

Questionnaire 1 (Consultation) for the Review of Exemption 2(c)(ii) of ELV Annex II

Since the scope of exemption 2(c)(ii) is defined via the scope of exemption 2(c)(i), both exemptions are listed in the below table as exemption 2(c) series even though only exemption 2(c)(ii) is due for review.

Table 1: Current wordings, scopes and expiry dates of the exemption 2(c) series

No.	Exemption	Scope and dates of applicability
2(c)(i)	Aluminium alloys for machining purposes with a lead content up to 0,4 % by weight	Vehicles type-approved before 1 January 2028 and spare parts for these vehicles
2(c)(ii)	Aluminium alloys not included in entry 2(c)(i) with a lead content up to 0,4 % by weight ¹	This exemption shall be reviewed in 2024

Acronyms and Definitions

ELV	End of life of vehicles
Pb	Lead
RoHS	Directive 2011/65/EU, RoHS Directive

1. Background

Bio Innovation Service, UNITAR and Fraunhofer IZM have been appointed² by the European Commission for the evaluation of applications for new exemptions and the renewal/continuation of exemptions currently listed in Annex II of the ELV Directive 2000/53/EC.

This questionnaire has been prepared for the stakeholder consultation held as part of the evaluation. The objective of this consultation is to collect information and evidence for subsequent review to assess whether the exemption is still justified according to the criteria listed in Art. (4)(2)(b)(ii) of Directive 2000/53/EC (ELV Directive)³.

Additional background information can be found on the exemption review page accessible through the following link: www.elv.biois.eu

We welcome your contribution to this stakeholder consultation. We recommend reading the below section before you answer the questions.

¹ Applies to aluminium alloys where lead is not intentionally introduced, but is present due to the use of recycled aluminium.

² It is implemented through the specific contract 070201/2020/832829/ENV.B.3 under the Framework contract ENV.B.3/FRA/2019/0017

³ C.f. EUR-Lex, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32000L0053>

2. Main Observations from Previous Reviews

Exemption 2(c)(ii) was reviewed⁴ last time in 2015/2016 under the ELV Directive³. The consultants concluded that the use of lead was still unavoidable at that time. The Commission therefore granted the exemption since it was justified in the light of the requirements of ELV Art. 4(2)(b)(ii). The exemption has become due for review in 2024 to adapt it to the scientific and technological progress.

It was raised by stakeholders during and after the review of exemption 2(c)(ii) by Deubzer et al. (2021) that exemption 2(c)(ii) is relevant for recycled aluminium. The share of lead in this aluminium is largely defined by the lead content of the aluminium scrap coming back from the market for recycling unless lead is added or removed intentionally. As a consequence of restrictions of lead uses the lead content in scrap aluminium has been declining over time. In the review of exemption 2(c)(ii) by Gensch et al. (2016), ACEA et al. expected that the Pb content in scrap aluminium (Al) will gradually decrease from around 0.4 % in 2010 to around 0.2 % in 2023.

Baron et al. (2022) recommended in their review of the equivalent RoHS exemption 6(b)(I) that the lead content defining the scope of this exemption can be reduced from 0.4 % to 0.3 % as a consequence of this development. The recommended exemption is listed as 6(b)(III) in the below table.

Table 2: Renewal of current exemption 6(b)(I) as 6(b)(III) as recommended by Baron et al. (2022)

	Exemption formulation	Duration
6(b)-I	<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</i>	Expires 12 months after the decision for all categories
6(b)-III	<i>Lead as an alloying element in aluminium casting alloys containing up to 0,3% lead by weight provided it stems from lead-bearing aluminium scrap recycling</i>	Expires on 21 July 2026 for all categories

Source: Baron et al. (2022)

3. Questions

1. Can the lead content in exemption 2(c)(ii) be reduced from 0.4 % to 0.3 % to reflect the declining share of lead in aluminium scrap? If not, please explain your objections. Please note that this question does neither imply that the future exemption 2(c)(ii) would automatically follow the expiry date recommended by Baron et al. (2022) nor that the wording of exemption 6(b)(III) would be adopted.

Yes, it can be reduced to 0,3%.

2. In case you do not agree to reduce the lead threshold to 0.3 %: The revised standard EN 1706 for the chemical composition of cast aluminium was released in 2020/2021 and

⁴ Gensch et al. (2016 a): 8th Adaptation to scientific and technical progress of exemptions 2(c), 3 and 5 of Annex II to Directive 2000/53/EC (ELV). Final Report for the European Commission DG Environment under Framework Contract No ENV.C.2/FRA/2011/0020. ELV III.5. Unter Mitarbeit von Carl-Otto Gensch, Yifaat Baron, Katja Moch, Oeko-Institut. Online verfügbar unter https://elv.exemptions.oeko.info/fileadmin/user_upload/Consultation_2014_1/20160216_ELV_Final_Gen_Ex_2c__Ex_3__Ex_5.pdf.



incorporates the declining lead content in aluminium scrap setting a 0.3 % threshold as well. Why should, in the light of this, the lead threshold remain at a higher level than 0.3 %?
No answer needed.

3. If you do not agree to the 0.3 % threshold: Is there any other threshold below 0.4 % that would be acceptable? Please explain the background of your statement.

No answer needed.

4. Following the above prognosis of ACEA et al.: Could the lead threshold level be reduced to 0.2 % in exemption 2(c)(ii)?

Actually, it cannot be reduced to 0.2%, because it depends on the quantity of scrap that had lead intentionally added in aluminium alloys for machining purpose in the past, which we can still find in old cars being recycled today. Furthermore, machined aluminium parts with lead content up to 0,4% are also likely to be found in new cars, because of the recent extension of exemption 2(c)(i) for vehicles type-approved before 1 January 2028 and spare parts for these vehicles, by Commission Delegated Directive (EU) 2023/544.

Therefore, car manufacturers will still be allowed to use wrought aluminium alloys with lead content up to 0,4%, and consequently, aluminium scrap with up to 0,4% of lead are likely to be found on the market for over 15 years.

The reason why the maximum lead content in exemption 2(c)(ii) can already be reduced to 0.3 % is the observed overall declining share of lead in aluminium scrap, that allowed to revise EN 1706 accordingly.

5. If not, when would you estimate this 0.2 % level to be achieved in aluminium alloys produced from scrap aluminium?

It is hard to say precisely but knowing that vehicles being type-approved before 1 January 2028 will still be for sale for several years after 2028, and spare parts for these vehicles will need to be produced even longer, and end-of-life vehicles containing these parts may only be recycled 15 years after having been produced, achieving 0.2 % level may easily take more than 15 years from now.

6. Aluminium alloys for machining purposes are normally wrought aluminium, not cast aluminium. Do you know of cases where cast aluminium or any other form of non-wrought aluminium is used for machining?

No, we don't.

As we recommended to modify the wording of exemption 2(c)(i) to precise that this is only relevant for wrought alloys (and we were unfortunately not heard on this), we recommend 2(c)(ii) to be reworded, or to be replaced with a new and more precise wording, as the proposed new exemption 6(b)-III under RoHS directive:

“6(b)-III: Lead as an alloying element in aluminium casting alloys containing up to 0,3% lead by weight provided it stems from lead-bearing aluminium scrap recycling”

7. What is the amount of lead in the scope of exemption 2(c)(ii) that would be contained in vehicles

- a. placed on the EU market
- b. worldwide

in case the exemption is continued? Please provide a rough calculation or substantiated estimate.

We let the car industry answer to this question.

8. Overall, please let us know whether you agree with the necessity to continue the exemption and your arguments for or against the continuation.

We agree with the necessity to have an exemption for lead content up to 0.3 % for casting alloys, but the wording of such exemption should be modified as: *Lead as an alloying element in aluminium casting alloys containing up to 0,3% lead by weight provided it stems from lead-bearing aluminium scrap recycling*”.

We let the European Commission services appreciate whether such change would be possible by changing the wording of exemption 2(c)(ii), or whether 2(c)(ii) should be withdrawn and replaced by a new 2(c)(?) with the new wording proposed above.

9. Is there any other information you would like to provide?

If exemption 2(c)(i) could be revised and its date of applicability made shorter in time, it would help in decreasing the lead content in casting alloys faster.

We should also add that European producers of wrought aluminium alloys for machining purpose developed lead-free alternatives and would like to see exemption 2(c)(i) coming to an end as soon as possible.

4. Your contact details

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Please note that answers to these questions can be published in the stakeholder consultation, which is part of the evaluation of this request. If your answers contain confidential information, please provide a version that can be made public along with a confidential version, in which proprietary information is clearly marked. Please also add “CONFIDENTIAL” to the file name to prevent confusion.

We ask you to kindly provide the information in formats that allow copying text, figures and tables so that they can be included into questionnaires and the review report.

5. References

Baron et al. (2022): Study to assess requests for a renewal of nine (-9-) exemptions 6(a), 6(a)-I, 6(b), 6(b)-I, 6(b)-II, 6(c), 7(a), 7(c)-I and 7 (c)-II of Annex III of Directive 2011/65/EU (Pack 22) – Final Report (Amended Version). Under the Framework Contract: Assistance to the Commission on technical, socio-economic and cost-benefit assessments related to the implementation and



further development of EU waste legislation. in cooperation with Yifaat Baron, Carl-Otto Gensch, Andreas Köhler, Ran Liu, Clara Löw, Katja Moch, Oeko-Institut e. V. Baron et al. Yifaat Baron, Carl-Otto Gensch, Andreas Köhler, Ran Liu, Clara Löw, Katja Moch, Oeko-Institut e. V. <https://data.europa.eu/doi/10.2779/869784> Study to assess requests for a renewal of nine (-9-) exemptions 6(a), 6(a)-I, 6(b), 6(b)-I, 6(b)-II, 6(c), 7(a), 7(c)-I and 7 (c)-II of Annex III of Directive 2011/65/EU (Pack 22) – Final Report (Amended Version) 15 February 2022 Baron et al. 15 February 2022 Yifaat Baron, Carl-Otto Gensch, Andreas Köhler, Ran Liu, Clara Löw, Katja Moch, Oeko-Institut e. V. <https://data.europa.eu/doi/10.2779/869784> (Pack 22). Retrieved from <https://data.europa.eu/doi/10.2779/869784>.

Deubzer et al. (2021): 11th adaptation to scientific and technical progress of exemptions 2(c)(i), 3 and 5(b) of Annex II to Directive 2000/53/EC (ELV). Final report. in cooperation with Dr. Deubzer, Otmar, Fraunhofer IZM und UNITAR, UNITAR Christian Clemm and BiolS Shailendra Mugdal Deubzer et al. Dr. Deubzer, Otmar, Fraunhofer IZM und UNITAR; UNITAR Christian Clemm; BiolS Shailendra Mugdal <https://data.europa.eu/doi/10.2779/373311> [Titel anhand dieser DOI in Citavi-Projekt übernehmen] 11th adaptation to scientific and technical progress of exemptions 2(c)(i), 3 and 5(b) of Annex II to Directive 2000/53/EC (ELV) 5 November 2021 Deubzer et al. 5 November 2021 Dr. Deubzer, Otmar, Fraunhofer IZM und UNITAR; UNITAR Christian Clemm; BiolS Shailendra Mugdal <https://data.europa.eu/doi/10.2779/373311> [Titel anhand dieser DOI in Citavi-Projekt übernehmen]. Retrieved from <https://data.europa.eu/doi/10.2779/373311> [Titel anhand dieser DOI in Citavi-Projekt übernehmen].

Gensch et al. (2016): 8th Adaptation to scientific and technical progress of exemptions 2(c), 3 and 5 of Annex II to Directive 2000/53/EC (ELV). Final Report for the European Commission DG Environment under Framework Contract No ENV.C.2/FRA/2011/0020. ELV III.5. in cooperation with Carl-Otto Gensch, Yifaat Baron, Katja Moch, Oeko-Institut Gensch et al. Carl-Otto Gensch, Yifaat Baron, Katja Moch, Oeko-Institut https://elv.exemptions.oeko.info/fileadmin/user_upload/Consultation_2014_1/20160216_ELV_Final_Gen_Ex_2c_Ex_3_Ex_5.pdf 8th Adaptation to scientific and technical progress of exemptions 2(c), 3 and 5 of Annex II to Directive 2000/53/EC (ELV) 17 February 2016 Gensch et al. 17 February 2016 Carl-Otto Gensch, Yifaat Baron, Katja Moch, Oeko-Institut https://elv.exemptions.oeko.info/fileadmin/user_upload/Consultation_2014_1/20160216_ELV_Final_Gen_Ex_2c_Ex_3_Ex_5.pdf. Retrieved from https://elv.exemptions.oeko.info/fileadmin/user_upload/Consultation_2014_1/20160216_ELV_Final_Gen_Ex_2c_Ex_3_Ex_5.pdf.