

# Evaluation of the Directive 2006/66/EC

## Initial results of the evaluation study

### No 8: Hazardous substances

Trinomics/Oeko-Institut/E&Y

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# Agenda

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1. Current provisions
2. Definition of hazardous substances
3. Inconsistencies – substance prohibition
4. Points for discussion

# 1. Current provisions

- Article 1(1) states that the Batteries Directive establishes rules regarding the placing on the market of batteries containing hazardous substances.
- Article 4 prohibits:
  - The use of mercury in all batteries; and
  - The use of cadmium in portable batteries.
- Article 5 requires Member States to promote research, among others on the development of batteries containing “less polluting substances“ and particularly substitutes for mercury, cadmium and lead.
- Article 21 requires the labelling of batteries containing more than a certain level of mercury, cadmium and/or lead (Hg, Cd or Pb symbol).

## 2. Definition of hazardous substances

- There is no definition in the Directive of “hazardous substances“ and no specification as to what substances are considered hazardous.
- However, based on prohibitions and labelling requirements it can be concluded that mercury (Hg), cadmium (Cd) and lead (Pb) are considered to be hazardous.
- Commission Decision 2000/532/EC, on the list of wastes, classifies waste batteries as hazardous when they contain Hg, Cd or Pb
- The Document on Frequently Asked Questions acknowledges that: “all batteries contain substances which are harmful to the environment,”  
→ although other substances are not addressed.
- Comparing with other substance classifications instruments (CLP, notified self-classifications) it is observed that other substances are considered hazardous, despite their not being addressed in the Directive.

## 2. Substances classified as hazardous CLP/notified

- Compilation of classifications of various substances present in batteries shows that additional substances have hazardous classifications (not just Hg, Cd and Pb based compounds).
- Comparison of classifications is not sufficient to allow concluding whether additional substances should be prohibited:
  - Not all substances have harmonized classifications (including for forbidden heavy metals) – notified self classifications are less certain;
  - Hazardousness can be related to various health or environment aspects (cancer, reproduction, aquatic toxicity, etc.). Comparison not straightforward.

## 2. Definition of hazardous substances

### Initial conclusions

- In addition to Hg, Cd and Pb, there are more substances present in batteries that are classified as hazardous.
- It should be considered whether they need to be addressed in the Directive.
- The lack of a definition in the Batteries Directive for hazardousness does not allow evaluating whether other substances should also be managed under the Directive as hazardous.
- The relation between the definition of a substance as hazardous and its prohibition under the Directive is not clear, and this influences the definition of additional substances as hazardous in the Directive.

### 3. Inconsistencies – substance prohibition

- Though Hg, Cd and Pb can be understood to be hazardous under the Batteries Directive, prohibitions are only established for Hg and Cd.
- The Batteries Directive specifies that batteries used in vehicles need to comply with the ELV Directive, and thus also regulates relevant automotive and industrial batteries.

	Portable	Industrial	Automotive
Mercury	Prohibited in BD		
Cadmium	Prohibited in BD	Prohibition for use in vehicles through ELV. Other applications allowed	
Lead		Prohibition for use in vehicles through ELV however currently exempted	

- There is no explanation why other batteries (or substances) are not addressed through prohibition, nor on what basis this would become necessary – for the three substances/batteries (NiCd industrial, Pb-acid portable) nor for other substances.

### 3. Inconsistencies – substance prohibition

#### Initial conclusions

- It may be relevant to prohibit hazardous substances in additional battery applications :
  - Prohibitions of cadmium and lead in battery types currently not covered by BD and ELV;
  - Prohibitions of other substances recognized as hazardous.
- However, it is not clear on what basis (criteria) this should be done and whether the intention is for this to be addressed through the Batteries Directive or other legislation.
- The waste regulation has a precautionary approach, whereas REACH has a risk based approach – regulation under REACH is thus not necessarily equivalent to regulation under BD.



## 4. Discussion



## Points for Discussion

### Points for discussion

- Is the current state of prohibitions appropriate or should additional prohibitions be considered (e.g. Pb in portable, Cd in industrial, etc.)?
- Should criteria be developed or a reference to e.g. chemical legislation be explicitly taken into consideration to define whether a substance present in batteries is hazardous? Or, conversely, is it enough with the provisions in the Batteries Directive?
- In light of the (somehow) diverging approaches of the Batteries Directive, the ELV and REACH, is it appropriate for prohibitions to be scattered among different legislation as it is currently the case?

# Thank you for your attention!

Any further questions?



## Your contact

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## 4. Effectivity of prohibitions **BACK-UP**

- **Mercury** is completely prohibited (exemption expired in October 2015).
  - A decline in collected batteries observed and expected to continue. A survey performed by one of the MS on mercury content in button cells at the end of 2016 examined 49 products and found mercury in only 9 button cells. In most cases, the mercury contained batteries were placed on market before 1st October 2015
- **Cadmium** prohibited in portable batteries (2 exemptions still valid) .
  - A decline in collected batteries observed and expected to continue.
- **Lead** is prohibited in vehicle batteries through ELV but with exemption.
  - A few stakeholders suggest the prohibition of lead-acid batteries in light of the risk of leakage still perceived to be high.

## 4. Effectivity of prohibitions **BACK-UP**

- Safety issues have been raised in relation to Lithium batteries
- Some stakeholders argue that new restrictions, if needed, would be better placed under REACH and not under the Batteries Directive
- Some stakeholders view further restrictions as unjustified as the “risk from heavy metals and hazardous substances is managed by recyclers”, however, collection rates show that large amounts of batteries are still not collected (55% for portable), possibly ending up in the environment.