

1 Background information

The Swedish Chemicals Agency (KemI) considers preparing a RoHS Annex II dossier for the restriction of use of MCCP in electrical and electronic equipment (EEE), in accordance with Article 6(1) of the RoHS recast Directive (2011/65/EU) and has commissioned Risk & Policy Analysts Ltd (RPA) to support them in this.

We are contacting you to kindly request your assistance with the collection of relevant information regarding these tasks and we would be grateful if you could assist us by answering the questions in this questionnaire. It is very important that you consider and provide information on:

- Management of WEEE that can contain MCCP
- Releases of and exposure to MCCP throughout its life cycle (including environmental monitoring), paying special attention to emissions during service life and the waste stage
- Alternative substances, materials or techniques, of which you are aware of, regarding their technical feasibility, availability on the market, and relevant costs for substitution.

Alkanes, C₁₄₋₁₇, chloro (CAS No: 85535-85-9, EC No: 287-477-0), otherwise known as Medium-chained Chlorinated Paraffins (MCCP) are a group of organic substances with a carbon chain length between 14 and 17 containing varying amounts of chlorine, typically ranging from 40-63% w/w¹ chlorine content. MCCPs are extensively utilised in flexible PVC, commonly used for EEE cable sheathing and insulation. The lower volatility of higher chlorination MCCP analogues is compatible with PVC. An estimated 9,200 tonnes/year of MCCP is used for cable products. Use of MCCPs in other plastics is primarily as a flame retardant additive (70-72% wt. chlorination).

Thank you in advance for taking the time to complete this questionnaire

Please email your completed questionnaire

by **6 May 2016**

to **Mr Byron Georgalas** at RPA

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¹ ECB (2005), *European Union Risk Assessment Report – Alkanes, C₁₄₋₁₇, Chloro (MCCP) – Part I - environment*, European Commission, EUR 21640 EN, Volume 58, Luxembourg: Office for official publications of the European Communities

ATTENTION – CONFIDENTIALITY ISSUES

The correct handling of confidential information is of paramount importance to RPA. RPA and Keml are willing to accommodate justified requests for confidentiality, including the complete anonymity of your submissions, as long as this does not adversely affect the transparency and robustness of the Annex XV dossier under preparation. Before you complete and submit your questionnaire, please ensure that you have read our Confidentiality Note.

Please tick the grey box to the right to confirm that you have read this note and you are satisfied with the procedures outlined.

Also, note that each question in this questionnaire allows you to mark your responses as confidential

2 Company information

Table 2-1 What is the role of your company?		
	Tick here if relevant	Provide some brief detail on your activities
Manufacturer of MCCP		
User of MCCP in materials		
Downstream user of materials containing MCCP / EEE manufacturer		
Waste (WEEE or plastics) management company		
Importer/Distributor of MCCP		
Manufacturer/Importer of alternative		
Industry association	✓	Electronics and IT Industries Association

Table 2-2 Details of your organisation	
Organisation name:	Japan Electronics and Information Technology Industries Association (JEITA)
Relevant sector / NACE Code:	
Address:	Ote Center Bldg., 1-1-3, Otemachi, Chiyoda-ku, Tokyo 100-0004, Japan
Web page:	http://www.jeita.or.jp/english/
Contact person:	Hiroyuki Ishii
Telephone Number:	+81 3 5218 1054
E-mail address:	h-ishii@jeita.or.jp

Table 2-3 If you indicated that you represent an industry association	
Question	Details
What is the nature of the businesses you represent?	Electronics and IT Industries Association in Japan
How many individual companies does your response represent?	400
What share of the relevant EU market do your members cover?	Depends on the product sector
In which countries are your concerned members located?	Japan

3 Waste treatment

Table 3-1

We would like to obtain a better understanding of the entire lifecycle of electronic equipment under consideration.

Please consider the following questions:

- What is the typical lifetime of the articles containing MCCP (expressed in years)?
- How is the waste handled and processed?
- Do the articles come with explicit or implicit instructions on their disposal?
- Do waste disposal methods and practices vary across the EU, and if yes, in what way?

Relevant article	Typical lifetime (years)	Methods for waste disposal at end of life	If products come with disposal instructions for the users, please indicate here	Recycling possibilities	Variability of waste treatment methods in the EU
Is this confidential information?					

Table 3-2

With specific regard to the disposal of WEEE that contains MCCP, please provide, where available, information on:

- Current practices with regard to the disposal of waste materials of importance to this study, i.e. plastics or electrical and electronic equipment
- The breakdown of these types of waste that is reused, recycled, incinerated, landfilled or exported

We are clearly interested in the disposal of MCCP-containing equipment; however, if you cannot provide information specifically relevant to MCCP, please respond in relation to the following article categories

Describe the waste treatment for...	MCCP						
	Plastics						
	Cables						
	Other EEE						
Breakdown of waste treatment methods	Waste category	Export to EU %	Export to non-EU %	Reuse in the EU %	Recycle locally %	Landfill locally %	Incinerate locally %
	Plastics						
	Cables						
	Other EEE						
Please describe whether separation takes place for cables when handling WEEE							
Please indicate the source(s) of this information							
Is this confidential information?							

4 Exposure data

Table 4-1 We are interested in collecting information on worker exposure to MCCP during your operations	
Do you measure MCCP concentrations and/or emissions in your organisation?	
If yes, what index are you using (e.g. total chlorine, total MCCP)?	
What are the measured or estimated emissions of MCCP in the workplace?	
Are you aware of Occupational Exposure Limits in place for MCCP?	
Number of workers in your organisation that are potentially exposed to MCCP	
Is this confidential information?	

Table 4-2 We are interested in obtaining information on <u>emissions of MCCP</u> to the environment, which are associated with the handling, use and disposal of MCCP and the products that contain it. Please provide any relevant information that is available to you in the table below.											
Lifecycle stage	Year	Emissions of MCCP (t/y)									
		Air		Waste-water		Surface water		Soil		Solid waste	
		Value (unit)	M/E*	Value (unit)	M/E*	Value (unit)	M/E*	Value (unit)	M/E*	Value (unit)	M/E*
Raw material handling (emissions from transportation and storage)											
Formulation stage											
Article manufacturing											
Article service life											
Waste treatment											
Recycling											
Other (please specify)											
Please indicate the source(s) of this information											
Is this confidential information?											

*M/E: measured or estimated data

5 Alternatives

Table 5-1

In the following table, please provide details on alternatives you are aware of as MCCP substitutes. We are asking here for a ranking of potential alternatives on the basis of your past experience with and/or knowledge of them. If you have used/trialled any identified alternative, would you describe it as

- (A) Suitable to replace MCCP in all situations/applications
- (B) Suitable to replace MCCP in some situations/applications
- (C) Promising but requires further research
- (D) Feasible, but overall poor
- (E) Unsuitable, not a real alternative
- (F) You have not produced/trialled/used it, you do not know

Name (or trade name) of alternative	CAS/EC No (where relevant)	Your ranking of the technical feasibility of the alternative – A to F (see above)	In which specific applications could/has this alternative been used to replace MCCP?	Please justify the ranking you have given; describe any particular problems or failures to achieve the required performance but also any advantages in comparison to MCCP
Is this confidential information?				

Table 5-2

Please consider each alternative substance you have identified above and explain how it compares to MCCP against the identified technical criteria shown below.

If you believe that there are additional relevant technical feasibility criteria, feel free to add them to the table.

If you have information for more alternatives, please feel free to replicate the table.

Technical criterion	Comparison with MCCP		Please provide comments where necessary.
	Alternative A	Alternative B	
PVC / polymer compatibility			
Processibility			
Plasticiser efficiency			
Permanence			
Elastic recovery			
Other (please describe...)			
Is this confidential information?			

Table 5-3

Please help us evaluate the current market availability of alternatives and whether/how this may change in the future

Potential alternative	To the best of your knowledge, has this alternative been commercially used?		
	Yes		No
	↓	↓	↓
	If yes, explain if this applies to the EU market or elsewhere	If yes, please confirm whether the substance is available in quantities sufficient to replace MCCP in the EU	If no, do you have specific views on the likelihood of each alternative becoming commercially available/successful in the future? Please explain these in the boxes below
Alternative A			
Alternative B			
Alternative C			
Etc.			
Is this confidential information?			

Table 5-4

Please help us determine the economic feasibility of the suggested alternatives by giving information on:

- The relevant dose (loading) of the alternative compared to MCCP
- The price difference between MCCP and the alternative in €/tn
- The key costs that would arise for your organisation after a switch from MCCP to an alternative

Potential alternative	Relevant dose (loading) of alternative compared to MCCP	Price difference between alternative and MCCP (€/tn)	Key costs that would arise during substitution. Examples include: Investment costs, changes in operating costs or changes in quality of product
Alternative X			
Alternative Y			
Alternative Z			
Etc.			
Is this confidential information?			

6 Other information

Table 6-1

If you feel that we have missed anything important, or would like to comment on any of the issues raised by this questionnaire, please let us know (and continue on a separate sheet, if required)

1. We welcome that the substance under this study is clearly designated by using identifier from the beginning. It would be quite difficult to get hold of a substance in a final product without precise identification by CAS number etc. Downstream manufacturers would not be able even to gather information on the substance through supply-chain without it. Especially about MCCP, clear identification would be essential to investigate and manage the substance, because there are many kinds of chlorinated paraffins and this fact makes it difficult to identify whether it is MCCP or not. Hence Japanese EEE industry considers that any substances under discussion should be always identified clearly, whether it is discussed under any legislation, RoHS or REACH and regardless of its conclusion.
2. We have shared the information on current study with our members with the reference to the "Study for the Review of the List of Restricted Substances under RoHS 2" published in August 2014, and asked for their knowledge on MCCP. In addition, we have consulted to Japanese suppliers' industrial associations which might use EEE-related applications of MCCP. As long as we know and through the hearing, applications of MCCP seem to be rather limited in EEE. At least, we have not heard any cases where an EEE manufacturer intentionally requires for its suppliers to use MCCP in its products. Consequently, we recognise that MCCP would not be widely used in EEE, and as the result, we don't have any concrete information on application, volume or what are required under questions 3 to 5.

Is this confidential information?

No.

Table -2

If you have any additional relevant information sources (e.g. studies, published data, etc.) that can complement your answers to the questions posed in this questionnaire, please do so by posting a link here or by attaching the documents to your response e-mail.

Is this confidential information?