Wirtschaftsverband Stahl- und Metallverarbeitung e.V.
Düsseldorf • Hagen

COMMENTS ON

1ST STAKEHOLDER CONSULTATION

IN THE FRAME OF THE STUDY TO SUPPORT THE REVIEW OF THE LIST OF RESTRICTED SUBSTANCES AND TO ASSESS A NEW EXEMPTION REQUEST UNDER ROHS 2 (PACK 15)

Background

The Oeko-Institut and Fraunhofer IZM have been appointed by the European Commission, within a framework contract, among others to support the review of the list of restricted substances and to assess seven substances with a view to their possible future restriction under Directive 2011/65/EU (RoHS 2).

General comments

WSM represents the economic policy interests of the steel and metal processing industry and is one of the largest business associations in Germany. The German steel and metal processing industry are approximately 5,000 mainly medium-sized industrial companies with a turnover of about 80 billion euros a year and an average number of employees of around 500,000. The companies employ on average 100 employees and are important customers of the steel producers. They process around 18 million tons of steel a year - around 40 percent of the German steel production. The companies manufacture for the international markets of the automotive, electrical, construction and engineering industry and for the trade sector.

Although our industry is not directly affected by the substance restrictions under RoHS (usually no placing on the market of electrical products), the requirements (substance restrictions) apply to us via customer requirements in the supply chain. For this reason, substance restrictions under the RoHS directive are of great importance to our industry. Especially for small and medium-sized enterprises, new substance restrictions under the RoHS Directive are associated with large administrative burden and costs.

Therefore, any new substance restriction under RoHS must be based on a robust, science-based and consistent evaluation methodology and substitution of the restricted substances must lead to clear and measurable benefits for the environment.

With the first consultation (“2018 Stakeholder Consultation 1”) now started, the second step is taken before the first one: We are convinced that finalising the RoHS substance methodology prior to assessing new substances would be the correct procedure. Even the Commission´s “Specific study request” (http://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_15/Technical_Specifications_RoHS_15.pdf) sets a timeframe by clearly stating that under “Task 1” the “contractor shall, in close cooperation with the Commission and with stakeholders, update the methodology that details the technical and procedural provisions […]”. In “Task 2” the “contractor shall apply the updated methodology for the assessment of the substances/group of substances […]”.

Logically, the development of a methodology for future substance restrictions would be the first step. On the basis of this methodology, which of course would be agreed with all stakeholders, the "right and relevant" questions on substances could be raised in an open stakeholder consultation.
In any case, at a later date, the new methodology to be developed must be applied to the seven substances.

Nevertheless, we would like to submit our comments with focus on Beryllium on the 1st stakeholder consultation within the frame of the Study for the review of the list of restricted substances and to assess a new exemption request under Directive 2011/65/EU (RoHS 2) – Pack 15.

Questionnaire for beryllium and its compounds

Beryllium and its compounds were specified in the project terms of reference for detailed assessment. Initial substance information for beryllium metal and beryllium oxide are compiled and available on the substance specific webpage of the stakeholder consultation (http://rohs.exemptions.oeko.info/index.php?id=294).

Questions

1. General questions

a. In past processes for identifying substances of relevance for possible restriction under RoHS, only beryllium metal and beryllium oxide were considered. The current assessment looks at a broader scope in this respect, namely beryllium and its compounds. Please specify, should a restriction be considered, if it should be limited to beryllium metal and beryllium oxide or expanded to include beryllium and its compounds.

b. Please provide information to support your view, including information as to the use and presence of additional beryllium compounds in EEE placed on the EU market (e.g. beryllium-copper alloy, beryllium sulfate, beryllium chloride etc).

According to our information, Beryllium is mainly used as alloying element in copper containing less than 2% of beryllium. These copper beryllium alloys (CuBe) are used in many specific end applications due to its unique properties and advantages.

2. Applications in which beryllium metal and beryllium oxide are in use

a. Please provide information concerning products and applications in which the substances are in use.

i. In your answer please specify if the applications specified are relevant to EEE products and applications or not.

ii. Please elaborate if substitution of the substance is already underway in some of these applications in relation to the properties for which beryllium metal and beryllium oxide are used and/or in relation to specific applications in

which it is used (for example beryllium copper alloys used in flexible contacts for batteries), and where relevant elaborate, which chemical (substance level) or technology (elimination of the need for beryllium) alternatives may be relevant for this purpose.

Companies of the steel and metal processing industry produce a wide variety of spring types. Basic materials for the production of springs are for example Cu-Be alloys, which are processed into springs in a specific mechanical forming process (if wire is the basic material: by coiling, if strip is the basic material: by stamping).
According to our information, CuBe alloys are used in EEE to increase electrical and thermal conductivity, enhance product performance, increase reliability, extend products life and facilitate miniaturization of components and products. Due to these unique properties and advantages CuBe alloys are used in automotive, aerospace, telecommunications, computers and industrial and medical technologies.
According to BeST (Beryllium Science & Technology Association), there is no substitute with equivalent performance and, given Beryllium's economic importance, it has been classified a Critical Raw Material (CRM) to the EU[1].

b. Please specify if you are aware, if aside from actual use of the substances, it may be reintroduced in to the material cycle through the use of secondary materials.

i. Please detail in this case what secondary materials may contain impurities of beryllium or of its compounds (please specify which) and at what concentrations as well as in the production of what components/products such materials are used.

ii. If possible please provide detail as to the changing trends of concentrations of beryllium and its compounds in such secondary materials as well as the changing trend of use of the respective secondary material in EEE manufacture.

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3. Quantities and ranges in which beryllium and its compounds are in use

a. Please detail in what applications your company/sector applies beryllium and its compounds and give detail as to the annual amounts of use (please specify which data is relevant for which compound). If an exact volume cannot be specified, please provide a range of use (for example – 50-100 tonnes per annum).

b. Please provide information as to the ranges of quantities in which you estimate that the substance is applied in general and in the EEE sector.

[1] http://beryllium.eu/wp-content/uploads/2018/05/BeSTs-position-paper-on-RoHS.pdf

c. If substitution has begun or is expected to begin shortly, please estimate how the trend of use is expected to change over the coming years.

Beryllium is mainly used as alloying element in copper containing less than 2% of beryllium. Cu-Be alloys are the basic materials e.g. for the production of springs.
According to our information it is not expected that any significant volume of beryllium usage can be substituted without an unacceptable loss of performance.

4. Potential emissions in the waste stream

a. Please provide information on how EEE applications containing beryllium and its compounds are managed in the waste phase (with which waste is such EEE collected and what treatment routes are applied)?

b. In the treatment and the destruction processes of electronic components beryllium oxide can be released and result in health risks for workers. Please detail potentials for emissions in the relevant treatment and disposal processes specified relevant to each application EEE.
Please also detail how such impacts can be mitigated and to what degree such practices are applied in recycling facilities in the EU and outside the EU.

c. Please specify if there is a risk for emissions of additional beryllium compounds.

Production scrap, which is produced in the production of springs, is gathered and returned for recycling.

5. Substitution

a. Please provide details as to the substitution of beryllium and its compounds (as a minimum for beryllium metal, beryllium oxide and beryllium copper alloys):

i. For which applications is substitution scientifically or technically not practicable or reliable and why.

ii. For which application is substitution underway. Please specify in this respect which alternatives are available on the substance level (substitution) and which are available on the technological level (elimination) and in which of the beryllium applications they can be applied (for example which substitutes cab be applied for copper beryllium alloys used in flexible contacts for batteries).

iii. What constraints exist to the implementation of the named substitutes in a specific application area (provide details on costs, reliability, availability, roadmap for substitution, etc.)

As mentioned above, it is not expected that any significant volume of beryllium usage can be substituted without an unacceptable loss of performance.

6. Socio economic impact of a possible restriction

Please provide information as to the socioeconomic impacts of a scenario in which beryllium metal and beryllium oxide or beryllium and its compounds are restricted under RoHS. Please specify your answers in relation to specific applications in which the substances are used and/or in relation to the phase-in of specific alternatives in related application areas. Please refer in your answer to possible costs and benefits of various sectors, users, the environment, etc. where possible; please support statements with quantified estimations.

Although our industry is not directly affected by the substance restrictions under RoHS (usually no placing on the market of electrical products), the requirements (substance restrictions) apply to us via customer requirements in the supply chain. For this reason, substance restrictions under the RoHS directive are of great importance to our industry. Especially for small and medium-sized enterprises, new substance restrictions under the RoHS Directive are associated with large administrative burden and costs.

7. Further information and comments

The information compiled on these substances for the stakeholder consultation has been prepared as a summary of the publicly available information reviewed so far. If relevant, please provide further information in this regard, that you believe to have additional relevance for this review, as well as references where relevant to support your statements.

Supplement to the document “1st Stakeholder Consultation – Compilation of initial substance information for beryllium and its compounds”[2] (Background document for beryllium and its compounds):
In November 2016, the German Federal Institute for Occupational Safety and Health (BAuA) published an updated risk management option analysis (RMOA) for beryllium[3]. The conclusion of the RMOA is as follows:

Conclusions	**Tick box**
Need for follow-up regulatory action at EU level:	X
Harmonised classification and labelling	
Identification as SVHC (authorisation)	
Restriction under REACH	(x)
Other EU-wide regulatory measures	X
Need for action other than EU regulatory action	
No action needed at this time	

[2] http://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_15/Beryllium_Be-compounds_Substance_info_1st_cons_Pack-15.pdf

[3] https://www.reach-clp-biozid-helpdesk.de/de/REACH/SVHC-Roadmap/Downloads_RMOA-Conclusion/7440-41-7_Beryllium.pdf?__blob=publicationFile&v=3

In fact, the RMOA concludes that the REACH authorisation procedere is not the best way to regulate beryllium.

In this context, we would like to point out that on April 5, 2018, the European Commission published its proposal for an occupational exposure limit (OEL) for Beryllium in the frame of the Carcinogens and Mutagens Directive and proposed an OEL of 600 ng/m3 as an 8-hour Time Weighted Average (TWA) for "Inhalable" beryllium-containing particulates, for a transition period of 5 years, to be subsequently reduced to 200 ng/m3 inhalable 8h TWA after the transitional period.

In October 2017, the following low OELs for beryllium and beryllium compounds were introduced by the German Committee for Hazardous Substances:

Beryllium and beryllium compounds	OEL	0.14 µg/m³ (E)
	OEL	0.06 µg/m³ (A)

(A) Alveolar fraction
(E) Inhalable fraction

The Technical Rule for Hazardous Substances "Activities involving carcinogenic metals and their compounds (TRGS 561)"[4] concretises special protective measures and the concept of measures to reduce exposure to a minimum.

WSM supports BeST's statement that Beryllium and its compounds did not satisfy the conditions to be regulated under RoHS[5].

We thank you for your kind consideration.

Düsseldorf, 13th June 2018

WSM Wirtschaftsverband Stahl- und Metallverarbeitung e.V. (German Steel and Metal Processing Industry Association)

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The industry is characterized by high specialization and intense competition. The companies manufacture for the international markets of the automotive, electrical, construction and engineering industry and for the trade sector.
WSM is a member of the Federation of German Industries e.V. (BDI). Political advocacy in Europe takes place through ORGALIME, the European association of the mechanical, electrical, electronic and metal articles industries. WSM comprises 15 member associations. More about our member associations at http://www.wsm-net.de/ueber-uns/mitglieder/.

[4] https://www.baua.de/EN/Service/Legislative-texts-and-technical-rules/Rules/TRGS/pdf/TRGS-561.pdf?__blob=publicationFile&v=2
[5] http://beryllium.eu/wp-content/uploads/2018/05/BeSTs-position-paper-on-RoHS.pdf