

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 #16

#	Question	Exemption #16
		Lead in linear incandescent lamps with silicate coated tubes
1	<p>Please describe the application with its technical characteristics: in which RoHS related applications are linear incandescent lamps with silicate coated tube needed?</p> <p>What is the technical functionality of lead? Why is the use of fluorescent tubes as an alternative not possible?</p>	<p>They are decorative lamps which provide white light as a result of the silicate coating attached to the inside of the glass tube.</p> <p>This enamel coating is attached to the glass with a material containing lead. The silicate powder has a high melting temperature and is attached to the glass by melting the lead-containing bonding material. The bonding material must fuse and form a good bond at a temperature below the glass melting temperature. Lead oxide was originally used as a constituent of the glass as it produces glass which is colourless and has a low melting temperature. It forms glassy materials with a wide range of other oxides. It is the reason why it bonds well to the glass tube and the silicate coating. Lead oxide, therefore, is the ideal choice of material for this application and is why it was originally used.</p> <p>Linear incandescent lamps have a perceived superior quality compared to fluorescent lamps in instant starting i.e they provide full light at the time of switch on. Also they do not need additional equipment like choke or electronic ballast that are needed for operating fluorescent lamps. Furthermore fluorescent lamps have metal end caps so do not provide the same decorative effect.</p>
2	<p>Is lead currently still in use as bonding material within linear incandescent lamps with silicate coated tube or are there alternatives available?</p>	<p>Yes, it is still used.</p> <p>Alternatively internal coating can be replaced by an outer painting. The painting material is lead free but contains organic solvents.</p>
3	<p>Please state the amount of lead used per lamp and in the homogeneous material. What is the amount of lead put on the market in the EU annually in RoHS-relevant applications?</p>	<p>Approximately 5 tons of lead.</p>
4	<p>Please provide evidence on research efforts carried out with regard to substitution of lead (e.g. test results or executive summaries). What alternatives have been found and what are their technical characteristics? When will substitution be possible?</p>	<p>See answer to question 2.</p>
5	<p>Please provide evidence on future activities towards substitution such as a schematic roadmap or similar evidence.</p>	<p>18 months after publication</p>