

## Revision of Annex II (Draft 8)

As result of joint ACEA/JAMA/KAMA/CLEPA Meeting on November 10<sup>th</sup> at VDA in Frankfurt  
and VDA supplier community (Hst.G III) Meeting on November 17<sup>th</sup> at VDA in Frankfurt

### Materials and components exempt from Article 4 (2)(a)

Current exemption	Scope and expiry date of the exemption	Revised exemption	Scope and expiry date of the exemption	Comments	Add. Comments/ More detailed Info see:
<b><i>Lead as an alloying element</i></b>					
1. Steel for machining purposes and galvanised steel containing up to 0,35 % lead by weight		1. Steel for machining purposes and galvanised steel containing up to 0,35% lead by weight		Exemption is still necessary, some ISO standards for fasteners are in this range. Lead is still needed for parts where a high machinability is required. Investigations with substitute materials (e.g. Calcium) showed still detrimental results.	
2.a) Aluminium for machining purposes with a lead content up to 2 % by weight Note: a maximum concentration value up to 0,4 % by weight of lead in aluminium shall also be tolerated provided it is not intentionally introduced	1 July 2005 Entry to be reviewed by January 2005	<b>2. Aluminium for machining purposes with a lead content up to 2 % by weight</b> Note: a maximum concentration value up to 0,4 % by weight of lead in aluminium shall also be tolerated provided it is not intentionally introduced	<b>1 July 2008</b> <b>Entry to be reviewed by January 2008</b>	Castings alloys seem to be workable, problems with wrought alloys not yet solved (see EN 573-3)	Eurometaux findings as of 2002 (Attachment 1) <b>Fall back position:</b> <b>Keep the existing entries</b>

2.b) Aluminium for machining purposes with a lead content up to 1 % by weight	1 July 2008 Entry to be reviewed by January 2005	<b>Shall be deleted</b>		See above.	<b>Fall back position: Keep the existing entries</b>
3. Copper alloy containing up to 4 % lead by weight		3. Copper alloy containing up to 4 % lead by weight		Exemption is still necessary. Main reason for the lead content is the machinability. No other metal of alloy can be machined faster, longer or more consistently than these brass types. The vast majority of all lead containing copper alloy is used for essential safety, comfort and reliability features. Collection and recycling are performed as a regular activity of the affected industries.	The copper industry is currently working on a common position paper. Final outcome should be more or less in line with the above made statements. (Attachment 2, not yet available)
4 Lead-bronze bearing shells and bushes		<b>4 Lead in bearing shells and bushes</b>		Exemption is still necessary; however needs to be reworded. There are various translations out there and interpretations possible regarding the lead content; in the bronze as an alloying element, as a functional layer, as constituent in the functional layer and many more. The interpretations differ between vehicle manufacturer and the supply base. There are lead-	<b>Fall back position: Entry to be reviewed by January 2008.</b>

				free bearings and bushes available for some applications, however there are still no substitutes for some high performance/heavy loaded powertrain applications available.	
<b>Lead and lead compounds in components</b>					
5. Battery		5. Battery		Exemption is still necessary. There is still no practicable alternative for lead acid starter batteries. No practicable alternatives are expected to be available for mass production in the foreseeable future. Efficient collection and recycling system in place.	Statements made in the Ökopol-Report from July 2001 are still valid. (Attachment 3) <i>More detailed input will be delivered later by EUROBAT.</i>
6. Vibration dampers		6. Vibration dampers		The entry will also be required in future, without any time limitations. No new evidence is available that the industry could live without this. Typically design flaws are being reworked as soon as possible but are not at all unavoidable. Safety issues are predominately the driver behind such solutions, to e.g. prevent from vibrations in the steering column.	

7 Wheel balance weights	Vehicles type-approved before July 2003 and wheel balance weights intended for servicing of these vehicles: 1 July 2005. Entry to be reviewed by January 2005	<b>7 Wheel balance weights</b>	<b>Vehicles type-approved before July 2003.</b>	Substitutes have been developed successfully in a joint industry effort. Will cause more complexity in the recycling/recovery chain for a period of time	Instead of established closed recycling loops, virgin material has to be mined for the substitutes based on tin and zinc. <b>Fall back position: Wheel balance weights intended for servicing of vehicles type-approved before July 2003 : 1 July 2005.</b> <i>Add. Input from BLIC reg. servicing at independent service stations??</i>
8. Vulcanising agents and stabilisers for elastomers in fluid handling and powertrain applications	1 July 2005. Entry to be reviewed by January 2005	<b>8. Vulcanising agents and stabilisers for elastomers in fluid handling and powertrain applications</b>  <b>8. Vulcanising agents for elastomers in fluid handling and powertrain applications</b>	<b>1 July 2005</b>  <b>1 July 2007</b>	Extension for vulcanisation agents necessary. Argumentation of (German) Rubber Industry is based on some long- term risks regarding safety-related aspects in the current developments. Stabilisers are already replaced in some elastomer types. Total replacement	More detailed info and facts will be provided by the (German) Rubber Industry by End of November. Including kind of risk assessment. If these facts are reliable, the vehicle

				under development.	manufactures will support them. (Attachment 4, not yet available)
9. Stabiliser in protective paints	1 July 2005	9. Stabiliser in protective paints	1 July 2005	No extension of this entry needed. Alternatives are available. Industry is changing to lead-free stabilisers step by step.	CLEPA may ask their members if any problems are known at the supply base. <i>USCAR requested: For applications for bonding surface for structural adhesives until 1 July 2007; need more time to meet safety requirements of components</i>
10. Carbon brushes for electric motors	Vehicles type-approved before 1 July 2003 and carbon brushes for electric motors intended for servicing of these vehicles: 1 January 2005	<b>10. Carbon brushes for electric motors</b>	<b>Vehicles type-approved before 1 July 2003</b>	Extension necessary. There are no replacement options for the carbon brushes itself. The complete component needs to be exchanged. Lifetime design and reliability issues of components are the reasons to apply for an extended use of lead containing carbon brushes.	See additional arguments out of Ökopol-Study and CLEPA statements. (Attachment 5)
11. Solder in electronic circuit	Dismantling if in	11. Solder in electronic	Dismantling if in	Exemption is still necessary.	See detailed

boards and other electric applications	correlation with entry 14, an average threshold of 60 grams per vehicle is exceeded.	circuit boards and other electric applications	correlation with entry 14, an average threshold of 60 grams per vehicle is exceeded.	Industry is not yet there to use lead-free applications cross board. Due to safety-related reasons for e.g. chassis control, ABS, airbags, etc. lead containing solders are still required	industry input. (Attachment 6)  <b>As a fall back position a re-assessment in 2007 could be offered.</b> (Because of lead free roadmaps) <b>Also as fall back position: Wording of footnote should read: Dismantling, if lead concentrations after shredding processes would not allow further treatment according to existing regulations.</b>
12. Copper in brake linings containing more than 0,5 % lead by weight	Vehicles type-approved before 1 July 2003 and servicing on these vehicles: 1. July 2004	<b>12. Copper in brake linings containing more than 0,5 % lead by weight</b>	<b>Vehicles type-approved before 1 July 2003</b>	The note: - a max. concentration value up to 0,4 % by weight of lead in copper intended for friction materials in brake linings shall be tolerated until 1 July 2007, provided it is not intentionally	There is still the discrepancy of 0,5 % lead until 1 July 2004 and the 0,4 % lead as of 1 July 2004 until 1 July 2007.

				introduced, is still needed.	<b>Fall back position: Servicing on these vehicles: 1. July 2004</b>
13. Valve seats	Engine types developed before 1 July 2003: 1 July 2006	<b>13. Valve seats</b>	<b>Engine types developed before 1 July 2003</b>	Extension of this entry needed for engine types developed before 1 July 2003. New developments are already lead-free	Alternatives for running series are under investigation. Gasoline engines are more advanced in testing than Diesel. Final results available by end of 2004. <b>Fall back position: Entry needs to be re-assessed by January 2006.</b>
14. Electrical components which contain lead in a glass or ceramic matrix compound except glass in bulbs and glaze of spark plugs.	Dismantling if in correlation with entry 11, an average threshold of 60 grams per vehicle is exceeded.	14. Electrical components which contain lead in a glass or ceramic matrix compound except glass in bulbs and glaze of spark plugs.	Dismantling if in correlation with entry 11, an average threshold of 60 grams per vehicle is exceeded.	Exemption is still necessary. During the last three years in research and development there were no practical alternatives found for piezo-electronic based car components, sensors and highly precise passive electronic components. Lead is still essential in these applications.	See detailed industry input. (Attachment 7) <b>As a fall back position a re-assessment in 2007 could be offered. Also as fall back position: Wording of footnote should</b>

					<b>read: Dismantling, if lead concentrations after shredding processes would not allow further treatment according to existing regulations.</b>
15. Glass in bulbs and glaze of spark plugs	1 January 2005	15. Glass in bulbs and glaze of spark plugs	1 January 2005	No extension of this entry needed. Mass production of lead-free glazing and bulbs started in 2003. Industry is changing to lead-free step by step.	Main suppliers have been asked, they do not see mayor obstacles. CLEPA may ask their members of any problems are known.
16. Pyrotechnic initiators	1 July 2007	<b>16. Pyrotechnic initiators</b>	<b>Vehicles type-approved before 1 July 2006</b>	Entry shall distinguish between old and new developments. The industry sees mayor safety-related problems and risks for human health by changing of running series.	Presently lead free ignition systems are in the development process for these safety sensitive applications. Different ignition systems (low and high energy) must be validated and large tests are needed for

					qualification considering technical periphery.
<b>Hexavalent chromium</b>					
17. Corrosion preventive coatings	1 July 2007	<b>17. Corrosion preventive coatings</b>	<b>Vehicles type-approved before 1 July 2007. Entry to be reviewed by January 2006</b>	<p>Industry is facing major challenges:  First of all a long range planning "trust level" regarding the substitutes is needed from the commission. Industry does not want to develop substitutes with higher risk potential to the environment and human health. Industry is confident that some applications can be successfully introduced by this due date. (e.g. coating for fasteners)</p> <p>For several applications neither substitutes nor alternatives are available at this point in time (e.g. Mg, Al, black chromate)</p>	<p>Regarding galvanic plating see report from VDA-WG- Cr (VI)</p> <p>Substitutes:</p> <p>a) Process is still not under control at the job-coaters.  b) Major variation in quality  c) High temperature resistance (&gt;120°) not yet achievable.</p> <p>There are still not all safety risks known .Outcome of the CHROMATEX study need to be considered.</p> <p>Add. Info: Pre-treatment of weather strips. Commission should be made aware of the real</p>

					situation.
18. Absorption refrigerators in motor caravans		18. Absorption refrigerators in motor caravans		Entry still needed	
<b>Mercury</b>					
19. Discharge lamps and instrument panel displays		19. Discharge lamps and instrument panel displays		Entry still needed. Some alternatives are under development.	CLEPA is kindly asked for input. Statements made in the Ökopol-Report from July 2001 are still valid. (Attachment 9) A phase out date for discharge lamps seems to be possible. Needs some further discussion.
<b>Cadmium</b>					
20. Thick film pastes	1 July 2006	20. Thick film pastes	1 July 2006	Entry is still needed. There is still no substitute available.	<i>CLEPA Input needed: concerning CdS in sensors.</i> An extended phase out date seems to be appropriate.
21. Batteries for electrical vehicles	After 31 December 2005, the placing on the market of NiCd batteries	21. Batteries for electrical vehicles	After 31 December 2005, the placing on the market of Ni Cd batteries shall	Entry is still needed	Pascal Feillard to be asked for arguments and add. input. <i>CLEPA (Dr.</i>

	shall only be allowed as replacement parts for vehicles put on the market before this date.		only be allowed as replacement parts for vehicles put on the market before this date.		<i>Fricke) is kindly asked for input as well.</i>
Impurities	--A maximum concentration value up to 0,1 % by weight and per homogeneous material, for lead, hexavalent chromium and mercury and up to 0,01 % by weight per homogeneous material for cadmium shall be tolerated, provided these substances are not intentionally introduced. The use of recycled materials	<b>Impurities</b>	<b>-- a maximum concentration value up to 0,1 % by weight and per homogeneous material, for lead, hexavalent chromium and mercury and up to 0,01 % by weight per homogeneous material for cadmium shall be tolerated. The use of recycled materials as feedstock for the manufacture of new products,</b>	The last part of the sentence "provided these substances are not intentionally introduced" should be deleted. There is no difference regarding the environmental impact if the metals are intentionally added or part of the materials as "normal" impurity as far as the upper limits are met.	The threshold values for impurities shall be set in accordance with the maximum concentration values already fixed, and periodically revised, in CEN and other international or national standards. (Attachment10)

	as feedstock for the manufacture of new products, where some portion of the recycled materials may contain amounts of regulated metals, is not to be considered as intentionally introduced.		<b>where some portion of the recycled materials may contain amounts of regulated metals, is not to be considered as intentionally introduced.</b>		
Replacement parts	until 1 July 2007, new replacement parts intended for repair (4) of parts of vehicles exempted from the provisions of Article 4(2)(a) shall also benefit from the same exemptions. (4) This clause applies to replacement parts and not to components intended for normal servicing of vehicles. It does not apply to wheel balance weights, carbon brushes for electric	<b>Replacement parts</b>	<b>Vehicles put on the market prior to 1 July 2003 or prior to the respective expiry date of the exemptions listed in Annex II and parts intended for repair or servicing of these vehicles are not affected by the restrictions.</b>	The ELV Directive refers to vehicles including their components and materials. Annex II lists exemptions to the general substance restrictions. A differentiation between spare parts, service parts, and replacement parts is not part of the Directive and therefore, should also be deleted in Annex II.	<b>Fall back position: This does not apply to wheel balance weights and brake linings. The arguments used in the answer back to the commission regarding the infringement process against Germany shall be used as well.</b>

	motors and brake linings as these components are covered in specific entries.					