Beryllium Science & Technology Association

Brussels, 13 October 2023

BeST position statement on Transition Pathway ASD

Introduction

In the frame of the EU industrial strategy, discussions between EU authorities, Member States, industry and academia are ongoing to define a transition pathway for the Aerospace and Defence sector (ASD). The transition pathway aims to aid the sector to contribute to the objectives of the EU Green Deal and achieve the twin digital and green transitions.

BeST's comments

The uniqueness of the ASD sector must overall govern the discussions on the transition pathway to guarantee that the objectives proposed are realistic, achievable and do not jeopardise human health and safety. Considering the importance of the sector, BeST submits the following comments in reference to the potential measures addressing resilience and competitiveness, and supply of raw materials:

- **Understanding the link between raw materials and the performance of products**

The materials used in the ASD sector are chosen due to their unmatched and unique combination of properties which allow them to adapt under specific conditions. This means that these materials often cannot be replaced without jeopardising human health and safety. The properties of these raw materials and their contribution to the performance of the product must be central to the discussions on decreasing the use of raw materials, substitution, and recycling. The unintended consequences of decreasing the use of specific materials or substituting them should be carefully considered to avoid regrettable outcomes.

- **Competing applications and sectors**

The critical and strategic materials used in the ASD sector are often used in a wide range of competing applications and sectors. This should be acknowledged and considered when developing the transition pathway. Beryllium, for example, has many defence and aerospace applications, and therefore is considered of vital importance for the sector. The production of beryllium for the defence, space and military sectors is directly connected to the commercial applications of beryllium. Indeed, the revenues of the latter allow to offset the costs associated with the former. Consequently, policy actions curtailing the use of beryllium in commercial actions will potentially jeopardise the availability of the material for the ASD sector.

- **Impact of legislation on availability of raw materials**

Over the last decade, an increasing amount of EU and national legislation targeting raw materials due to their hazard classifications has been adopted. This has impacted the reputation of these materials, their commercial and non-commercial applications, and their availability. When considering EU and national regulatory measures applicable to these materials, a risk-based approach is the efficient streaming tool to use where both hazard and exposure are considered: Risk = Hazard x Exposure. On the contrary, the use of a hazard-based approach would jeopardise the performance of the products by promoting the phasing out of materials that are used safely based solely on their hazardous classification.

- **Understanding the link between raw materials, the durability of products and recycling opportunities**

When introducing measures impacting the use of raw materials in products, a clear understanding of the properties of these materials and their contribution to the performance and durability of the products that contain them is of vital importance. In absence of this, unintended and regrettable consequences with potential substitution of safe materials with less-performing materials and higher negative impact on the environment and human health will occur.

Indeed, circularity is a broad concept that is not only limited to the end of use and waste phases of the value chains of and/or products but also covers use and longevity of products. In the case of beryllium, its addition at 2% maximum in copper considerably increases the performances and durability of copper as conductive material in Electrical and Electronic Equipment used on the ASD sector.

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, mostly as alloying element in copper, 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.

- **Supporting Industry**

With the correct regulatory and financial medium/long term frameworks in place, industry would benefit from the predictability and stability needed to invest in technology development, research and innovation to identify solutions to support the resilience and competitiveness of the ASD sector while contributing to the green objectives. Predictability and stability are needed to attract investors and support companies operating in the EU.

- **Realistic timelines**

While decarbonisation and "greening" of the ASD sector is an important objective, it should not be blindly pursued when it will put human health and safety at risk as well as substantially decrease EU competitiveness and resilience. Overly ambitious objectives and timelines will not allow the ASD sector to conquer the twin transitions. Realistic and reasonable objectives agreed with industry should therefore be identified and pursued.

Conclusions

The above statements should be considered in the development of a transition pathway for the ASD sector that is based on the uniqueness and importance of the sector and proposes reasonable, realistic and achievable objectives that support EU competitiveness and resilience.

****

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.