

# 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

## 1 Introduction

Article 4(1) of Directive 2002/95/EC (the RoHS Directive) provides that 'from 1 July 2006, new electrical and electronic equipment put on the market does not contain lead, mercury, cadmium, hexavalent chromium, PBB or PBDE.' The Annex to the Directive lists a number of applications of these substances, which are exempted from the requirements of Article 4(1).

According to Article 5 (2) of Directive 2002/95/EC the Commission is required to consult the relevant stakeholders before amending the Annex. The results of this consultation will be forwarded to the Technical Adaptation Committee of Directive 2002/95/EC and the Commission services will provide an account of the information received.

This consultation is run by the Öko-Institut together with the Fraunhofer IZM, on behalf of the European Commission, under <http://rohs.exemptions.oeko.info/index.php?id=5>.

Please read here <http://rohs.exemptions.oeko.info/index.php?id=61> the "Guidelines for Submitting Stakeholder Comments" before submitting your contributions.

The objective of the consultation is to collect comments **on existing exemptions as well as on new exemption requests**. Please note that the role of Öko-Institut and Fraunhofer IZM is only to collect and evaluate the information provided by stakeholders and not take any decision.

For the interest of clarity, the following thematic groups have been set for the purpose of this consultation:

Group	Description
I	Hg + heavy metals in lamps
II	Pb in solder / soldering technology
III	Pb in glass technology
IV	Pb in metals
V	Cd in electrical contacts
VI	CrVI applications
VII	Brominated flame retardants

**Neither the fact that a stakeholder consultation is being launched, nor the results of this stakeholder consultation should be interpreted as a political or legal signal that the Commission intends to take a given action.**

## 2 Review of existing exemptions

Based on Article 5 (1) (c), the Commission shall carry out a review of each exemption listed in the Annex at least every four years or four years after an item is added to the list. Thus, the deletion of exemptions for materials and components of electrical and electronic equipment from the existing Annex has to be considered if the elimination or substitution of the restricted substances is possible with regard to the criteria listed in Article 5 (1) (b).

As the RoHS Directive has entered into force on 1 July 2006 this review of the Annex shall be done by 2010. Through assessment and evaluation of the existing exemptions by Öko-Institut and Fraunhofer IZM, a basis shall be provided for the forthcoming review of the Annex.

Hence, this consultation shall cover the following existing entries of the Annex to the RoHS Directive:

No.	Topic	Group
1	Mercury in compact fluorescent lamps not exceeding 5 mg per lamp	I
2	Mercury in straight fluorescent lamps for general purposes not exceeding: - halophosphate 10 mg - triphosphate with normal lifetime 5 mg - triphosphate with long lifetime 8 mg	I
3	Mercury in straight fluorescent lamps for special purposes	I
4	Mercury in other lamps not specifically mentioned in this Annex	I
5	Lead in glass of cathode ray tubes, electronic components and fluorescent tubes	III
6	Lead as an alloying element in steel containing up to 0,35 % lead by weight, aluminium containing up to 0,4 % lead by weight and as a copper alloy containing up to 4 % lead by weight	IV
7	<ul style="list-style-type: none"> <li>▪ Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead),</li> <li>▪ lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission as well as network management for telecommunications,</li> <li>▪ lead in electronic ceramic parts (e.g. piezoelectronic devices)<sup>1</sup></li> </ul>	II
8	Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC (*) amending Directive 76/769/EEC (**) relating to restrictions on the marketing and use of certain dangerous substances and preparations. (*) OJ L 186, 12.7.1991, p. 59. (**) OJ L 262, 27.9.1976, p. 201. <sup>2</sup>	V
9	Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators	VI
9a	DecaBDE in polymeric applications	VII
9b	Lead in lead-bronze bearing shells and bushes	IV
11	Lead used in compliant pin connector systems.	II
12	Lead as a coating material for the thermal conduction module c-ring.	IV

<sup>1</sup> Original 27 Jan 2003:

- Lead in high melting temperature type solders (i.e. tin-lead solder alloys containing more than 85 % lead),
- lead in solders for servers, storage and storage array systems (exemption granted until 2010),
- lead in solders for network infrastructure equipment for switching, signalling, transmission as well as network management for telecommunication, ▪ lead in electronic ceramic parts (e.g. piezoelectronic devices).

<sup>2</sup> Original 27 Jan 2003: Cadmium plating except for applications banned under Directive 91/338/EEC (\*) amending Directive 76/769/EEC (\*\*) (\*) OJ L 186, 12.7.1991, p. 59. (\*\*) OJ L 262, 27.9.1976, p. 201.

No.	Topic	Group
13	Lead and cadmium in optical and filter glass.	III
14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80 % and less than 85 % by weight.	II
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.	II
16	Lead in linear incandescent lamps with silicate coated tubes.	I
17	Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications.	I
18	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (BaSi2O5:Pb) as well as when used as speciality lamps for diazo-printing reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba)2MgSi2O7:Pb).	I
19	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact Energy Saving Lamps (ESL).	I
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCD).	III
21	Lead and cadmium in printing inks for the application of enamels on borosilicate glass.	III
22	Lead as impurity in RIG (rare earth iron garnet) Faraday rotators used for fibre optic communications systems.	III
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm or less with NiFe lead frames and lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm or less with copper lead frames.	II
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors.	II
25	Lead oxide in plasma display panels (PDP) and surface conduction electron emitter displays (SED) used in structural elements; notably in the front and rear glass dielectric layer, the bus electrode, the black stripe, the address electrode, the barrier ribs, the seal frit and frit ring as well as in print pastes.	III
26	Lead oxide in the glass envelope of Black Light Blue (BLB) lamps.	III
27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers.	II
28	Hexavalent chromium in corrosion preventive coatings of unpainted metal sheetings and fasteners used for corrosion protection and Electromagnetic Interference Shielding in equipment falling under category three of Directive 2002/96/EC (IT and telecommunications equipment). Exemption granted until 1 July 2007 <sup>3</sup> .	VI
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC (*). (* OJ L 326, 29.12.1969, p. 36.	III

### 3 Proposal for additional exemptions

Article 5(1)(b) of Directive 2002/95/EC provides that materials and components can be exempted from the substance restrictions contained in Article 4(1) if their elimination or substitution via design changes or materials and components which do not require any of the materials or substances referred to therein is technically or scientifically impracticable, or

<sup>3</sup> Please note that this exemption has already expired and is thus not subject to the stakeholder consultation. An extension of this exemption formally requires a new exemption request.

where the negative environmental, health and/or consumer safety impacts caused by substitution outweigh the environmental, health and/or consumer safety benefits thereof.

On the basis of this provision the Commission has received from industry additional requests for applications to be exempted from the requirements of the RoHS Directive. It should be noted that since the wording for some of the exemptions is not self explanatory, some exemption requests may overlap with exemption requests covered by previous consultations.

Öko-Institut and Fraunhofer IZM – on behalf of the European Commission - **have published the requests as worded by the submitters**, therefore submitters are solely responsible for the wording and supporting evidence they have provided.

The requests for exemptions as submitted by industry are:

No.	Topic	Applicant	Group
1	Lead in solders for the connection of very thin enamelled wires with a terminal.	Siemens	II
2	Lead and Cadmium as components of the glazes and colour used to glaze or decorate lamp bases, lamp carriers or clocks.	Cérame-Unie	I
3	Lead in solders in a third party component of Cortex family equipment.	In-Snec	II

#### 4 Consultation of interested parties

For the consideration of the items listed above, Öko-Institut and Fraunhofer IZM – on behalf of the European Commission - would like to consult interested parties.

**It shall be noted that generic comments, statements, position papers and any additional request for exemptions will not be taken into account.**

Interested parties are invited to send their comments by e-mail, the latest on 1 April 2008, to [rohs.exemptions@oeko.de](mailto:rohs.exemptions@oeko.de) or by post to:

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Responses submitted electronically will be posted on this web site as they are received, unless respondents specifically request that their contribution should not be publicised. In the latter case, responses should be clearly and visibly marked with the words "Not for publication".