

SE CA contribution to stakeholder consultation on exemption requests 2018-1 and ex 39a - Joint Evaluation of three requests for exemption, dealing with Cadmium Quantum Dot applications

The SE CA welcomes this opportunity to give input to the requests for new and amended exemptions under the RoHS directive. We have noticed that the objective of this consultation and the review process is to “collect and to evaluate information and evidence according to the criteria listed in Art. 5(1)(a) of Directive 2011/65/EU (RoHS II)”. Thus, we have particularly taken these criteria into account when reading the exemption requests.

Article 5(1)(a) of the RoHS directive:

1. For the purposes of adapting Annexes III and IV to scientific and technical progress, and in order to achieve the objectives set out in Article 1, the Commission shall adopt by means of individual delegated acts in accordance with Article 20 and subject to the conditions laid down in Articles 21 and 22, the following measures:

(a) inclusion of materials and components of EEE for specific applications in the lists in Annexes III and IV, provided that such inclusion does not weaken the environmental and health protection afforded by Regulation (EC) No 1907/2006 and where any of the following conditions is fulfilled:

- *their elimination or substitution via design changes or materials and components which do not require any of the materials or substances listed in Annex II is scientifically or technically impracticable,*
- *the reliability of substitutes is not ensured,*
- *the total negative environmental, health and consumer safety impacts caused by substitution are likely to outweigh the total environmental, health and consumer safety benefits thereof.*

Please see below our comments to the items in the questionnaire.

Question 1

Please explain if you support that there is a need for an exemption for Cd QD applications:

a. If not please explain why?

We object to the requests from the applicants to exempt the use of cadmium in quantum dot technology because:

- The exemption requests apply to different products still under development, and where the producers intend to introduce the products on the market before they are fully developed to fulfil the EU legislation. In our view, the aim of the RoHS directive is

phasing out old equipment containing substances in Annex II, but not for expanding the market for new uses of such substances.

- The reasons for the requests are new applications that would improve colour performance. Hence, the requests is not about continued production of EEE with certain qualities, instead the aim is to start using cadmium in order to introduce new applications. There are available techniques free from cadmium both for quantum dot technology and for other technologies that provide the same basic function to the relevant equipment.
- According to recital 5 of the RoHS Directive the use of cadmium should be limited to cases where suitable and safer alternatives do not exist. (Recital 5: "*The Council Resolution of 25 January 1988 on a Community action programme to combat environmental pollution by cadmium (5) invites the Commission to pursue without delay the development of specific measures for such a programme. Human health also has to be protected and an overall strategy that in particular restricts the use of cadmium and stimulates research into substitutes should therefore be implemented. The Resolution stresses that the use of cadmium should be limited to cases where suitable and safer alternatives do not exist.*")
- We do not share the applicants conclusion that the criteria for adopting the requested exemptions are met. We do not find that any of the conditions in Article 5(1)(a) are fulfilled, and thus there is no basis for adoption of any exemptions from Annex II of RoHS. According to Article 5 (1), the overall negative consequences should be weighed against the overall positive consequences. Some of the applications related to the exemption requests are currently not in use. It is therefore not possible to determine to what extent the exemptions will be used and thus not what amount of cadmium in the EEE that the exemptions will cause. E.g. we can not foresee if other companies than the applicants will use an exemption, when in force.
- An adoption of an extended or a new exemption against the aim of RoHS will encourage the development of cadmium technology and means that resources will be spent on unsustainable solutions instead of investing in cadmium free technologies under development. The refuse of an exemption could therefore act as a driving force and accelerate the development of cadmium free technology.

b. If yes, please detail which of the proposed formulations you support or provide an alternative proposal, also explaining why you support an exemption and the specific formulation alternative.

Not applicable since we do not support the need for any exemption.

In both cases, please provide detailed technical argumentation / evidence in line with the criteria in Art. 5(1)(a) to support your statement.

Question 2

From the information provided by the applicants it can be understood that Cd QDs have various application areas of relevance to the RoHS Directive (displays and lighting) and may be applied in such applications in different configurations (on-edge, on surface, on chip within the LED package and on-chip within a thin layer on top of the chip). As regards the scope of a possible exemption, please provide information to clarify:

a. Which of the above application areas should be covered by a future exemption;

None. When new technologies for EEE are developed, it is the duty of the producers to only introduce new technologies to the EU market that fulfils the concentration limits in RoHS Annex II.

In light of the request from the applicant to redraft the current exemption 39a, it is questionable whether it is possible to request an extension of the existing exemption. In this specific case, when the exemption request concerns an application that is not introduced at the European market yet, a rewording of the existing exemption could not be regarded to be an appropriate measure while the exemption request should be treated as a new request.

Question 5

For the various application areas and configurations mentioned in question 2, please provide data as to actual products currently on the market and how this is to develop within the next five years. Please refer in your answer to:

a. Types of products (lighting products for various purposes, displays of various size and type), also specifying the applied Cd QD configuration;

...

c. Alternative products of the same type that are Cd free and that provide similar performance in terms of colour output (CRI, colour gamut, etc. as relevant to the application area) energy efficiency.

The issue of comparable performance is referred to in the questionnaire. From the implementation of other EU legislation, e.g REACH, we have experienced that alternatives never give exactly the same performance, but they could still deliver a quality that is sufficient and generally accepted for the intended purpose. All answers on performance of alternatives should therefore be assessed carefully.

Additional comments not related to the specific questions in the questionnaire

In the exemption requests, the introduction of new products with cadmium content at the EU market is justified by a reduction of cadmium emissions from generation of electricity due to a predicted decrease in energy consumption from equipment containing cadmium quantum dots. We do not agree with this kind of argumentation. If the parties behind the exemption requests are concerned over the environmental impact from the generation of electricity, the way forward should rather be to search for solutions to reduce cadmium emissions in the energy sector and not by development of new EEE based on cadmium.

Furthermore, the representative energy mix for generation of electricity can always be challenged and the energy market is steadily improving in environmental performance.