

## BeST Position Paper to the Questionnaire on the European Critical Raw Materials Act

### Introduction

BeST welcomes the European Commission's proposition of creating a European Critical Raw Materials Act to address the challenges associated with the sourcing of critical raw materials (CRMs) essential for the green and digital transition.

### BeST's recommendations

Considering the significant importance of this topic, BeST submits the following comments and stresses the role of beryllium as a strategic raw material for the EU industry:

- Throughout the questionnaire, general statements are used to describe the challenges for securing the supply of CRMs, possible policy options, etc. It is, however, extremely difficult to provide a single affirmative or negative answer to each of the statements without considering the unique intrinsic properties and the sourcing challenges of each raw material. Indeed, a "one size fits all" approach is undesirable when addressing CRMs and raw materials in general.

For example, while BeST agrees that further action should be taken to increase the re-use and recycling of raw materials, in the case of beryllium where very small amounts of the material are present in end-applications, these actions are not technically nor economically feasible. On the other hand, beryllium has a key role in allowing the recycling of other raw materials. Indeed, the addition of a few ppm of beryllium prevents molten magnesium alloys from catching fire during the recycling stage. Without the addition of a few ppm of beryllium, there would be no production or recycling of aluminium-magnesium alloys and magnesium alloys in Europe.

Additionally, the use of beryllium in end use applications increases product longevity as well as product performance and reliability. Beryllium therefore substantially contributes to the circularity of products while avoiding obsolescence.

Targets in terms of recycling efficiencies, recycled material, etc., cannot be applied to all commodities indistinctively. Indeed, these need to be tailored to the specific characteristics of the commodity targeted to achieve the desired impact and avoid unintended consequences.

**These commodity-specific trade-offs should be considered by policymakers when assessing raw materials. Industry is best equipped to provide this information and data to policymakers.**

Moreover, while substitution is a potential tool to decrease the use of certain raw materials, it should not be regulatory induced. Indeed, in the case of beryllium, the cost of the material is sufficient to prompt its substitution wherever possible. Consequently, beryllium is generally exclusively used in those end-use applications where substitution is simply not possible without substantial loss of performance with dire consequences in case of life-saving applications.

**Considering the above examples, policy actions should be developed considering the heterogeneity of raw materials and their intrinsic properties to achieve the desired objective of securing their supply while avoiding unintended consequences.**

- In reference to the questions on current EU challenges, while all the policies mentioned in the questionnaire are to be considered positive, the current disruption of CRM supply chains demonstrates that more actions are needed to secure the supply of raw materials to the EU. Specifically, policymakers should implement a transversal and consistent approach to raw materials to support regulatory certainty and consistence, industry competitiveness and investments.

**Considering the critical and strategic importance of critical raw materials, including beryllium, for all key EU industrial sectors (electronics, defence, aerospace, automotive, medical devices, etc.), all possible solutions and**

Rue Belliard 205 – 1040 Brussels - Belgium

T. +32.2.213 74 20 – M. +32.471 06 47 86 – [info@beryllium.eu](mailto:info@beryllium.eu) – [www.beryllium.eu](http://www.beryllium.eu) – [www.berylliumsafety.eu](http://www.berylliumsafety.eu)  
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**opportunities to secure the sourcing of these materials should be considered and implemented. This should include developing trade partnerships, boosting primary production in the EU, enhancing secondary production where possible and economically feasible, stockpiling and streamlining legislation to support industry, competitiveness and investments in the sector. A transversal and consistent approach to raw materials implemented by all EU institutions and Member States is necessary.**

- On supply chain vulnerability, BeST highlights that industry is best equipped to identify the risks of supply chain disruptions.

**In the frame of the EU CRM Act, policymakers should therefore consider industry feedback and data to develop reactive and proactive measures at EU level to best address the risks identified and raised by industry.**

- On the creation of a specific list of strategic raw materials, while this could prompt support for these materials, it is important to avoid that the list is used as a barrier for other materials. Indeed, the dynamic nature of the geopolitical context has clearly demonstrated that all raw materials could be strategic when certain conditions arise.

**The dynamic nature of the geopolitical context should be carefully considered by policymakers when developing lists of CRMs and strategic materials. Additionally, the relationship between the EU CRM list and the future strategic CRM list should be clearly defined.**

## **Conclusions**

The Critical Raw Materials Act constitutes the EU's ultimate opportunity to develop efficient and effective policy actions to finally address the challenges associated with the supply of CRMs. To do so, the above considerations must be taken into account, including acknowledging that a "one size fits all approach" is not possible and commodity-specific actions may be necessary.

BeST encourages the European Commission to identify beryllium as a strategic material in the frame of the European CRM Act. Indeed, beryllium complies with the pre-set criteria identified in the call for evidence, i.e. economic importance, supply concentration, demand substitution, strategic applications and forecasted supply gaps.

Beryllium's economic importance has been demonstrated in all criticality assessments since the first EU CRM list in 2011 while its supply concentrations are located in a limited number of countries (i.e. U.S., China..). Moreover, given the cost of the material, beryllium is generally exclusively used in those end-use applications where substitution is simply not possible without substantial loss of performance with dire consequences in case of life-saving applications. Beryllium has several important and strategic applications in a range of different sectors, including defence, energy transition, and digital. Due to beryllium's superior properties as a lightweight, stiff and thermally stable material, it is ideally suited for mission critical aerospace and military applications where low weight and high rigidity are essential. Beryllium, mainly used as an alloying element (2% maximum) in copper, is also essential for the reliability and durability of connector equipment, essential in all transportation equipment, including electrical and hydrogen vehicles. No-fail aircraft electrical and electronic copper-beryllium connectors enable fly-by-wire commercial airliners to achieve fuel efficiencies. Finally, beryllium is used in the development of the infrastructures for 5G and 6G technology.

In terms of forecasted supply gaps, the potential increase in demand of beryllium at EU and International level, coupled with competing commercial and non-commercial end-use applications, could potentially cause supply disruptions of the material with the risk that certain sectors or applications are no longer supplied.

Beryllium has been classified as a strategic and critical material in lists in other jurisdictions, i.e. U.S., Japan, Australia etc. It is important to note that beryllium is the only raw material classified by the US as both critical and strategic even though the US has a significant internal supply of beryllium from ore to metal.

BeST is available to provide further feedback to the European Commission on beryllium and its uses upon request.

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T. +32.2.213 74 20 – M. +32.471 06 47 86 – [info@beryllium.eu](mailto:info@beryllium.eu) – [www.beryllium.eu](http://www.beryllium.eu) – [www.berylliumsafety.eu](http://www.berylliumsafety.eu)  
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Beryllium Science & Technology Association

### **About BeST**

The Beryllium Science and Technology Association (BeST) represents the manufacturers, suppliers and users of beryllium metal, beryllium containing alloys and beryllium oxide ceramics in the EU market. BeST has the objective of promoting sound policies, regulations, science and actions related to the safe use of beryllium and to serve as an expert resource for the international community on the benefits and criticality of beryllium applications. It is also the objective of BeST to promote good practices in the workplace to protect workers handling beryllium containing materials.

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