EUROPEAN ALUMINIUM

Please find below the input from European Aluminium on the Exemption 6(b) and 6(b)-I of RoHS Annex III – "*Lead as an alloying element in aluminium containing up to 0,4 % lead by weight*"; and "*Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling*"

European Aluminium represents the full aluminium value chain in Europe. Our 80+ members include primary aluminium producers; downstream manufacturers of extruded, rolled and cast aluminium; producers of recycled aluminium and national aluminium associations are representing more than 600 plants in 30 European countries. Aluminium products are used in a wide range of markets, including automotive, transport, high-tech engineering, building, construction and packaging.

FOREWORD:

Clarification of the exemptions of lead in aluminium in the RoHS Directive

In March 2018, legislators differentiated aluminium alloys where lead is not intentionally introduced and aluminium alloys where lead is added to obtain certain properties with two different wordings, respectively exemption 6(b)-I and exemption 6(b)-II, for categories 1 to 7 and 10. Legislators however kept the "old" not differentiated wording for categories 8, 9 and 11 in exemption 6(b).

Currently, the RoHS covers three exemptions for Lead in Aluminium Alloys:

• 6(b) Lead as an alloying element in aluminium containing up to 0,4 % lead by weight

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

• 6(b)-II Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight

In this context, it is important to know that, depending on the targeted manufacturing processes, two categories of Aluminium alloys are used in the electrical and electronic equipment industry, namely casting alloys and wrought alloys. Both categories of aluminium alloys differ in their raw material resources, production processes and required different percentages of alloying elements. This is to fulfil the required properties and functionality of the final product. It does not make sense to compare the alloy categories with each other. And it is crucial that exemptions 6(b)-I and exemption 6(b)-II are treated separately.

Main Aluminium alloy categories

1- Casting Aluminium alloys usually require a higher percentage of alloying elements when compared to wrought Aluminium alloys. Today, most of the end-of-life Aluminium scrap ends in casting alloys. Due to the longevity of aluminium products and higher lead limits in the past, different amount of lead is embedded in the scrap. In order to be able to continue to recycle end-of-life scrap and preserve the aluminium material loop in the most environmentally friendly way, it is important to allow to produce casting alloys with a certain level of Lead. In order to foster a successful circular economy, recycling of post-consumer scrap has to be ensured. This tolerated amount is 0,4% in the present RoHS Directive exemption 6(b)-I. It broadly reflects the global available material standards for recycled Aluminium.

Nevertheless, there is a declining trend. The Aluminium industry has already reacted on this. The recent update of the standards EN 1676:2020 'Aluminium and Aluminium alloys. Alloyed ingots for remelting. Specifications' and EN 1706:2020 'Aluminium and Aluminium alloys - Castings - Chemical composition…' will support that move since alloy compositions have been revised with a maximum lead content reduced to 0,29%.

So, the case of casting aluminium alloys is covered by exemption 6(b)-I, for which we applied for an extension with a more precise wording and maximum lead limit reduced to 0,3%.

For more details about this, please refer to our application for renewal and modification of exemption 6(b)-I, our answers to the clarification questions, and our answers to the present public consultation on 6(b) & 6(b)-I.

2- Wrought aluminium alloys are used for rolled, extruded and forged parts (not for cast parts). Wrought aluminium alloys for machining purposes are mostly not manufactured using scrap deriving from end-of-life recycling aluminium, and when Lead is needed, it must be added intentionally. Lead has been used for technical reasons, mainly to give machinability properties to its alloys. Factories related to wrought aluminium alloys, in order to produce lead-containing alloys, are obliged to store and use pure lead metal, and the quantities are in the range of several hundred tons per year per factory. Pure lead metal can cause health problems for the workers, according to latest research and studies.

It is our understanding that the case of wrought aluminium alloys is covered by exemption 6(b)-II, and European Aluminium has not applied for the extension of that exemption, as we consider the limit of 0.1% sufficient and because not adding intentionally lead to new alloys will contribute to decrease of lead in the final products that are going back to recycling at the end of their life.

Since the above facts about aluminium supply are valid for all EEEs, including categories 8, 9 and 11:
- our proposal for narrowing down the scope of exemption 6(b)-I to casting alloys and reducing the maximum lead limit to 0,3% is also valid for 6(b)
- our opposition to the extension of exemption 6(b)-II applies to all EEE categories.

Further information for 6(b) & 6(b)-I is provided as answers to the questions below.
(For further information on 6(b)-II, please refer to our separate answers to the public consultation on 6(b)-II.)

QUESTIONS:

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).

Being the applicant who proposed this new wording, we support it, for the reasons explained in the FOREWORD, in our application and in our answers to the clarification questions.

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.

See reasons explained in the FOREWORD, in our application, and in our answers to the clarification questions.

c. If you do not support either of the proposals, please suggest an alternative wording and explain your proposal.

Not applicable.

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.

We would like to clarify that the 5 years renewal we are asking in our application refers to our new wording proposal "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" that we propose for the new exemption 6(b)-I that should immediately follow the present 6(b)-I expiring on 21 July 2021.

3. Please provide available quantitative information as to the actual levels of lead in recycled aluminium/ secondary aluminium currently supplied to the market.

Our members are able to supply casting alloys according to EN 1676:2020 and EN 1706:2020, with a maximum Pb limit of 0.29% since 2020.

4. Please provide any further information and/or data that you think is of importance to substantiate your views.

Our proposal for narrowing down the scope of exemption 6(b)-I to casting alloys and reducing the maximum lead limit to 0,3% is also valid for exemption 6(b).