

Quarterly **NEWS** Letter **Q4 ISSUE 2024**

BeST **Beryllium Science and Technology Association**

Dear Readers,

We welcome you to the Winter edition 2024/25 of the BeST Quarterly Newsletter!



In this edition, you will read about the expectations of a new European Commission, the EU's Strategic Partnerships, the discovery of Sombrero by the James Webb Space Telescope and its beryllium mirrors, the use of copper-beryllium alloys in electric vehicles and BeST developments.

Wishing you a very pleasant read.

Kind regards,

*Mr. Troy A Kajfasz,
BeST Board Member*

BeST

Beryllium Science & Technology Association

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Risk-based approach in a new European governance

BeST is looking forward to working with a newly elected European Parliament and newly appointed European Commission.

Although there are only a few details known yet of the plans of the new European Commission, it is clear that it will take a more balanced approach, taking into account environmental concerns as well as the competitiveness of the European industry.

The beryllium sector is particularly affected by the chemicals legislation.

We hope that the anticipated review of the Regulation on the registration, evaluation, authorisation and restriction of chemicals (REACH) will show a more realistic approach by policy makers. Not every substance that has a hazardous classification poses a risk for environment or human health. A hazardous approach for chemicals legislation is not appropriate and BeST therefore joins the big majority of industries that call for a risk based approach.

Beryllium is mostly marketed in its metal form, either pure metal or as an alloying element. It is completely harmless and can be touched as one likes. Only in industrial processes, such as polishing, grinding or other, small particles (dust) are released and this may cause a health hazard for workers by inhalation.

This is a risk that has been rigorously addressed by a binding Occupational Exposure Level, which adequately secures workers health. We believe that the new European Commission should take the risk-based approach as a cornerstone of its chemicals policy in the next five years.

The threat to EU strategic partnerships

In the 2023 Critical Raw Materials Act, beryllium was confirmed as a critical raw material.

It is a recognition of the importance of beryllium to some important economic sectors, like satellites, aviation, medical equipment, defense, electronics, nuclear and other. Today, beryllium is brought on the European Single Market through three origins, from the US, Japan and Kazakhstan, mainly.

One of the objectives of the CRM Act is to ensure EU access to a secure and sustainable supply of critical raw materials. The EU has therefore signed bi-lateral agreements (strategic partnerships) with 14 different producing countries from different continents. They include Australia, Chile, Canada, Congo, Kazakstan and others.

BeST believes that the current supply of beryllium meets the requirements of security and sustainability. Moreover, the small market size of this specialty material does not incentivize the creation of a new source. As for several other materials, the pressure on availability comes from inside.

The EU often issues legislation that puts the availability of materials at risk.

It cannot expect to issue environmental, chemical or worker protection rules that are out of line with the rest of the world and expect investors to stay in Europe.

Supply chains are global and the EU needs to align its policies to global standards if it wishes to have secured supply chains of CRMs in the EU. Strategic partnerships will not change this.

James Webb unveils the Sombrero Galaxy

The James Webb Space Telescope (JWST) continues to revolutionize our understanding of the cosmos, revealing unprecedented details about celestial objects.

In its latest triumph, NASA's JWST has captured a stunning mid-infrared image of the Sombrero galaxy (Messier 104, or M104), challenging our perception of this iconic celestial structure.

At a distance of 30 million light-years from Earth in the Virgo constellation, the Sombrero galaxy is not only a fascinating subject but also a gateway to understanding larger cosmic structures and processes.

As Webb enters its fourth year of science operations in July 2025, competition for observation time is fiercer than ever. A record-breaking 2,377 proposals were submitted by October 2024, requesting 78,000 hours of observation—nearly nine times the telescope's annual capacity. Priorities include distant galaxies, exoplanet systems, and stellar populations.

As the world's leading space observatory, JWST continues to push the boundaries of what we know about our solar system, distant worlds, and the universe's origins.

This international collaboration—led by NASA in partnership with the European Space Agency (ESA) and the Canadian Space Agency (CSA)—embodies humanity's quest to explore the unknown and understand our place in the cosmos.

The Sombrero galaxy's newfound details, unveiled through Webb's cutting-edge technology, underscore the telescope's transformative potential. With every image, Webb offers not just a glimpse of the universe but also a reminder of the boundless possibilities that lie ahead.

The Webb Telescope team at NASA decided to make the mirror segments from beryllium, which is both strong and light and remains stable under the extreme temperature changes in space.

Beryllium is key to Electric Vehicles

Beryllium plays an important role in advancing the electric vehicle (EV) market by contributing to both battery efficiency and the development of charging infrastructure.

Here's a deeper look at its impact:

Beryllium's excellent thermal conductivity helps manage the high temperatures generated by lithium-ion batteries, commonly used in EVs. By efficiently dissipating heat, beryllium-containing materials prevent battery overheating, enhancing safety and prolonging battery life. This is critical as maintaining the optimal temperature of EV batteries ensures better energy retention, reduces the risk of thermal runaway, and increases overall efficiency.

Beryllium-containing materials are also utilized in power distribution and control systems within the battery packs. This ensures an optimal flow of energy, contributing to the overall performance and longevity of EV batteries.

Beryllium-containing alloys are essential components in connectors and contacts within EV charging stations.

These alloys are chosen for their durability and ability to prevent overheating during the transfer of energy between the charging station and the vehicle. As the demand for EVs increases, the need for efficient, fast, and reliable charging infrastructure grows, and beryllium's properties are vital in meeting these requirements.

As the adoption of electric vehicles grows, beryllium's role in ensuring safe, efficient, and reliable EV systems—from battery performance to charging infrastructure—becomes even more critical. This positions beryllium as an important material in the sustainable and efficient future of electric transportation.

BeST meets the EU

In November 2024, a BeST delegation met with EU officials and stakeholders to discuss policies for the newly appointed European Commission.

"Part of our engagement with officials is the education about the unique properties of our material", explains BeST General Secretary Angélique Renier, "beryllium is 6 times stiffer than steel and has perfect electric conductivity. This makes it the perfect alloying element for copper."

Among the topics of discussion was the proposed regulation on the use of green claims for consumer products. The BeST delegation met with several Member States to discuss the need not to ban green claims for products containing a hazardous substance. Most metals have some sort of hazardous classification, which would exclude the use of green claims for a wide variety of products like electric cars, dishwashers or vacuum cleaners.

Other subjects for engagement with EU officials and stakeholders included the upcoming review of the chemicals legislation (REACH), the proposed End-of-Life Vehicles Directive, the Directive on Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS), the Eco design for Sustainable Products Regulation, the Essential Use Concept and the re-assessment of existing outdated classifications of hazardous substances.

"We value the good relations we have with policymakers in Brussels" explains BeST Vice-President Troy Kajfasz, "our experience is that our views on regulatory matters are taken into account. We have trust that future laws will be good for our business in Europe".

BeST Positions



With the change of EU legislature taking place, BeST published its Charter 2024-2029 which expresses the expectations of Beryllium industry for the next five years.

We envision an EU framework that gives a positive environment around our material, that is key to the green and digital transition.

DOWNLOAD IT HERE

Beryllium to join forces with industry coalitions

BeST has renewed its various membership in international coalitions for 2025. It will continue its active role in the CRM Alliance. With the implementation of the 2023 CRM Act, many policy initiatives are expected in the coming year, dealing with processing, circularity and trade to name a few. The CRM Alliance will be instrumental in securing recognition for beryllium as crucial for the EU economy.

Memberships of the Alliance of Sustainable Management of Chemical Risk (ASMoR) and Cross-Industry Initiative for better regulation in chemicals management (CII) will be crucial in a year where the revision of chemicals legislation (REACH) will take place. Promotion of a risk-based approach and solutions through worker protection are the way forward.

Finally, BeST is a keen supporter of the Antwerp Declaration for a European Industrial Deal. This initiative, now supported by almost 1300 business organisations, aims to improve the policy climate and make it more industry oriented. Europe's industries are facing the worst economic downturn in a decade at a period when investments are needed to achieve Europe's transition to climate neutrality. Urgent action is needed to restore the business case for investments in Europe.

News from BeST

BeST has adopted its Charter for 2024-2029, in which it expresses its expectation for an industrial policy during the next five years of EU legislature that is based on three key principles: competitiveness, sustainability, and Health & Safety.

BeST has issued a paper on the importance of beryllium to the defense industry. This paper describes the unique properties of beryllium and its use in a variety of applications. BeST calls for consistency in policy making and regulation that promotes the use of beryllium.

BeST has made a remake of our Voluntary Product Stewardship Program and its websites in the 24 official languages of the EU. For next year, BeST intends to provide further guidance on the treatment of beryllium oxide and waste treatment.

Check out all our position papers [here](#).



Working Safely with Beryllium

Easy Guide Blast

Easy Guides are a communication tool developed by BeST at the end of 2021 and dedicated to each of the 12 Guides developed in the frame of the Be Responsible Voluntary Product Stewardship Program.

Nine of these guides are dedicated specifically to specific processes.

The last of the nine process-specific Easy Guides was recently published and it is **dedicated to Welding** operations on beryllium-containing materials.

Check out all our Easy Guide Blast editions [here](#).

Stay in Touch

The BeST website keeps you informed with a '[Latest News](#)' section, where readers can follow the latest news and features on Beryllium.

The news section complements the wealth of information already on the site, on issues such as environment, health, and safety.

Get the latest news on [BeST online](#).

On Social Media

BeST can also be found on [Facebook](#) and [LinkedIn](#).

'Like' the page and be notified when there is news from our association.

Best regards,

BeST

