

Consultation Questionnaire Exemptions 6(b) and 6(b)-I

Exemption 6(b) for “Lead as an alloying element in aluminium containing up to 0,4 % lead by weight”; and

Exemption 6(b)-I for “Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling“

Abbreviations and Definitions

Al	Aluminium
EEE	Electrical and Electronic Equipment
Pb	Lead
RoHS	Directive 2011/65/EU on the Restriction of Hazardous Substances in Electrical and Electronic Equipment
UP	Umbrella Project

Background

The Oeko-Institut has been appointed by the European Commission, within a framework contract¹, for the evaluation of applications for exemption from Directive 2011/65/EU (RoHS), to be listed in Annexes III and IV of the Directive.

The EU Aluminium and COCIR, HARTING Stiftung & Co and Pepperl + Fuchs AG on behalf of the “RoHS Umbrella Industry Project” (hereafter referred to as “Umbrella Project” or “UP”) have submitted requests for the renewal of the above-mentioned exemption, which have been subject to an initial evaluation. A summary of the main argumentation for justifying the requests is provided below. The applicants have been requested to answer additional questions and to provide additional information, available on the request webpage of the stakeholder consultation (<https://rohs.exemptions.oeko.info/index.php?id=356>).

For further details, please check the exemption requests and additional information submitted by the applicants on the request webpage of the stakeholder consultation.

The objective of this consultation and the review process is to collect and to evaluate information and evidence according to the criteria listed in Art. 5 (1) (a) of Directive 2011/65/EU (RoHS 2), which can be found under:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT>

¹ The contract is implemented through Framework Contract No. ENV.B.3/FRA/2019/0017, led by Ramboll Deutschland GmbH.

If you would like to contribute to the stakeholder consultation, please review the summary of the argumentation provided and answer the questions that follow.

1. Summary of argumentation of applicant on the justification of the exemption

1.1. Background

A renewal of exemption 6(b)-I is requested by both applicants for:

“Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling”.

In addition, the Umbrella Project applies for a renewal of exemption 6(b) for:

“Lead as an alloying element in aluminium containing up to 0,4 % lead by weight”.

Exemption 6(b) has been reformulated following its last assessment in 2015/2016, which resulted in a split of 6(b)-I and 6(b)-II differentiating between applications of aluminium alloys where lead is unintentionally present and between applications where lead provides necessary properties. Exemption 6(b), however is still valid for categories 8 and 9 until July 2021 and will remain valid afterwards for category 8 in vitro diagnostic medical devices (21 July 2023), for category 9 industrial monitoring and control instruments and for category 11 (21 July 2024).

Applications covered under exemption 6(b) are assumed to cover the two main application areas covered under exemption 6(b)-I and exemption 6(b)-II. Therefore, the request for renewal of Ex 6(b) will not be followed up as a separate evaluation but rather considered in the course of the assessments of exemption 6(b)-I and exemption 6(b)-II, all the more so as the UP application for exemption 6(b)-II requests the exemption for EEE Cat. 1-10.

The following summary focuses on 6(b)-I.

EU Aluminium requests the exemption to be renewed for 5 years for all EEE categories, however proposing to lower the allowance for Pb given in the exemptions. The UP requests the maximum validity periods foreseen in the RoHS 2 Directive (which means 7 years for Cat. 8 and Cat. 9 EEE and 5 years for all other categories).

1.2. The scope of the exemption

EU Aluminium explains that *“there is less scrap available on the market today that contains lead”*, thus, in aluminium alloys where recycled lead-bearing aluminium scrap is the only source of lead the lead content is decreasing. Furthermore, the amendment of the EU Standard EN 1706 for Aluminium and Al alloys – Castings requires reducing the Pb content to 0,29% by weight. For those reasons, the threshold can be lowered to 0,3% by weight. Against this background, EU Aluminium proposes an adapted wording of the exemption:

Lead as an alloying element in aluminium casting alloys containing up to 0,3% lead by weight provided recycled lead-bearing aluminium scrap is the only source of the lead

The Umbrella Project states that *“there is no evidence that it would be possible to lower the limit from 0,4% for the time being”*. It is understood that the Umbrella Project was not aware of the timeline of

the EU standards revision as they state that “*RoHS limits can be lowered only once new standards are in place and enough time has been granted [...]*” and “*RoHS limits cannot be changed before international standards are adopted and fully implemented*”.

The UP was asked to comment on the change to the exemption wording proposed by EU Aluminium: The consultants understand that the UP, is uncertain whether the proposed limit of 0,29 % lead content in recycled aluminium is already achieved by international suppliers or whether it is a target level. In both cases, the UP contends that a transition period would be needed before lowering the limit of lead in exemption 6(b)-I. This is to allow “*Time for reducing the level of lead to 0,29% + time needed for the global supply chain to exhaust the stock + time for recertification/re-validation*”. The UP states that the European Standard revision, given by EU Aluminium as the basis for proposing to lower the lead content in recycled aluminium, is an insufficient argumentation. According to the UP, for casting alloys, there is no international standard², but rather a high dependency of the EEE industry on the global supply chain. “*Global customer specifications cannot be changed unilaterally by European aluminium alloys suppliers*”, states the answer to the clarification questionnaire provided by the UP. Another argument put forward is that the lead content is lowered by diluting the Al scrap with non-lead Al, which in the EU is from secondary sources but it is not clear whether a lowered threshold through this exemption would not result in a dilution of the Al scrap with primary aluminium outside the EU. Finally, as the concentration of lead in recycled Al would decrease anyway in the future as new lead-free aluminium machining alloys are introduced, the UP does not see any benefit but more legal uncertainty.

As to EU Aluminium’s proposal to specify only casting aluminium in the wording of Ex. 6(b)-I and not wrought alloys, the UP did not comment on this at this stage seeing as EU Aluminium has not explained the background for their proposal.

EU Aluminium was also asked to provide additional detail. To support their new wording proposal for exemption 6(b)-I: It is confirmed that EN 1706 standard has included the value of 0.29% w/w of lead, based on a compromise between member states and stakeholders. The Standard is available for purchase since April 2020. Standards can be used as a basis for regulatory development, even if they are voluntary as long as they are not referred to in legal texts. EU Aluminium propose to make use of this. Reacting on the arguments regarding the slowness of global supply chains, EU Aluminium states that “*whilst it is paramount to grant transition time to these systems it is also important to make progress in line with the political wave of the Green Deal and the Zero Pollution Action Plan. We believe in an approach that combines steady reductions, giving enough time for the industry to adapt to them, therefore our suggestion to grant 5 years*”. It is not completely clear what EU aluminium means when referring to a transition period, i.e., if they mean that the current exemption should be renewed for 5 years for this purpose, despite proposing an amendment.

EU Aluminium raise the following argument in favour of the proposed 0.3% threshold for lead in aluminium scrap: The health classification of lead metal as defined by Regulation (EC) No 1272/2008 (CLP) is based on a concentration level of 0.3%³ of lead (metal) w/w. “*Considering that for the time being the regulatory procedures addressing lead as a Substance of Very High Concern (SVHC) see that value as a reference, it would make sense to promote alignment in this regard. Doing so would help approach the two positions and, in the event of a potential inclusion of lead metal in the*

² For wrought alloys there exists an international standard published by the Aluminium Association (last updated in 2015), accessible through <https://www.aluminum.org/sites/default/files/Teal%20Sheets.pdf> (UP answer to the clarification questions)

³ ECHA: <https://echa.europa.eu/de/registration-dossier/-/registered-dossier/16063/2/1> (accessed 03.02.2021)

authorisation list under REACH, would help maintaining coherence in the threshold values.' (EU Aluminium answer to clarification questions)

1.3. Applicants' justifications for the requested exemption

1.3.1. Volume of lead to be placed on the EU market through the exemption

The UP provides a non-exhaustive long list of applications (p. 7 of the application). The share of recycled Al from all Al used in EU end-use applications is estimated to have been 26 % in 2000 (EU Aluminium), 37% in 2013 (UP) and is estimated to reach 50% in 2050 (EU Aluminium). This information is understood to concern the general use of Al in the EU and not only the use of EEE articles. As for the amount of Pb entering the market through this exemption, both applicants state that it is not possible to derive the amount of lead through recycled aluminium.

1.3.2. Availability of alternatives (Substitution or Elimination, roadmap to substitution, reliability of substitutes)

The substitution of unintentionally present lead in aluminium originating from Al scrap recycling is explained not to be appropriate. Technological alternatives for removing the lead in the melting and refining step of the Al recycling process have been tested in 2012 without finding a technically feasible way. Both applicants refer to a study on 'Existing technologies for lead removal from Aluminium melts', carried out by MIMI Tech UG and finalized in June 2012. *The study shows that only few methods could be found and were assessed, i.e. Phase separation, Electrolysis and Vacuum distillation. These methods are either not approved above lab-scale or from an environmental/economical perspective are not feasible. The only alternative is to dilute the metal with primary aluminium. This would result in higher environmental impacts due to the fact that the production of primary aluminium is energy intensive*" (European Aluminium).

Both applicants state that a dilution of Pb takes place over time with no "new" Pb being added to the material stream as aluminium produced with primary material enters the waste phase and is recycled. They stress the environmental benefits of using recycled material as compared to virgin resource extraction.

The UP states that a closed loop system exists for Al as *"in 2017, collection rates for aluminium were over 95% for new scrap and 70% for old"*.

1.3.3. Environmental and health arguments (also LCA aspects)

The applicants argue that health and environmental impacts of recycled aluminium lead to a lower total impact than the use of primary aluminium. This is based on several LCA studies.

1.3.4. Socioeconomic impacts

The UP argue in favour of the exemption explaining that the decrease in recycling of aluminium scrap will impact the EU circular economy and limit economic growth and jobs. Whether aluminium scrap can be used or not (in light of lead impurities) also affects the dependency of the EU on primary aluminium for which imports remains very high.

2. Questions for stakeholders

1. One applicant has requested an exemption, proposing the following wording formulation:

“Lead as an alloying element in aluminium casting alloys containing up to 0,3% lead by weight provided recycled lead-bearing aluminium scrap is the only source of the lead”

The views of both applicants towards the reduction of lead in recycled aluminium are presented in the summary above.

- a. What is your view in light of the upper summarised argumentation? Please explain why you either support the new wording proposal or object to it. To support your views, please provide detailed technical argumentation / evidence in line with the criteria in Art. 5(1)(a).
 - b. The new wording proposes to narrow down the scope of Ex. 6(b)-I to casting alloys excluding any other type of aluminium alloy. Please express your view supported by a detailed technical argumentation and quantified data where at hand.
 - c. If you do not support either of the proposals, please suggest an alternative wording and explain your proposal.
2. Both applicants speak of a transition time for industry and global markets to adapt the total supply chain to meet the targets of lower lead levels in recycled aluminium. It is understood that this could be accomplished by granting a 5 years renewal period for exemption 6(b)-I with its existing wording. Please comment on this proposal and the need for a 5-year transition period.
 3. Please provide available quantitative information as to the actual levels of lead in recycled aluminium/ secondary aluminium currently supplied to the market.
 4. Please provide any further information and/or data that you think is of importance to substantiate your views.

In case parts of your contribution are confidential, please provide your contribution in two versions (public /confidential). Please also note, however, that requested exemptions cannot be granted based on confidential information!

Finally, please do not forget to provide your contact details (Name, Organisation, e-mail and phone number) so that Oeko-Institut can contact you in case there are questions concerning your contribution.