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Subject : Proposal for a Directive of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (**RoHS**) - (recast)

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Delegations will find attached a compromise text on the Articles and Annexes of the above-mentioned proposal (bold underline). Following the WPE discussions, the Presidency has, in particular, introduced an important change in the scope of the proposal, which is now covering all EEEs unless specifically excluded. Annexes I and II (categories and positive lists) have been deleted from the text. The exclusions from the scope, as a consequence, need to be further refined and the Presidency would welcome contributions from delegations on the impact of this change as well as any suggestions on the nature of such exclusions.

Articles 4(7) and 5 are also revised, keeping in mind that the relationship with REACH should be clarified further. The changes in Article 3 points (b) to (kb) and in Articles 7 to 17 have been discussed previously and appear in the text as simple underlining.

Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**on the restriction of the use of certain hazardous substances in electrical and electronic equipment \***

*p.m. recitals*

*Article 1*

**Subject matter**

[...]

This Directive lays down rules on the restriction of use of hazardous substances in electrical and electronic equipment with a view to contribute to the protection of human health and the environmentally sound recovery and disposal of waste electrical and electronic equipment.

*Article 2*

**Scope**

1. This Directive shall apply to electrical and electronic equipment. [...]
2. This Directive shall apply without prejudice to requirements of \*\* Community legislation on safety and health, on chemicals, in particular Regulation (EC) 1907/2006, as well as of specific Community waste management legislation.

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\* Some editorial changes (suggestions already circulated) have been incorporated into this text.  
\*\* Consultative Committee Opinion.

3. This Directive does not apply to [...]:

(a) equipment which is necessary for the protection of the essential interests of the security of Member States, including arms, munitions and war material intended for specifically military purposes;

(b) equipment which is specifically designed as part of another type of equipment that does not fall within the scope of this Directive and can fulfill its function only if it is part of that equipment;

(c) equipment which is not intended to be placed on the market as a single functional or commercial unit;

**(ca) large-scale stationary industrial tools;**

**(cb) musical pipe organs.**

### *Article 3*

#### **Definitions**

For the purposes of this Directive, the following definitions shall apply:

(a) "electrical and electronic equipment" (hereinafter \* 'EEE') means equipment which is dependent on electric currents or electromagnetic fields in order to work properly and equipment for the generation, transfer and measurement of such currents and fields [...] and designed for use with a voltage rating not exceeding 1000 volts for alternating current and 1500 volts for direct current;

[...]

(b) "manufacturer" means any natural or legal person who manufactures EEE or who has EEE designed or manufactured, and markets it under his name or trademark;

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\* Consultative Committee Opinion.

- (c) "distributor" means any natural or legal person in the supply chain, other than the manufacturer or the importer, who makes EEE available on the market;
- (d) "importer" means any natural or legal person established within the Community, who places EEE from a third country on the Community market;
- (da) "authorised representative" means any natural or legal person established within the Community who has received a written mandate from a manufacturer to act on his behalf in relation to specified tasks;
- (db) "economic operators" mean the manufacturer, the authorised representative, the importer and the distributor;
- (e) "making available on the market" means any supply of EEE for distribution, consumption or use on the Community market in the course of a commercial activity, whether in return for payment or free of charge;
- (f) "placing on the market" means the first making available of EEE on the Community market;
- (g) "harmonised standard" means a standard adopted by one of the European standardisation bodies listed in Annex I to Directive 98/34/EC on the basis of a request made by the Commission in accordance with Article 6 of Directive 98/34/EC;
- (ga) "technical specification" means a document that prescribes technical requirements to be fulfilled by a product, process or service;
- [...]
- (i) "CE marking" means a marking by which the manufacturer indicates that the product is in conformity with the applicable requirements set out in Community harmonization legislation providing for its affixing;
- (j) "conformity assessment" means the process demonstrating whether the requirements of the present Directive relating to EEE, are met;

- (k) "market surveillance" means the activities carried out and measures taken by public authorities to ensure that EEE complies with the requirements set out in this Directive and do not endanger health, safety or other issues of public interest protection ;
- (ka) "recall" means any measure aimed at achieving the return of a product that has already been made available to the end user;
- (kb) "withdrawal" means any measure aimed at preventing a product in the supply chain from being made available on the market;
- (l) "homogeneous material" means a material of uniform composition throughout that can not be mechanically disjointed into different materials, meaning that the materials can not, in principle, be separated by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes;
- (m) "medical device" means a medical device within the meaning of point (a) of Article 1(2) of Directive 93/42/EC;
- (n) "in vitro diagnostic medical device" means an in vitro diagnostic medical device within the meaning of point (b) of Article 1(2) of Directive 98/79/EC;
- (o) "active implantable medical device" means any active implantable medical device within the meaning of point (c) of Article 1(2) of Directive 90/385/EEC;
- (p) "industrial monitoring and control instruments" mean monitoring and control instruments designed for exclusively industrial or professional use.

#### *Article 4*

#### **Prevention**

1. Member States shall ensure that EEE, including spare parts for its repair or its reuse placed \* on the market, does not contain the substances listed in Annex IV.

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\* Consultative Committee Opinion.

2. For the purposes of this Directive, the maximum concentration value by weight in homogeneous materials as specified in Annex IV shall be tolerated [...].
  3. Paragraph 1 shall apply to medical devices and monitoring and control instruments which are placed on the market from 1<sup>st</sup> January 2014, to in vitro medical devices which are placed on the market from 1<sup>st</sup> January 2016 and to industrial monitoring and control instruments which are placed on the market from 1<sup>st</sup> January 2017.
  4. Paragraph 1 shall not apply to spare parts for the repair or to the reuse of the following:
    - (a) EEE placed on the market before 1 July 2006.
    - (b) Medical devices placed on the market before 1<sup>st</sup> January 2014.
    - (c) In vitro diagnostic medical devices placed on the market before 1<sup>st</sup> January 2016.
    - (d) Monitoring and control instruments placed on the market before 1<sup>st</sup> January 2014.
    - (e) Industrial monitoring and control instruments placed on the market before 1<sup>st</sup> January 2017.
    - (f) EEE which benefited from an exemption and was placed on the market before that exemption expired.
  5. Paragraph 1 shall not apply to active implantable medical devices. By 2020 the Commission shall review the exclusion of active implantable medical devices with a view to propose inclusion.
  6. Paragraph 1 shall not apply to the applications listed in Annexes V and VI.
- [...]

7. [...] <sup>1</sup>

**The Commission shall adopt a methodology for the review of Annex IV, based on the process set out in Articles 69 to 72 of Regulation (EC) No 1907/2006 and the sound recovery and disposal of waste electrical and electronic equipment. This measure, designed to amend non essential elements of this Directive, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(2).**

**7a. The list of prohibited substances in Annex IV shall be reviewed according to the methodology referred to in paragraph (7) and, if necessary, amended, following the submission of a request by the Commission or a Member State if it is considered that the use of a substance in EEE, or the waste derived from it, poses a hazard to human health or the environment that is not adequately controlled and needs to be addressed on a Community-wide basis. Those measures, designed to amend non essential elements of this Directive shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(2).**

#### *Article 5*

#### **Adaptation of the Annexes to scientific and technical progress**

1. The Commission shall, for the purposes of adapting the annexes to scientific and technical progress, adopt the following measures:

(a) [...]

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<sup>1</sup> It is proposed to delete Annex III, replacing it by the mention of the priority substances concerned in Recital 7 as follows:

"(7) The measures provided for in this Directive take into account existing international guidelines and recommendations and are based on an assessment of available scientific and technical information. The measures are necessary to achieve the chosen level of protection of human and animal health and the environment, having regard to the risks which the absence of measures would be likely to create in the Community. The measures should be kept under review and, if necessary, adjusted to take account of available technical and scientific information. In particular, the risks to human health and the environment arising from the use of Hexabromocyclododecane (HBCDD), Bis (2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP) and Dibutylphthalate (DBP) should be considered as a priority. "

[...]

(b) Inclusion of materials and components of EEE in Annexes V and VI where either of the following conditions is fulfilled:

- their elimination or substitution via design changes or materials and components which do not require any of the materials or substances referred to in Article 4(1) is scientifically or technically impracticable;
- the availability and reliability of substitutes is not ensured **or the negative socio economic impacts caused by substitution are disproportionate compared to the environmental, health, consumer safety or socio economic benefits thereof;**
- the negative environmental, health, consumer safety [...] impacts caused by substitution are likely to outweigh the environmental, health or consumer safety [...] benefits thereof;

[...]

(c) deletion of materials and components of EEE from Annexes V and VI where the conditions set out in point (b) are no longer fulfilled.

Those measures designed to amend non essential elements of this Directive shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(2).

2. Measures adopted in accordance with point (b) of paragraph 1 shall have a maximum validity period of four years and may be renewed. The Commission shall decide in due time on any application for renewal that is submitted no later than 18 months before an exemption expires.
3. Before Annexes are amended [...], the Commission shall *inter alia* consult producers of electrical and electronic equipment, recyclers, treatment operators, environmental organisations and employee and consumer associations. [...]

4. As long as materials or components are included in Annexes V and VI to this Directive, on the basis of Article 5(1)(b) of this Directive, those applications shall also be considered exempted from the authorisation requirements set out in Article 58(2) of the regulation (EC) No 1907/2006.<sup>2</sup>

#### *Article 6*

### **Implementing measures**

The Commission shall adopt detailed rules for:

- applications for exemption including a format and types of information to be provided when introducing those applications, including analysis of the alternatives and, if suitable alternatives are available, substitution plans as referred to in Regulation (EC) 1907/2006;
- complying with the maximum concentration values of Article 4(2);
- the implementation of Article 5(2), taking into account the need for legal certainty for economic operators pending a Commission Decision on renewal of exemptions.

Those measures designed to amend non essential elements of this Directive shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(2).

[...]

#### *Article 7*

### **Obligations of manufacturers**

Member States shall ensure that:

1. When placing EEE on the market, manufacturers [...] ensure that they have been designed and manufactured in accordance with the requirements set out in Article 4.
2. Manufacturers [...] draw up the required technical documentation and carry out the internal production control procedure set out in module A of Annex II to Decision No 768/2008/EC or have it carried out.

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<sup>2</sup> The link with REACH should be further discussed also in connection with Article 2(2).

Where compliance of EEE with the applicable requirements has been demonstrated by that procedure, manufacturers [...] draw up an EC declaration of conformity and affix the CE marking.

3. Manufacturers [...] keep the technical documentation and the EC declaration of conformity for ten years after the EEE has been placed on the market.
4. Manufacturers [...] ensure that procedures are in place for series production to remain in conformity. Changes in product design or characteristics and changes in the harmonised standards or in technical specifications by reference to which conformity of an EEE is declared shall be adequately taken into account.
5. When deemed appropriate with regard to the risks presented by a product, manufacturers [...], to protect the health and safety of consumers, carry out sample testing of marketed EEE, investigate, and, if necessary, keep a register of complaints, of non-conforming EEE and product recalls, and [...] keep distributors informed of any such monitoring.
6. Manufacturers [...] ensure that their EEE bears a type, batch or serial number or other element allowing their identification, or, where the size or nature of the EEE does not allow it, that the required information is provided on the packaging or in a document accompanying the EEE.
7. Manufacturers [...] indicate their name, registered trade name or registered trade mark and the address at which they can be contacted on the EEE or, where that is not possible, on its packaging or in a document accompanying the EEE. The address must indicate a single point at which the manufacturer can be contacted.
8. Manufacturers who consider or have reason to believe that EEE which they have placed on the market is not in conformity with [...] this Directive [...] immediately take the necessary corrective measures to bring that EEE into conformity, to withdraw it or recall it, if appropriate. Furthermore, where the EEE presents a risk, manufacturers [...] immediately inform the competent national authorities of the Member States in which they made the EEE available to that effect, giving details, in particular, of the non-compliance and of any corrective measures taken.

9. Manufacturers [...], further to a reasoned request from a competent national authority, provide it with all the information and documentation necessary to demonstrate the conformity of the EEE, in a language which can be easily understood by that authority. They shall cooperate with that authority, at its request, on any action taken to eliminate the risks posed by EEE which they have placed on the market.

#### *Article 8*

##### *Authorised representatives*

Member States shall ensure that:

1. A manufacturer [...] has the possibility to appoint an authorised representative by written mandate.

The obligations laid down in Article 7(1) and the drawing up of technical documentation shall not form part of the authorised representative's mandate.

2. An authorised representative [...] performs the tasks specified in the mandate received from the manufacturer. The mandate shall allow the authorised representative to do at least the following:

(a) keep the EC declaration of conformity and the technical documentation at the disposal of national surveillance authorities for ten years;

(b) further to a reasoned request from a competent national authority, provide that authority with all the information and documentation necessary to demonstrate the conformity of EEE;

(c) cooperate with the competent national authorities, at their request, on any action taken to eliminate the risks posed by EEE covered by their mandate.

## Article 9

### Obligations of importers

Member States shall ensure that:

1. Importers [...] place only compliant products on the Community market.
2. Before placing EEE on the market importers [...] ensure that the appropriate conformity assessment procedure has been carried out by the manufacturer. [...] Importers will further ensure that the manufacturer has drawn up the technical documentation, that the EEE bears the CE marking and is accompanied by the required documents, and that the manufacturer has complied with the requirements set out in Article 7(5) and (6).

Where an importer considers or has reason to believe that EEE is not in conformity with Article 4, he [...] **does** not place the EEE on the market until it has been brought into conformity. Furthermore, where the EEE presents a risk, the importer [...] **will** inform the manufacturer and the market surveillance authorities to that effect.

3. Importers [...] indicate their name, registered trade name or registered trade mark and the address at which they can be contacted on the EEE or, where that is not possible, on its packaging or in a document accompanying the EEE.
4. Importers [...] ensure that, while EEE is under their responsibility, storage or transport conditions do not jeopardise its compliance with the requirements set out in Article 4.
5. When deemed appropriate with regard to the risks presented by EEE, importers [...], to protect the health and safety of consumers, carry out sample testing of marketed EEE, investigate, and, if necessary, keep a register of complaints, of non-conforming EEE and EEE recalls, and [...] keep distributors informed of such monitoring.

6. Importers who consider or have reason to believe that an EEE which they have placed on the market is not in conformity with this Directive [...] immediately take the corrective measures necessary to bring that EEE into conformity, to withdraw it or recall it, if appropriate. Furthermore, where the EEE presents a risk, importers [...] will immediately inform the competent national authorities of the Member States in which they made the EEE available to that effect, giving details, in particular, of the non-compliance and of any corrective measures taken.
7. Importers [...] keep, for ten years, a copy of the EC declaration of conformity at the disposal of the market surveillance authorities and ensure that the technical documentation can be made available to those authorities, upon request.
8. Importers [...], further to a reasoned request from a competent national authority, provide it with all the information and documentation necessary to demonstrate the conformity of EEE in a language which can be easily understood by that authority. They shall cooperate with that authority, at its request, on any action taken to eliminate the risks posed by EEE which they have placed on the market.

#### *Article 10*

#### **Obligations of distributors**

Member States shall ensure that:

1. When making EEE available on the market distributors [...] act with due care in relation to the requirements applicable.
2. Before making EEE available on the market distributors [...] verify that the EEE bears the CE marking, that it is accompanied by the required documents in a language which can be easily understood by consumers and other end-users in the Member State in which the EEE is to be made available on the market, and that the manufacturer and the importer have complied with the requirements set out in Article 7([...]6) and ([...]7) and Article 9(3).

Where a distributor considers or has reason to believe that EEE is not in conformity with Article 4, he [...] does not make the EEE available on the market until it has been brought into conformity. Furthermore, where the EEE presents a risk, the distributor [...] will inform the manufacturer or the importer to that effect as well as the market surveillance authorities.

3. Distributors [...] ensure that, while EEE is under their responsibility, storage or transport conditions do not jeopardise its compliance with the requirements set out in Article 4.
4. Distributors who consider or have reason to believe that EEE which they have made available on the market is not in conformity with this Directive [...] make sure that the corrective measures necessary to bring that EEE into conformity, to withdraw it or recall it, if appropriate, are taken. Furthermore, where the EEE presents a risk, distributors [...] will immediately inform the competent national authorities of the Member States in which they made the EEE available to that effect, giving details, in particular, of the non-compliance and of any corrective measures taken.
5. Distributors [...], further to a reasoned request from a competent national authority, provide it with all the information and documentation necessary to demonstrate the conformity of EEE. They [...] cooperate with that authority, at its request, on any action taken to eliminate the risks posed by EEE which they have made available on the market.

#### *Article 11*

##### **Cases in which obligations of manufacturers apply to importers and distributors**

Member States shall ensure that an importer or distributor [...] is considered a manufacturer for the purposes of this Directive and that he [...] is subject to the obligations of the manufacturer under Article 7, where he places EEE on the market under his name or trademark or modifies EEE already placed on the market in such a way that compliance with the applicable requirements may be affected.

#### *Article 12*

##### **Identification of economic operators**

Member States shall ensure that economic operators [...], on request, identify the following to the market surveillance authorities, for ten years:

- (a) any economic operator who has supplied them with EEE;
- (b) any economic operator to whom they have supplied EEE.

### *Article 13*

#### **EC declaration of conformity**

1. The EC declaration of conformity shall state that the fulfilment of requirements specified in Article 4 has been demonstrated.
2. The EC declaration of conformity shall have the model structure and shall contain the elements specified in Annex VII and shall be updated. It shall be translated into the language or languages required by the Member State in which market the product is placed or made available.
3. By drawing up the EC declaration of conformity, the manufacturer shall assume responsibility for the compliance of the EEE.

### *Article 14*

#### **General principles of the CE marking**

The CE marking shall be subject to the general principles set out in Article 30 of Regulation (EC) No 765/2008.

### *Article 15*

#### **Rules and conditions for affixing the CE marking**

1. The CE marking shall be affixed visibly, legibly and indelibly to the EEE or to its data plate. Where that is not possible or not warranted on account of the nature of the EEE, it shall be affixed to the packaging and to the accompanying documents, where the legislation concerned provides for such documents.
2. The CE marking shall be affixed before the EEE is placed on the market. It may be followed by a pictogram or any other mark indicating a special risk or use.
3. [...]

4. Member States shall build upon existing mechanisms to ensure correct application of the regime governing the CE marking and take appropriate action in the event of improper use of the marking. Member States shall also provide for penalties for infringements, which may include criminal sanctions for serious infringements. Those penalties shall be proportionate to the seriousness of the offence and constitute an effective deterrent against improper use.

#### *Article 16*

#### **Presumption of conformity**

Member States shall presume electrical and electronic equipment bearing the CE marking as conforming to this Directive.

EEE on which tests and measurements have been performed in accordance with harmonised standards, the references of which have been published in the *Official Journal of the European Union*, shall be presumed to comply with all the relevant requirements of this Directive to which such standards relate.

#### *Article 16a*

#### Formal objection to a harmonised standard

1. When a Member State or the Commission considers that a harmonised standard does not entirely satisfy the requirements which it covers and which are set out in [Article 4], the Commission or the Member State concerned shall bring the matter before the Committee set up by Article 5 of Directive 98/34/EC, giving its arguments. The Committee shall, having consulted the relevant European standardisation bodies, deliver its opinion without delay.
2. In the light of the Committee's opinion, the Commission shall decide to publish, not to publish, to publish with restriction, to maintain, to maintain with restriction or to withdraw the references to the harmonised standard concerned in or from the Official Journal of the European Union.
3. The Commission shall inform the European standardisation body concerned and, if necessary, request the revision of the harmonised standards concerned.

## *Article 17*

### **Market surveillance and controls of EEE entering the Community market**

Member States shall carry out market surveillance, in accordance with Articles 15 – 29 of Regulation (EC) No 765/2008.

## *Article 18*

### **Committee**

1. The Commission shall be assisted by the Committee set up by Article 18 of European Parliament and Council Directive on waste 2006/12/EC of 5 April 2006<sup>3</sup>.
2. Where reference is made to this paragraph, Article 5a(1) to (4) and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

## *Article 19*

### **Penalties**

The Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented\*. The penalties provided for must be effective, proportionate and dissuasive.

The Member States shall notify those provisions to the Commission by the date specified in Article 20 at the latest and shall notify it without delay of any subsequent amendment affecting them.\*

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<sup>3</sup> OJ L 114, 27.4.2006, p. 9.

\* Consultative Committee Opinion.

## *Article 20*

### **Transposition**

1. Member States shall adopt and publish, by at the latest [18 month after this Directive's publication in the Official Journal of the European Union], the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith communicate to the Commission the text of those provisions and a correlation table between those provisions and this Directive.  
They shall apply those provisions from [...].  
When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.
2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

## *Article 21*

### **Repeal**

Directive 2002/95/EC as amended by the acts listed in Annex VIII Part A is repealed with effect from the day after the date mentioned in the first subparagraph of Article 20(1) without prejudice to the obligations of the Member States relating to the time limits for transposition into national law and application of the Directive set out in Annex VIII, Part B.  
References to the repealed acts shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex IX.

## *Article 22*

### **Entry into force**

This Directive shall enter into force on the 20<sup>th</sup> day following that of its publication in the *Official Journal of the European Union*.

*Article 23*

**Addressees**

This Directive is addressed to the Member States.

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<sup>4</sup> *p.m. Annexes I and II appear in the WEEE text and Annex III is replaced by an addition in Recital n°7 (see Article 4 paragraph 7).*

## **ANNEX IV**

### **Prohibited substances referred to in Article 4(7) and maximum concentration values tolerated by weight in homogeneous materials**

Lead (0,1%)

Mercury (0,1%)

Cadmium (0,01%)

Hexavalent chromium (0,1%)

Polybrominated biphenyls (PBB) (0,1%)

Polybrominated diphenyl ethers (PBDE) (0,1%)

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## ANNEX V

### **Applications exempted from the ban in Article 4(1)**

1. Mercury in compact fluorescent lamps not exceeding 5 mg per lamp.
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.

3. Mercury in straight fluorescent lamps for special purposes.
4. Mercury in other lamps not specifically mentioned in this Annex.
5. Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
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.
7. - Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead),  
- lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission as well as network management for telecommunications,  
- lead in electronic ceramic parts (e.g. piezoelectronic devices).
8. Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC <sup>5</sup> amending Directive 76/769/EEC <sup>6</sup> relating to restrictions on the marketing and use of certain dangerous substances and preparations.
9. Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators.
10. Lead in lead-bronze bearing shells and bushes.

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<sup>5</sup> OJ L 186, 12.7.1991, p. 59.

<sup>6</sup> OJ L 262, 27.9.1976, p. 201.

11. Lead used in compliant pin connector systems.
12. Lead as a coating material for the thermal conduction module c-ring.
13. Lead and cadmium in optical and filter glass.
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.
15. Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
16. Lead in linear incandescent lamps with silicate coated tubes.
17. Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications.
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 ( $\text{BaSi}_2\text{O}_5:\text{Pb}$ ) as well as when used as speciality lamps for diazo-printing reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ( $(\text{Sr},\text{Ba})_2\text{MgSi}_2\text{O}_7:\text{Pb}$ ).
19. Lead with  $\text{PbBiSn-Hg}$  and  $\text{PbInSn-Hg}$  in specific compositions as main amalgam and with  $\text{PbSn-Hg}$  as auxiliary amalgam in very compact Energy Saving Lamps (ESL).
20. Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCD).
21. Lead and cadmium in printing inks for the application of enamels on borosilicate glass.
22. Lead as impurity in RIG (rare earth iron garnet) Faraday rotators used for fibre optic communications systems.
23. Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm or less with  $\text{NiFe}$  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.
24. Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors.
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.

26. Lead oxide in the glass envelope of Black Light Blue (BLB) lamps.
  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.
  29. Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC <sup>7</sup>.
  30. Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more.
  31. Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting).
  32. Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes.
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<sup>7</sup> OJ L 326, 29.12.1969, p. 36. Directive as last amended by 2003 Act of Accession.

## **ANNEX VI**

### **Applications exempted from the ban in Article 4(1) as regards Categories 8 and 9**

#### Equipment utilising or detecting ionising radiation

- 1 Lead, cadmium and mercury in detectors for ionising radiation
  - 2 Lead bearings in X-ray tubes
  - 3 Lead in electromagnetic radiation amplification devices: micro-channel plate and capillary plate
  - 4 Lead in glass frit of X-ray tubes and image intensifiers and lead in glass frit binder for assembly of gas lasers and for vacuum tubes that convert electromagnetic radiation into electrons
  - 5 Lead in shielding for ionising radiation
  - 6 Lead in X-ray test objects
  - 7 Lead stearate X-ray diffraction crystals
  - 8 Radioactive cadmium isotope source for portable X-ray fluorescence spectrometers  
Sensors, detectors and electrodes (plus item 1)
  - 1a Lead and cadmium in ion selective electrodes including glass of pH electrodes
  - 1b Lead anodes in electrochemical oxygen sensors
  - 1c Lead, cadmium and mercury in infra-red light detectors
  - 1d Mercury in reference electrodes: low chloride mercury chloride, mercury sulphate and mercury oxide
- Others
- 9 Cadmium in helium-cadmium lasers
  - 10 Lead and cadmium in atomic adsorption spectroscopy lamps
  - 11 Lead in alloys as a superconductor and thermal conductor in MRI
  - 12 Lead and cadmium in metallic bonds to superconducting materials in MRI and SQUID detectors
  - 13 Lead in counterweights
  - 14 Lead in single crystal piezoelectric materials for ultrasonic transducers
  - 15 Lead in solders for bonding to ultrasonic transducers
  - 16 Mercury in very high accuracy capacitance and loss measurement bridges and in high frequency RF switches and relays in monitoring and control instruments not exceeding 20 mg of mercury per switch or relay

17 Lead in solders in portable emergency defibrillators

18 Lead in solders of high performance infrared imaging modules to detect in the range 8 –  
14  $\mu\text{m}$

19 Lead in Liquid crystal on silicon (LCoS) displays

20 Cadmium in X-ray measurement filters

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## **ANNEX VII**

### **EC DECLARATION OF CONFORMITY**

1. No ... (unique identification of the EEE):
2. Name and address of the manufacturer or his authorised representative:
3. This declaration of conformity is issued under the sole responsibility of the manufacturer (or installer):
4. Object of the declaration (identification of EEE allowing traceability. It may include a photograph, where appropriate):
5. The object of the declaration described above is in conformity with Directive... on the restriction of the use of certain hazardous substances in electrical and electronic equipment
6. Where applicable, references to the relevant harmonised standards used or references to the technical specifications in relation to which conformity is declared:
7. Where applicable, the notified body ... (name, number) ... performed ... (description of intervention) ... and issued the certificate: ...
8. Additional information:  
Signed for and on behalf of: .....  
(place and date of issue):  
(name, function) (signature):

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**ANNEX VIII**

*(omissis)*

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**ANNEX IX**

**Correlation table**

*(omissis)*

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