Lead metal vs EU REACH: Brief note to projects

The substance lead metal (CAS 7439-92-1) is severely restricted in the EU due to its hazard profile.

Workplace limit values update

To strengthen the protection of workers, the European Commission (COM) has proposed to lower the existing limit values for lead and its inorganic compounds (COM(2023) 71 final). The resulting Directive (EU) 2024/869 of 13 March 2024 has been published in the Official Journal of the European Union on 19 March 2024;[1] it now needs to be transposed by the EU Member States by 9 April 2026.

The limit values are to be lowered as follows:

- Occupational Exposure Limit (OEL) from 0,15 mg/m^3 to 0,03 mg/m^3
- Biological Limit Value (BLV) from 70µg/100ml to 30 µg Pb/100 ml until 31.12.2028 and to 15µg/100ml from 1.1.2029

EU REACH Candidate List

Lead was also included in the EU REACH Candidate List in June 2018, triggering certain reporting obligations for EU/EEA suppliers of articles containing lead above 0.1% weight by weight, notably REACH Article 33 and WFD/SCIP notification[2].

Continued use

Importantly however, **lead is still allowed to be used in the production of space hardware today and in the foreseeable future** where there are no viable alternatives. The European Commission has clarified in June 2024 that it **does not intend to include lead in the authorisation list**.[3] The prior recommendation of the European Chemicals Agency (ECHA) of 12 April 2023 for the inclusion of substances in Annex XIV to REACH (List of Substances subject to Authorisation), **which includes lead metal**,[4] is non-binding for COM and does **not** imply any ban of lead use in the EU.

It is thus expected that essential uses of lead without alternatives (e.g. tin/lead soldering, use in other alloys / mixtures) may legally continue in the EU space industry as long as necessary.

Possible further constraints

The future legal framework for continuing such uses under EU REACH, incl. the possibility of additional requirements (e.g. targeted restriction with derogations) is still undecided at this point; it may also depend on the outcome of the ongoing REACH Regulation Revision. The Commission has stated in June 2024 that it is assessing all available risk management measures, to address the concerns related to the remaining non-regulated uses of lead in the most appropriate way.[5]

[1] https://eur-lex.europa.eu/eli/dir/2024/869/oj.
[2] See https://echa.europa.eu/scip.
[3] See J. Fabre, M. Beekman and F. Vitobello, Commission Update on the CSS and Recent Developments, 5th ESA REACH Workshop, ESA ESTEC, Noordwijk, the Netherland, 19th June 2024, p. 27 available here.
[4] The ECHA Recommendation is available here.
[5] See footnote 3.

European Space Sector activities addressing lead

A dedicated Space Sector Task Force (REACH **Lead Task Force** (**LTF**)) is closely monitoring the regulatory evolutions for lead and develops input to support continued use.

An EU-funded project **"Lead-free Transition For The European Space Sector" (LETTERSS)** has been kicked off in January 2024. Its expected duration is until 31 December 2026. Further information can be found at https://letterssproject.eu.

Contact for further questions

For remaining questions, please contact reach.officer@esa.int.

Version history:

- Initial version 1.0, 25 August 2022, ref. RL-MPTB-2022-08-25-Pb-REACH
- Version 1.1, 21 June 2023, ref. RL-MPTB-2023-06-21-Pb-REACH: Added references to the Commission Proposal COM(2023) 71 final of 13.2.2023 regarding the lowering of worker protection limit values, the ECHA Annex XIV Recommendation of 12 April 2023 and the statement of Germany's *Federal Institute for Occupational Safety and Health* of 8 February 2023 opposing the inclusion of lead in Annex XIV.
- Current version 1.2, 11 July 2024, ref. MPTB-RL-MO-0156: Added references to Directive (EU) 2024/869 of 13 March 2024, clarifications by the European Commission of June 2024 concerning REACH authorization/other regulatory measures and the LETTERSS project.