Heavy metals restrictions of EU ELV directive.
Status of actual ANNEX II REVISIONs.

Mariola Hauke
Heavy metals restrictions of EU ELV directive. Status of actual ANNEX II REVISIONs.

Contents:
- CLEPA in a nutshell
- Introduction ELV directive
- Status 8th Revision of Annex II
- Next Revisions
- Presentation of Sub Organization for ELV exemptions 8 & 10
- Conclusion
Sylvia Assmann – BOSCH & Reinhard Hoock BMW
CLEPA in a nutshell

Our vision is for the European Automotive Supply Industry to be the leading provider of highly efficient & sustainable mobility worldwide.

Our mission is to increase the competitiveness of the European Automotive Supply Industry and drive its sustainable growth while enhancing wealth and employment in Europe.

- Founded in 1959
- Based in Brussels, Belgium
- Representing
  - Over 120 of the world’s most prominent suppliers (Corporate Members)
  - 23 National Trade & European Sector Associations representing 3000+ member companies (Association Members)
- 5 million employees vital for the EU’s industrial competitiveness
- 600 billion € annual sales auto industry accounts for circa 7% of the EU’s GDP
- 18 billion € annual RDI spend amongst the largest private investors in research & innovation
CLEPA in a nutshell

Mobility Evolution & New Mobility Paradigms

Environment & Climate Action

Safety

Growth & Competitiveness
WG EE Materials & Substances
Chair: M. Buczilowski - FAURECIA
Co-chair: F. Coene - AISIN

- Regulations
- Declaration (tools)
  - Material Reporting
    - L. Käseberg - Lumileds
  - GADSL
    - S. Dully - DuPont
- REACH like Regulations
  - M. Buczilowski - FAURECIA
- ELV
  - S. Assmann - BOSCH
- Conflict Minerals
  - D. Eggeling - HUF
- Other monitoring topics
**REACH like Regulations:**
- REACH EU
- POP - EU
- International Conventions
- BPR
- TSCA
- REACH non-EU

**ELV:**
- Minamata (monitoring)
- Non-EU ELV

**Material Reporting:**
- IMDS - Where Used Analysis
- IMDS - Chemistry Manager
- Recommendation Rev.
- New Release
- CAMDS
- GADSL +n

**GADSL:**
- GLAPS

**Conflict Minerals**

**Other monitoring topics:**
- Circular Economy (Critical Raw Materials)
- California proposition 65
- VIAQ
- Basel Convention
- LCA
Steering Committee:

Sylvia Assmann - BOSCH
Dennis Eggeling - HUF
Marco Buczilowski - FAURECIA
Lutz Käseberg - LUMILEDS
Frederic Coene - AISIN
Hannes Stradner - MAGNA
Hugues Boucher - FIEV
Michael Jeppe - ZF
Stefan Dully - DUPONT
... Member States shall ensure that materials and components of vehicles put on the market after 1 July 2003 do not contain lead, hexavalent chromium, cadmium and mercury other than in cases listed in Annex II under the conditions specified therein;
§ 4.2
(b) …the Commission shall on a regular basis, according to technical and scientific progress, amend Annex II, in order to:

(i) as necessary, establish maximum concentration values up to which the existence of the substances referred to in subparagraph (a) in specific materials and components of vehicles shall be tolerated;

(ii) exempt certain materials and components of vehicles from the provisions of subparagraph (a) if the use of these substances is unavoidable;

(iii) delete materials and components of vehicles from Annex II if the use of these substances is avoidable;

…
Trend: Split of entries, more application specific scope
Exemption 3: “Copper alloys containing up to 4% lead by weight”

Exemption 2(c): “Pb in Al < 0.4%” – Split in 2(c)(i) and 2(c)(ii)

Exemption 2(c)(i): “Aluminium alloys for machining purposes with a lead content up to 0.4% by weight”

Exemption 2(c)(ii): “Aluminium alloys not included in entry 2(c)(i) with a lead content up to 0.4% by weight”

(1a) Applies to aluminium alloys where lead is not intentionally introduced but is present due to the use of recycled aluminium.
Exemption 5: “Pb and Pb compounds in batteries” Split in 5(a) and 5(b)

**Exemption 5(a):** “Lead in batteries in high voltage systems (2a) that are used only for propulsion in M1 and N1 vehicles”

**Exemption 5(b):** “Lead in batteries for battery applications not included in entry 5(a)”


**Draft Proposal**

expires for vehicles type approved after 1 January 2019

review 2021
### Upcoming Annex II Revisions

<table>
<thead>
<tr>
<th>Exemption</th>
<th>Inspection date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pb “high melting solder“ (8e)</td>
<td>Review 2019 scheduled</td>
</tr>
<tr>
<td>Pb “flip chip“ (8g)</td>
<td>Review 2019 scheduled</td>
</tr>
<tr>
<td>Pb “lead in compliant pins … other than the mating area of vehicle harness connectors” (8(f)(b).)</td>
<td>Review 2019 scheduled</td>
</tr>
<tr>
<td>Pb “aluminum alloys 0,4% Pb“ (2(c)(i))</td>
<td>2021 ?</td>
</tr>
<tr>
<td>Pb “copper alloys 4% Pb“ (3)</td>
<td>2021 ?</td>
</tr>
<tr>
<td>… others ?</td>
<td>2021 ?</td>
</tr>
</tbody>
</table>

**Expiring exemption**

| Pb „laminated glazing“ (8j)                                              | Type aaproval before 1.1.2020            |
As annex II of the ELV directive the EU RoHS legislation is a sector specific legislation. It applies primarily to electric and electronic products.

Currently there around **90 extension request applications** of industrial stakeholders in assessment by the EU COMM.

The final decisions to grant an exemption are delayed.

If there is no decision, the exemption continues and a previous published end date remains without effect until a final decision was made.

If there is a decision not to continue an exemption, an 18 months transition period is granted to manage a phase out.

Several exemptions are similar, but not identical, to exemptions granted under ELV directive annex II.

Specific information like consultant reports assessing the need of exemptions for the Commission is free available on the web pages of the EU Commission.
Within current RoHS revisions consultant suggested split of exemptions and early reviews. The affected industry asks to extend review dates and rejects splitting.
CONCLUSIONS

- The draft for the 8\textsuperscript{th} annex II revision sets again review dates for several entries. As in previous reviews there is a further split of existing exemptions.

- **Without contributions based on solid and convincing technical arguments, the exemptions in annex II will end in long term.**

- Careful creation of material data sheets helps to identify the need of exemptions.

- The support of suppliers, associations, OEMs in the industry expert groups heavy metals is very appreciated and essential to obtain exemptions. **Thank you to all for their contribution.**

- For being prepared towards the next revisions **the work starts now.** The joint associations industry expert groups are open to welcome new members.
Why lead is used?

Lead is needed to suppress formation and growth of whiskers.
The EU Commission is currently analysing the coherence of the legislative approach and procedures regarding hazard identification, generic risk consideration, specific risk assessment or risk management measures. Non exhaustive list below.....

1) Legislation covering hazard identification and classification
   • Classification, labelling and packaging (Regulation No (EC) 1272/2008)
   • Plant protection products (Regulation (EC) No 1107/2009)
   • Biocidal products (Regulation (EU) No 528/2012)
   • REACH, Annex XIII (Regulation (EC) No 1907/2006)
   • Inland transport of dangerous goods (Directive 2008/68/EC)

2) Legislation covering risk management measures
   Worker safety and transport legislation
   • Inland transport of dangerous goods (Directive 2008/68/EC)
   • Carcinogens and mutagens at work (Directive 2004/37/EC)
   • Young people at work (Directive 1994/33/EC)
   • Signs at work (Directive 92/58/EEC)
   • Chemical Agents (Directive 98/24/EC)
   • Asbestos (Directive 2009/148/EC)

   Environmental protection legislation
   • Industrial emissions (IPPC) (Directive 2010/75/EU)
   • Waste framework (Directive 2008/98/EC) and List of Waste
   • Waste shipments (Regulation (EC) No 1013/2006)
   • Major-accident hazards involving dangerous substances (Seveso) (Directive 2012/18/EU)
   • Water Framework (Directive 2000/60/EC)
   • Urban Waste Water (Directives 91/271/EEC)
   • RoHS in electrical and electronic equipment (Directive 2001/11/EC)
   • End of life vehicles (Directive 2000/53/EC)
   • Batteries (Directive 2006/66/EC)
   • Packaging and Packaging Waste (Directive 94/62/EC)

3) Supporting legislation
   • Test methods (Regulation (EC) No 440/2008)
   • Good Laboratory Practice (Directives 2004/9/EC and 2004/10/EC)
   • Protection of animals used for scientific purposes (Directive 2010/63/EU)

Lead as an alloying element in steel RoHS exemption 6(a) split of exemption; reduction of lead in hot dipped galvanized steel to 0.2 % lead exemption 6(c) „machining steel“ shall be extended until > July 2021 Ares(2017)4565014

Lead in Aluminium RoHS exemption 6(b) split of exemption; exemptions shall be extended until > 2021 Ares(2017)4565077

Lead in glass ceramic matrix RoHS exemption 7(c) I shall be extended until > Juli 2021 Ares(2017)4565004

Lead in high melting solder RoHS exemption 7(a) shall be extended until > July 2021 Ares(2017)4565026

Lead in copper alloys RoHS exemption 6(c) shall be extended until > July 2021 Ares(2017)4565051/1
Sub Organization for ELV exemptions 8 & 10

**Exemption 8**
- **8 e (high-temp solder)**
  - Katsuhsa Kato
- **8 f (press-fits)**
  - Sylvia to clarify
- **8 g (flip chip)**
  - Mark Frimann
- **8 j (laminated glazing)**
  - Reinhard Hoock

**Core Team Contact:**
- Sylvia
- Peter
- Bodo

**Exemption 10**
- **10 a (other Pb in ceramics)**
- **10 b (PZT based capacitors)**
  - Randy Rath

**RoHS 7(a)**: No DD
**RoHS 15**: No DD
**RoHS 7(c)-I**: No DD

**Piezo actuator:**
- Sandrine Baudry / Gunnar Picht

**PTC:**
- Sylvia to clarify

**Various components with Pb in ceramic:**
- Walter Huck / Klaus Kelm

**Glass / thick film:**
- Albert van der Kuij

**Glass / protection:**
- Albert van der Kuij

**Glass / encapsulation:**
- Albert van der Kuij

**RoHS 7(c)-II, -III**: No DD

**Expiry Review 2019**
<table>
<thead>
<tr>
<th>Expert Group:</th>
<th>Working group to collect and maintain publically available information per related ELV exemption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Champion (Chair / Group Pilot):</td>
<td>Coordinator of the expert Group</td>
</tr>
</tbody>
</table>
| Champion Core Team: | Reinhard Hook (for all ELV exemptions)  
Sylvia Aßmann (8f, 10 a partially)  
Bodo Eilken (8e, 8g, 10a partially, 10b)  
Peter Flanker (10a glass) |
| Tasks for the Champions | • Check if Orga for 10a is up to date and complete  
• Define which of the Expert Groups have interfaces and should cooperate |
| Tasks for the Expert Groups | • Maintain status report and clarify need per each exemption together with the individual WG members  
  • based on the last input to stakeholder consultation on ELV and RoHS but point out sector specifics  
  • Evaluate which applications / components / materials are covered  
  • Evaluate quantities per component / car  
  • Summarize activities to find substitutes  
  • Scientific based evaluation based on  
    • publically available research  
    • publically available state of the art  
  • Maintain contact matrix  
  • Draft answers on Stakeholder Consultation and adjust with related associations |
The information contained in this file is intended solely for the addressee. Access to this document by anyone else is unauthorized. If you are not the intended recipient, any form of disclosure, reproduction, distribution or any action taken or refrained from in reliance on it, is prohibited and may be unlawful. Please notify the sender immediately.

The content of this presentation is not legally binding.