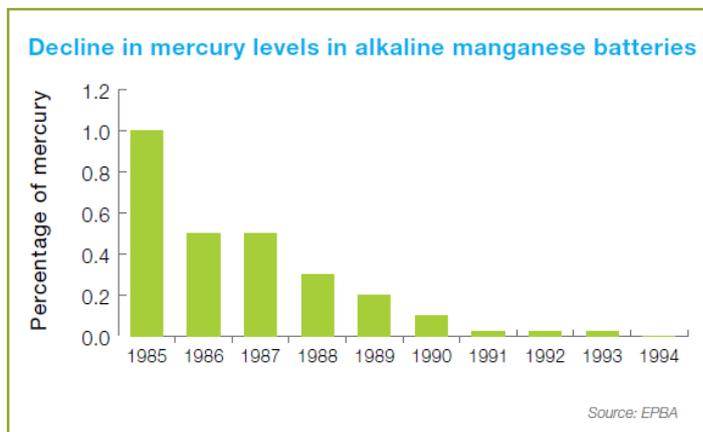


EPBA Sustainability Initiatives

Pioneering the removal of mercury from all portable batteries

1. Voluntary removal of mercury from alkaline and zinc batteries

In 1985, EPBA members launched an initiative to remove mercury from alkaline manganese batteries. At the time, mercury accounted for 1% of the total weight of these batteries, and it was decided that it would be phased out in a series of steps until complete elimination was achieved.



Zinc carbon batteries also contained mercury, but at a much lower concentration of 0.1%, and its removal was also incorporated into the programme. This programme was successfully completed in 1994, when all alkaline and zinc carbon batteries sold by EPBA members were totally free of mercury, a full six years before legislation to this effect (Directive 98/101/EC) came into force in 2000. This initiative was undertaken on an entirely voluntary basis by EPBA producers, and

involved an investment of more than €100 million.

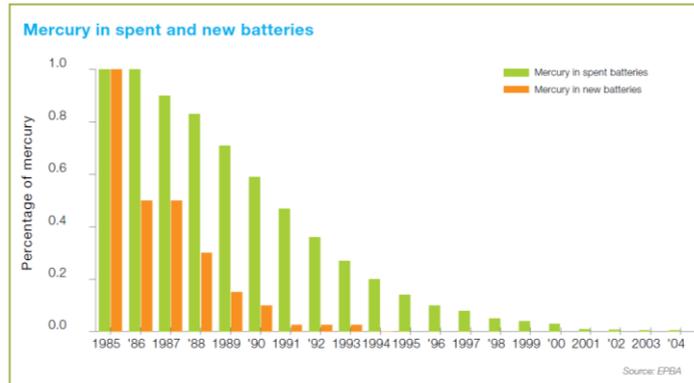
2. Substitution of mercuric oxide batteries

During the 1980s, the mercuric oxide battery was the dominant battery chemistry used in photographic applications and hearing aids. This battery contained more than 30% mercury, which could not be removed because mercury was a key ingredient and its removal would have meant the battery would no longer function. It was clearly not possible to simply stop selling these batteries without finding alternative sources to power cameras, hearing aids and other such appliances.

The battery industry rose to the challenge and set about developing new battery chemistries to replace the mercuric oxide battery. As a result, the lithium manganese dioxide battery, containing 0% mercury, and the zinc air battery, containing no more than 2% mercury, were introduced onto the consumer market. These developments resulted in a significant fall in mercury levels in Europe, decreasing the release of mercury of almost 54 tonnes annually.

3. Convincing authorities to enforce mercury's elimination in a two-step plan

EPBA set up a working group in 1991 to investigate available technologies for the recycling of primary batteries. It quickly became apparent that if recycling were to be implemented across Europe, existing facilities and capacity would be insufficient to meet anticipated demand. The industry concluded that, once mercury use had been phased out, the most effective and environmentally sound means of recycling would be to utilise existing infrastructures within the metals industry to recycle zinc, steel and manganese from batteries.



However, this approach would only be possible if collected batteries could be guaranteed to contain less than 0.0005% by weight (background level) of mercury. Under Battery Directive 91/157/EEC, batteries containing up to 0.0025% by weight of mercury could still be imported into the European Union. These imported batteries, and the continued availability of mercuric oxide batteries, threatened the feasibility of using recycling facilities already in place in the metals industry.

Consequently, the battery industry approached the European Commission with a proposal for a two-step plan aimed at ensuring recycling of all spent batteries.

- The first step involved legislation for a ban on primary batteries containing more than 5ppm mercury (adopted under Directive 98/101/EC).
- The second step involved legislation for the recycling of all batteries four years later (adopted under Directive 2006/66/EC).

4. Ambitious ban of the exemption for mercury containing button cells from the Batteries Directive

In 2012, the Commission launched a partial revision of the batteries directive. This gave an opportunity to the European Parliament to propose removing the exemption for mercury containing button cells which, according to the legislation, were still allowed to have a 2% by weight mercury content.

In the context of its three-year strategy, which included a pillar on sustainability, EPBA supported the initiative by the Parliament. EPBA did, however, suggest a more ambitious timeline to ban these batteries than what was initially proposed. This was also the deadline included by the decision makers in the final legislation.

About EPBA

The EPBA advocates the portable power solutions of its members working with regulators, NGOs and other stakeholders to create an environment of harmonized and fair legislation so costumers may enjoy efficient and safe batteries to be conveniently used and recycled. For more information, visit our website: www.epbaeurope.net/.