend/documents/070515%20Ecoprofile%20FL%20RLJC.pdf)</p>	<p>Not feasible in this lamp type.</p>	<p>Not feasible in this lamp type.</p>
7	<p>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).</p>	<p>(Currently under research. Answer can be expected in a short notice)</p>		<p>(Currently under research. Answer can be expected in a short notice)</p>
			<p>(Currently under research. Answer can be expected in a short notice)</p>	
8	<p>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").</p>	<p>See above</p>	<p>See above</p>	<p>See above</p>