

Brussels, 15th June 2018

Subject

Europacable contribution to the consultation on the study to support the review of the list of restricted substances and to assess a new exemption request under RoHS 2 (Pack 15): Medium Chain Chlorinated Paraffines (MCCP)

1. Applications in which MCCP is in use

- a. Please provide information concerning products and applications in which the sub-stance is in use.
 - i. In your answer please specify if the applications specified are relevant to EEE products and applications or not.

MCCP is used in electric cables as a plasticizer. Some of those cables fall in the scope of RoHS, in particular LV cables for electrical appliances.

Moreover, even for products not in the scope of RoHS, customers might ask for RoHS compliancy, and thus addition of MCCP on the list of RoHS banned substances would not only impact products in the scope manufactured in EU, but also products not in the scope and products manufactured outside EU.

- ii. Please elaborate if substitution of the substance is already underway in some of these applications, for example in relation to the properties for which MCCP is used (for example for example PVC cables, rubber components, adhesives, etc) and/or in relation to specific applications in which it is used (for example in specific plastic materials, etc.) and where relevant elaborate which chemical or techno-logical alternatives may be relevant for this purpose.

As far as members of Europacable are concerned, some substitution programs are on-going for cable applications in electrical appliances.

Nevertheless, previous substitution projects have shown that MCCP might be difficult to replace for cables in some specific environmental conditions.

- b. Please specify if you are aware, if aside from actual use of the substance, it may be re-introduced in to the material cycle through the use of secondary materials.
 - i. Please detail in this case what secondary materials may contain MCCP impurities and at what concentrations as well as in the production of what components/products such materials are used.

Europacable is not informed on potential presence of MCCP in secondary raw materials. As long as the substance is not regulated within REACH or RoHS, the supplier will most probably not evaluate nor communicate on the presence of the substance.
 - ii. If possible please provide detail as to the changing trends of MCCP concentrations in such secondary materials as well as the changing trend of use of the respective secondary material in EEE manufacture.

- c. Please specify in which applications MCCP is used as a material constituent, as an additive or as an intermediate and what concentration of MCCP remains in the final product in each of these cases (on the homogenous material level).

MCCP is used in cables applications for its plasticizing and fire retardancy properties. The concentration in the homogeneous materials is higher than 0.1%; concentrations up to 8% have been identified.

Please specify the MCCPs used, e.g. with regard to the degree of chlorination and content of SCCPs.

2. Quantities and ranges in which MCCP is in use

- a. Please detail in what applications your company/sector applies MCCP and give detail as to the annual amounts of use. If an exact volume cannot be specified, please provide a range of use (for example – 10-100 tonnes per annum).

No exact volume have been consolidated at Europacable level.

- 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.

Europacable estimates quantities in the range of 1 000 to 10 000t per year for the cable applications.

- 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.

If MCCP will be included in the scope of the RoHS directive, an acceleration of substitution programs will be necessary. If successful, the quantity of MCCP used is expected to decrease. Nevertheless, up to now and for some specific applications, MCCP seems difficult to replace.

- d. Please state on the observed decrease of MCCPs used in the EU: is this trend to be understood as a shift away from MCCPs (i.e. through a decrease in PVC cable use or in the use of other components and materials in which MCCP is present) or is the manufacture of MCCP based PVC and other MCCP based components being shifted from EU manufacturers to non-EU manufacturers (i.e. parts are imported to replace the decrease in manufacture)?

Europacable members continuous work on replacement programs, so the decrease of MCCP used in cable industry is most likely related to the use of alternative solutions.

3. Potential emissions in the waste stream

- a. Please provide information on how EEE applications containing MCCP are managed in the waste phase (with which waste is such EEE collected and what treatment routes are applied)?
- b. How are waste wire and cables containing MCCP managed in the waste phase and how is copper extracted from such waste to enable recycling?

The usual process for cables treatment at end of life is

- a sorting per cable type / materials (PVC or PE or rubber or...)

- per cable lot (for instance PVC based), a grinding of the cable and a plastic / metal separation thanks to vibrating tables

The cables containing MCCP, for instance based on PVC, are not separated from the other PVC cables stream. They are all grinded together and the PVC obtained after treatment may most probably contain MCCP at variable concentration.

- c. How are waste rubber and waste adhesive components containing MCCPs dealt with in the waste phase?
- d. Please detail potentials for emissions in the relevant treatment processes.

4. Substitution

- a. For which applications is substitution underway?

MCCP substitution programs are on-going for cables used in electrical appliances.

- b. For which applications is substitution scientifically or technically not practicable or reliable and why?

For LV building cables, previous substitution projects have concluded that MCCP can not always be replaced, particularly when cables are placed in specific environmental conditions.

- c. Please specify in this respect which alternatives are available on the substance level (substitution) and which are available on the technological level (elimination). For example, which alternatives can be applied instead of MCCPs used in PVC cables or in rubber components and which alternative isolating materials can be applied instead of PVC/rubber in order to eliminate the need for MCCP in such applications?

Identified alternative solutions include Long-chain chlorinated paraffins, Phthalates (DINP, DIDP), Aluminum hydroxide and antimony trioxide.

- d. 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.). For example for what range of applications can specific substitutes be used for MCCP applications in PVC cables?

Use of alternatives for cable applications, would induce significant increase of Raw Materials costs, reformulation and additional cost for product testing and qualification.

5. Socio economic impact of a possible restriction

Please provide information as to the socio-economic impacts of a scenario in which MCCP were to be restricted under RoHS. Please specify your answers in relation to specific applications in which the substance is 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.

Use of alternatives or cable application, would induce significant increase of Raw Materials cost, reformulation and additional cost for product testing and qualification.

6. Further information and comments

The information compiled on MCCP 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.

MCCP is used in cable applications both for its plasticizing and fire retardant properties (compared to other phthalates plasticizers). Today, alternative replacement solution identified include Sb₂O₃, which is also potentially to be restricted in the scope of RoHS. Restriction on both MCCP and Sb₂O₃ at the same time could be more impacting than only restricting substances one after the other.