

Consultation Questionnaire Exemption Request 2017-5

for „Lead in thermal cut-off fuses overmolded into solenoid coils used in industrial monitoring and control instruments (Category 9) and EEE falling under Category 11”, requested for 5 years

Abbreviations and Definitions

ASCO	ASCO Numatics
EEE	electrical and electronic equipment
Pb	lead
PWB	printed wiring board/printed circuit board

Background

The Oeko-Institut and Fraunhofer IZM have been appointed by the European Commission, within a framework contract¹, for the evaluation of applications for exemption from Directive 2011/65/EU (RoHS 2), to be listed in Annexes III and IV of the Directive.

ASCO has submitted a request for the above mentioned exemption, which has been subject to a first completeness and plausibility check. The applicant has been requested to answer additional questions and to provide additional information, available on the request webpage of the stakeholder consultation (<http://rohs.exemptions.oeko.info/index.php?id=287>).

According to ASCO, lead use is required in eutectic alloy based thermal cut-off fuses molded into Hazardous Location/Area (as defined by IEC 60079-0:2011) solenoid coils for industrial monitoring and control instruments (Category 9) and EEE falling under Category 11. The fuses restrict the maximum surface temperature of the solenoid coils thus preventing a thermal or sparking incident in electrical and electronic equipment that would cause the ignition of the hazardous atmosphere or dust that may be present. There are many protection methods to deal with various system conditions, but ASCO focuses on the surface temperature of the solenoid coil. If the surface temperature of the solenoid coil exceeds certain limits, the result is the possible ignition of the hazardous vapour, gases or dust. If the temperature at the solenoid coil exceeds the allowed limit, the thermal cut-off device interrupts the electrical circuit powering the solenoid coil. According to ASCO, because of application requirements, temperature limitations based on the hazardous environment and the temperature required during coil molding, only a lead based eutectic alloy thermal fuse can be used. ASCO does not manufacture thermal cut-off fuses but purchases them for use in its solenoid coil products.

For details, please check the applicant's exemption request at:
<http://rohs.exemptions.oeko.info/index.php?id=287>

¹ The contract is implemented through Framework Contract No. FWC ENV.A.2/FRA/2015/0008 of 27/03/2015, led by Oeko-Institut e.V.

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), which can be found under:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT>

If you would like to contribute to the stakeholder consultation, please answer the following questions:

Questions

1. The applicant's solenoid coils so far have been used in large-scale fixed installations which are outside the scope of the RoHS Directive, but in future it can be expected that they shall be used in EEE that is in scope. The applicant has therefore requested an exemption, proposing the following wording:
"Lead in thermal cutoff fuses overmolded into solenoid coils used in industrial monitoring and control instruments (Category 9) and EEE falling under Category 11" for 5 years.
 - a. Do you agree with the scope of the exemption as proposed by the applicant?
 - b. Please suggest an alternative wording and explain your proposal, if you do not agree with the proposed exemption wording.
 - c. Please explain why you either support the applicant's request or object to it. To support your views, please provide detailed technical argumentation / evidence in line with the criteria in Art. 5(1)(a) to support your statement.
2. Please provide information concerning possible substitutes or developments that may enable reduction, substitution or elimination, at present or in the future, of lead in the products/applications in the scope of the requested exemption;
 - a. In this regard, please provide information as to substitutes that may cover part or all of the applicability range of applications/products in the scope of the requested exemption;
 - b. Please also provide, if applicable, information about technical alternatives without lead which can achieve the same or a similar degree of protection in hazardous environments like the applications/products in the scope of this exemption request.
 - c. Please provide data as to application specifications to support your view.
3. Please provide information as to research initiatives, which are currently looking into the development of possible alternatives for some or all of the application range of applications/products in the scope of the requested exemption.
 - a. Please explain what part of the application range is of relevance for such initiatives (in what applications may substitution be possible in the future?).
4. Please provide a roadmap for substitution detailing the various stages that need to be carried out once a candidate is identified in order to develop a substitute substance/technology up to the stage that products without the relevant RoHS substance can be made available on the EU market?

- a. An estimated time or time range should be provided for each stage along with a short explanation that should allow following why the estimated time is needed;
 - b. Where relevant, it should be stated what stages could run in parallel and what stages need to take place on a linear basis;
5. According to ASCO, less than 2 kg of lead will enter the EU market in ASCO products in the scope of the requested exemption.
 - a. Can you provide information for the total volume of lead in the EU and globally? Please make sure the numbers can be followed, e.g. by providing relevant calculations.
6. As part of the evaluation, socio-economic impacts shall also be compiled and evaluated. For this purpose, please provide details in respect of the following:
 - a. Volume of EEE concerned per year in the applications/products placed on the market in the EU/worldwide;
 - b. Estimations as to possible additional waste to be generated should the exemption no be granted;
 - c. Estimations of impacts on employment in total, in the EU and outside the EU, should the exemption not be granted. Please detail the main sectors in which possible impacts are expected – e.g. manufacturers of monitoring and control instruments, manufacturers of solenoid coils in the supply chain, retail, etc.
 - d. Please estimate additional costs associated should the exemption not be granted, and how this is divided between various sectors (e.g. private, public, industry: manufacturers, suppliers, retailers).

In case parts of your contribution are confidential, please provide your contribution in two versions (public /confidential). Please also note, however, that requested exemptions cannot be granted based on confidential information!

Finally, please do not forget to provide your contact details (Name, Organisation, e-mail and phone number) so that Oeko-Institut/Fraunhofer IZM can contact you in case there are questions concerning your contribution.