

**Applications of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) which are exempted from the requirements of Article 4(1)**

Legend:

Original Exemption Amended Exemption New Exemption <del>Annulled Exemption (from July 1<sup>st</sup> 2008)</del>
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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 (\*) amending Directive 76/769/EEC (\*\*) 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.
- ~~9a. DecaBDE in polymeric applications;~~
- 9b. Lead in lead-bronze bearing shells and bushes
10. Within the procedure referred to in Article 7(2), the Commission shall evaluate the applications for:
    - Deca BDE,
    - mercury in straight fluorescent lamps for special purposes,
    - lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission as well as network management for telecommunications (with a view to setting a specific time limit for this exemption), and
    - light bulbs,as a matter of priority in order to establish as soon as possible whether these items are to be amended accordingly.
  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 Density 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 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 communication systems until 31 December 2009.
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.
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.
28. Hexavalent chromium in corrosive preventive coatings of unpainted metal sheetings and fasteners used for corrosion protection and Electromagnetic Interface Shielding in equipment falling under category three of Directive 2002/96/EC (IT and telecommunications equipment). Exemption granted until 1 July 2007.
29. Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3, and 4) of Council Directive 69/493/EEC.
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.
33. Lead in solders for the soldering of thin copper wires of 100  $\mu\text{m}$  diameter and less in power transformers.
34. Lead in cermet-based trimmer potentiometer elements.
35. Cadmium in photoresistors for optocouplers applied in professional audio equipment until 31 December 2009.

36. Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display until 1 July 2010.
37. Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body.
38. Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide.

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