

Japan 4EE Input to 1st Stakeholder Consultation – Questionnaire for beryllium and its compounds

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Name of the associations which make this input:

The Japanese electric and electronic (E&E) industrial associations:

Japan Electronics and Information Technology Industries Association (JEITA);
Japan Electrical Manufacturers' Association (JEMA);
Japan Business Machine and Information System Industries Association (JBMA); and
Communications and Information network Association of Japan (CIAJ)

With cooperation of the following Medical and Monitoring & Control Equipment Industrial Associations:

JAIMA (The Japan Analytical Instruments Manufacturers' Association); and
JEMIMA (Japan Electric Measuring Instruments Manufacturers' Association)

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We would like to submit our input to 1st Stakeholder Consultation – Questionnaire for beryllium and its compounds

http://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Pack_15/Questionnaire/Berllium_compounds_Questionnaire_1st_Cons_Pack-15.pdf

as follows:

Please note: Following information is mostly based on Japanese industry's intelligence collected in previous studies and others. We have not gathered information on these substances from our suppliers yet, because they are currently not covered under SVHC or other legislations and we have no scheme to gather information for these substances.

Questions and Answers:

1. General questions

We cannot but feel a sense of incongruity in current consultation that seems as if to premise a restriction. In the first place, there were many unsolved issues in the choice of "priority list" which would be prioritised in future RoHS study in 2014, there are following issues to be solved:

The risk of Beryllium metal to the Environment is "no harmonised C&L entry", but the judgement is "red" (high). (See Annex IV of "Study for the Review of the List of Restricted Substances under RoHS2".) In such "non-harmonized" cases, the judgement on the risk should be pending until the classification is harmonized.

Setting and handling of "Priority list" (Annex III of the "Final Report") is uncertain and we have had serious concern about the possible situation where the substances which have not been enough investigated would be misunderstood as "black-listed" in vain, since then.

In addition, Beryllium oxide (BeO) and Beryllium metal were prioritised as "fourth highest priority" based on the methodology prepared by Austlia UBA. On the other hand, the recommendations for these substances from Oeko Study of 2014 were as follows: "Lower priority to assess if environmental benefits justify restriction".

Therefore, we consider that the reasons why these are selected for current consultation should be provided first, before requiring detailed information. What is the aim of gathering information? If the aim is to assess if environmental benefits justify restriction as the previous recommendation, we consider that the consultation had better to clearly state such aim first from the point of view of transparency and to get more accurate input.

Under current flow of studies, the reasons of choice of substances are kept vague, on the other hand, only existing facts of doing studies on RoHS are piled up. We have serious concerns about such way that it be unsuitable for mind of Better Regulation.

We recognise as that the most of the contents of current consultation have been already covered by comments¹ from BeST, the upstream supplier for EE industry, in 4 April 2014.

- 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).

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

Following questions seem to be for manufacturers of materials or, therefore we don't have data on them. Japanese industry recognizes that beryllium copper (CAS No. 11108-64-8 or 11133-98-5) would be used in EEE according to the information from upper-stream suppliers. The reason of the use is because beryllium copper has high conductivity and high strength to contribute to make parts small and lighten, and has durability to be used in the applications in which reliability is indispensable. We sincerely hope that effective policy option should be considered carefully, only after such advantages of the substance would be properly reviewed and the socio-economic impacts would be well considered.

- a. Please provide information concerning products and applications in which the sub-stances are in use.

¹

http://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Substance_Review/Substance_Profiles/last_contributions/20140404_1_BeST_Questionnaire-RoHS_2_questions.pdf

- 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.
- 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.

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

We don't have any information, because final products manufacturers do not use the substance by themselves.

- 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.
- 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.

4. Potential emissions in the waste stream

We don't have our own information on this issue, however, we wonder why this substance is listed as priority substance based on waste information. According to Annex 4 of "Study for the Review of the List of Restricted Substances under RoHS2 (Reference: ENV.C.2/ETU/2012/0021", information on "Evidence of waste relevance" of beryllium metal was "n.i. (no information) for Article 6(a) and "n.d.i. (no detailed information) for Article 6(b) and (c). We cannot find the reason why "high relevance" on waste issues of beryllium metal could be justified based on such no or poor information.

As the answer to this question, we believe that the material provided from BeST in 4 April 2014 and

titled as “AN EVALUATION OF AIRBORNE BERYLLIUM EXPOSURES DURING RECYCLING OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)²” would be appropriate.

- 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.

5. Substitution

We don't have any information, because final products manufacturers do not use substance by themselves, but only require suppliers to supply parts/materials having necessary specifications.

However, in general, to substitute parts/materials completely, each of material suppliers, parts manufacturers and manufacturers of finished products must have technical processes for reviewing and developing substitution, testing its quality and reliability, and acquiring certification on applicable standards such as on safety as necessary. Therefore, the feasibility study for possible substitution (if any) should be done all the stages of the production of EEE.

- 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 can 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.)

6. Socio economic impact of a possible restriction

2

http://rohs.exemptions.oeko.info/fileadmin/user_upload/RoHS_Substance_Review/Substance_Profiles/last_contributions/20140404_5_BeSt_Be_Exposure_Assessment_WEEE_Recycling_2013.pdf

Please provide information as to the socio-economic 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.

We don't have data, however, especially when policy options would be considered for widely-used substances, advantages of such substance should be properly reviewed. For example, in considering advantages of flame retardants, product safety assessment report of power code would be useful as a reference.

In the socio-economic impact assessment, benefit and risk of presumed scenarios must be quantified, then compared and evaluated. Especially, following aspects would be important:

- benefit and risk of the use of the substance under review,
- detailed risk assessments of substitute substances in themselves,
- assessments of whether applications of the substance under review can really be replaced,
- reliability of parts/products using substitutes,
- necessary period to evaluate them, and
- influence on product safety.

We believe that such aspects having big socio-economic impact should be taken into consideration properly. Furthermore, we believe that the inspection of cost for substitution should be performed at each stage of supply chain. Even in the cases where some parts/materials could be technically substituted, for substituting such parts/materials completely, each of material suppliers, parts manufacturers (in general, there are far more parts manufacturers than manufacturers of finished products, and each supply-chain usually extends to the secondary, tertiary or more) and manufacturers of finished products must have technical processes for reviewing and developing substitution, testing its quality and reliability, and acquiring certification on applicable standards such as on safety as necessary. To manage these technical processes, managing processes and costs also occur. Such processes need not only the related costs but also considerable time for each of the related suppliers and manufacturers.

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.

- (1) **Coordination with other EU policies, scheme of laws and regulations should be reconsidered including Critical Raw Materials initiative based on circular economy policy.**

Beryllium is still regarded as “critical” for EU industry and listed in the latest CRM list³ based on “Methodology for establishing the EU list of critical raw materials”⁴ refined in 2017. It is the results of new calculating formula to judge Economic importance, and beryllium is judged as important. European Commission publishes “Report on Critical Raw Materials and the Circular Economy”⁵ in 2018, thus the examination and discussion on the CRM policy is continued lively.

On the other hand, we cannot know why the explanation about the cooperation or coordination with other policies including CRM is completely lacked in the recent studies on RoHS after the choice of previous list of priority substances. Especially about CRMs, they should be discussed under wider framework covering overall circular economy policy at first before starting studies under RoHS, in view of the industrial and economic importance.

(2) Consultation period is too short for comments.

Only in 60 days as the period for contribution, all we can do is to reply to the consultation solely based on the materials at our hand and our knowledge.

We industry would like to request to set at least 180 days (same as the period set for the consultation of draft dossiers by RAC/SEAC under REACH) as the period for comments on draft dossiers in the future consultation so that we may give more useful input to the consultation after more-detailed review. We believe full consideration among all the stakeholders would make the RoHS Directive contribute to European sustained development.

(3) Description of identifiers (such as EC number or CAS number) to identify chemical substance

The substances restricted under the RoHS Directive must be managed strictly from manufacturing process. In order to such strict control, such substances should be identified and managed by CAS Numbers. In the current priority list, substances are described in CAS Numbers, and it is very effective method in order to comply with the RoHS directive thoroughly.

About Japanese electric and electronic (E&E) industrial associations:

About JEITA

The objective of the Japan Electronics and Information Technology Industries Association (JEITA) is to promote the healthy manufacturing, international trade and consumption of electronics products and

³ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS on the 2017 list of Critical Raw Materials for the EU (COM(2017) 490 final)
Brussels, 13.9.2017
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017DC0490>

⁴ <https://publications.europa.eu/en/publication-detail/-/publication/2d43b7e2-66ac-11e7-b2f2-01aa75ed71a1/language-en>

⁵ Brussels, 16.1.2018

COMMISSION STAFF WORKING DOCUMENT Report on Critical Raw Materials and the Circular Economy
SWD(2018) 36 final (Brussels, 16.1.2018)
<https://ec.europa.eu/docsroom/documents/27327>

components in order to contribute to the overall development of the electronics and information technology (IT) industries, and thereby further Japan's economic development and cultural prosperity.

About CIAJ

Mission of Communications and Information network Association of Japan (CIAJ). With the cooperation of member companies, CIAJ is committed to the healthy development of info-communication network industries through the promotion of info-communication technologies (ICT), and contributes to the realization of more enriched lives in Japan as well as the global community by supporting widespread and advanced uses of information in socio-economic and cultural activities.

About JBMIA

Japan Business Machine and Information System Industries Association (JBMIA) is the industry organization which aims to contribute the development of the Japanese economy and the improvement of the office environment through the comprehensive development of the Japanese business machine and information system industries and rationalization thereof.

About JEMA

The Japan Electrical Manufacturers' Association (JEMA) The Japan Electrical Manufacturers' Association (JEMA) consists of major Japanese companies in the electrical industry including: power & industrial systems, home appliances and related industries. The products handled by JEMA cover a wide spectrum; from boilers and turbines for power generation to home electrical appliances. Membership of 291 companies, <http://www.jemanet.or.jp/English/>

About Medical and Monitoring & Control Equipment industrial associations:

About JAIMA

The Japan Analytical Instruments Manufacturers' Association (JAIMA) is a sole industry association of Analytical Instruments in Japan, which established under the Japanese law. Member of JAIMA are more than 200 leading companies in Japan. JAIMA is to contribute to the development of the Japanese economy and the cultural lives of citizens in Japan through efforts to improve and advance technologies related to analytical instruments and the analytical instruments industry for the purpose of the advancement of science & technology.

About JEMIMA

Japan Electric Measuring Instruments Manufacturers' Association (JEMIMA) has been an active forum for measuring instruments manufacturers since its establishment in 1948. It has 85 companies as regular members and 29 companies & 7 organizations as supporting members. JEMIMA members contribute to a wide variety of industries by supplying products as "Mother Tools of the industry" for R&D design, and manufacturing. JEMIMA activities are becoming more and more global, since most of the issues our industry is facing are also global. By actively working on these issues, we help our members to meet the challenge and promote the development of the industry worldwide. To achieve these goals, JEMIMA take "Globalization & promotion of International activities" to be one of the focal activities.