



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL  
ENVIRONMENT  
Directorate B – Circular Economy  
The Director

Brussels, 30 November 2023  
ENV.B.3/EGJ

**NOTE FOR THE ATTENTION OF  
DR SHARON MCGUINNESS, EXECUTIVE DIRECTOR, ECHA**

**Subject: Request to the European Chemicals Agency (ECHA) to prepare a study report identifying substances of concern in batteries, including an investigation on the need for further restrictions and on the need to extend current restrictions on substances currently set under Directive 2000/53/EC (ELV Directive) and Regulation (EU) 2023/1542 (Batteries Regulation) to other type of batteries**

## **1. BACKGROUND**

On 12 July 2023 the European Parliament and the Council adopted a new regulation that strengthens sustainability rules for batteries and waste batteries. The aim of the Regulation is to establish circularity in the batteries sector, and to ensure that batteries are safe, sustainable, and performant. Regulation (EU) 2023/1542 (hereafter the Batteries Regulation) entered into force on 17 August 2023 and repeals Directive 2006/66/EC (Batteries Directive). The Batteries Regulation contains provisions on production, import, use and recycling of batteries, and on restriction of substances present in or used in the manufacture of batteries.

The Commission can request ECHA to prepare a restriction dossier, or it can be prepared at the initiative of a Member State of the EU, if risks from the presence or use of substances in batteries, or in all life cycle stages including during repurposing or treatment of waste batteries, are considered not adequately controlled (Article 86). Annex I to the Regulation contains the list of restricted substances and the conditions for restriction. At the time of entry into force of the Regulation, Annex I included already three substances (mercury and its compounds, lead and its compounds, cadmium and its compounds) with specific concentration limits for certain types of batteries.

According to Article 6(5) of the Batteries Regulation, by 31 December 2027 the Commission, assisted by ECHA, shall prepare a report on substances of concern present in batteries or used in their manufacture. The Commission shall submit the report to the European Parliament and to the Council detailing its findings and shall consider the appropriate follow-up measures including the adoption of new restrictions.

## **2. THE MANDATE**

The Commission is hereby requesting ECHA to prepare a study report identifying substances of concern present in batteries or used in their manufacture and to investigate the need for further restrictions.

As part of the study report preparation, ECHA is requested to conduct an investigation on the need to extend current restrictions and, where applicable, their exemptions, on the presence of mercury (Hg), cadmium (Cd), hexavalent chromium (Cr(VI)), and lead (Pb) in vehicle batteries under the Directive on end-of life vehicles (ELV Directive)<sup>1</sup>, to batteries for other vehicle categories in scope under the proposed ELV Regulation as well as to other types of batteries under the Batteries Regulation.

The investigation should also take into account the scope and the timelines of the exemptions planned in Annex II to the ELV Directive.

The study report should include at least:

1. A list of substances of concern present in batteries, substances used in their manufacture and in subsequent life cycle stages including during repurposing or treatment of waste batteries, as available at the time of the preparation of the report. The criterion for their identification is based on the reference in Article 6(5) of the Batteries Regulation and on the definition of substances of concern under the Eco-design for Sustainable Products Regulation (ESPR Regulation<sup>2</sup>), once adopted, and subsequent related developments under ESPR.
2. Specific findings on the substances in the list identified in point 1 and investigation on substances to be prioritised for further regulatory action (e.g., restriction), including the criteria for their prioritisation. In addition to individual substances, the investigation should consider also groups of substances, substances used in specific battery related applications as well as substances contained in materials of which batteries are constituted. Prioritisation criteria will consider the approaches already in place to prioritise substances under REACH restriction and authorisation processes as well as socio-economic factors (e.g., circular economy, green and digital transition, strategic autonomy, availability of critical raw materials).
3. Investigation on the need (and possible options) to extend the current restriction of the presence of Hg, Pb, Cr(VI) and Cd in batteries in the scope of the ELV Directive to other batteries. To this end, considerations will be made on the scope and the timelines of the exemptions planned in Annex II of the ELV Directive and on potential risks from exposure of humans and the environment to Hg, Pb, Cr(VI) and Cd in all types of batteries in the scope of the Batteries Regulation, during manufacturing, use, collection and recycling.
4. Information on available/under development substitutes to Hg, Cd, Cr(VI) and Pb in different types of batteries including, when available, information on costs, technical

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<sup>1</sup> The Directive 2000/53/EC of the European Parliament and of the Council on end-of life vehicles entered into force in September 2000 aiming at reducing waste from vehicles by promoting recycling and other forms of recovery of end-of-life vehicles and their components. Annex II of the Directive contains provisions on maximum allowed concentrations for lead, hexavalent chromium, mercury and cadmium in homogeneous material used in vehicles (including batteries) as well as exemptions for certain uses. Following a review, on 13 July 2023 the Commission presented a proposal for a Regulation on end-of-life vehicles, which merges the ELV Directive with the Directive 2005/64/EC on the type-approval of motor vehicles into one legislation on design and end-of-life management of vehicles (COM(2023) 451 final). The ELV Regulation proposal takes over the current restrictions and their associated exemptions established in the Annex II of the ELV Directive. In order to ensure the coherence of legislation on chemicals, restrictions regarding placing on the market and use of other substances in vehicles are foreseen to be regulated under Regulation (EC) No 1907/2006.

<sup>2</sup> Regulation of the European Parliament and of the Council establishing a framework for setting ecodesign requirements for sustainable products COM(2022) 142 final

issues and hazard profile of identified substitutes.

During the preparation of the study report, information should be gathered by ECHA on:

- Life cycle stages (including manufacturing, use, collection and recycling of waste batteries<sup>3</sup>) for different types of batteries and in particular on those steps where exposure to humans and to the environment can be expected.
- Substances used in batteries including in manufacturing processes and in other life cycle stages. The materials and substances used in batteries shall be considered, including substances used in electrodes and battery cells, modules or of packs of them, in electrolytes and in battery casings.
- Chemical identity of substances used in batteries (i.e., composition and identity of all constituents), their known or potential hazards for human health and the environment and current regulatory status under relevant EU legislation (e.g., Harmonised Classification under CLP, inclusion in the Candidate List or Annex XIV/XVII of REACH, etc.).
- Typical (technical) functions of substances in batteries, their physical state<sup>4</sup> and typical amount and/or concentration. Considerations will also be made on whether the function could be used to differentiate the ‘difficult-to-substitute/critical/essential substances’ (e.g., key metallic ions) from the ‘more-easily-substitutable’ ones (e.g., additives), in a way that it could be used for prioritisation.
- Available alternatives for the substances already flagged under REACH/CLP as being of concern for the human health or the environment or as hampering recycling.
- Presence, concentration and specific technical function of Hg, Cd, Cr(VI) and Pb in EU-produced and imported batteries including batteries in the scope of the ELV Directive and “other batteries” (i.e. batteries not used in vehicles and batteries used in vehicle categories added to the ELVR proposal such as trucks, buses, motorcycles), on possible uses of these substances in manufacturing process and on their presence in waste batteries.
- Existing processes and practices for collection and recycling of batteries containing Hg, Cd, Cr(VI) and Pb, recovery of these substances and their recycling in the manufacturing process, including available information on annual quantities of these substances currently recycled in the EU.

Information should be gathered from available registration dossiers of substances under REACH EU and national reports, from applications for authorisation and corresponding opinions and decisions (e.g., for the use of Cr(VI) substances present in heat pumps or used in the production of lithium-ion batteries), information from open sources, literature studies, consultations with stakeholders and any other information that could be gathered from other EU/extra-EU authorities, Member States and national authorities.

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<sup>3</sup> e.g. recyclability and barriers for recycling; recycling rate of the battery type where the substance is used (per use and per material); recycling rate of the specific substance within the batteries supply chain.

<sup>4</sup> e.g., substance used in liquid or in solid electrolytes

### 3. TIMING

ECHA is invited to proceed with the request in two consecutive phases:

#### *Phase 1*

By **30 June 2025**, ECHA will provide the Commission with a **Phase 1 report** containing a mapping of different types of batteries, technology and substances used, supply chain, manufacturing processes, recycling and management of waste batteries including information from consultation with key stakeholders. The Phase 1 report will contain also the results of the investigation on the need to restrict, under the Batteries Regulation, Cd, Pb, Cr(VI) and Hg used in batteries that are not covered by current restriction under the ELV directive (vehicles' batteries) and the Batteries Regulation.

#### *Phase 2*

By **20 December 2026**, ECHA will provide the Commission with a **Phase 2 report** (final report) including an updated version of the Phase 1 report, a list of substances of concern contained in batteries or used in their manufacturing (as referred to in Article 6(5) of the Batteries Regulation and subsequently further defined under the ESPR Regulation, once adopted), including specific findings related to the substances in the list and an investigation on the need for follow up measures (i.e. restriction and exemption thereof) to address risks from these substances in the EU. The list of substances provided will be prioritised according to risk and socio-economic criteria. The report will contain an account of the consultation of concerned stakeholders.

We would request ECHA to keep the Commission regularly informed on the progress of the development of the study. We would appreciate receiving a confirmatory letter that our request has been accepted.

*E - signed*

Aurel CIOBANU-DORDEA

C.C.: Messrs Nuñez de Almeida (DG GROW), Pellegrini (DG ENV) and Soro (DG GROW) - batteries

Mmes Schreiber (DG GROW) and De Avila (DG ENV), Mr Casella (DG GROW)  
- chemicals