17 November 2014

COMMENTS ON AN ANNEX XV DOSSIER FOR IDENTIFICATION OF A SUBSTANCE AS SVHC AND RESPONSES TO THESE COMMENTS

Substance name: Reaction mass of DOTE and MOTE
CAS number: -
EC number: -

The substance is proposed to be identified as meeting the following SVHC criteria set out in Article 57 of the REACH Regulation: Toxic for Reproduction (Article 57 c)

Disclaimer: Comments provided during public consultation are made available in this document as submitted by the commenting parties. It was in the commenting parties own responsibility to ensure that their comments do not contain confidential information. The Response to Comments table has been prepared by the competent authority of the Member State preparing the proposal for identification of a Substance of Very High Concern. RCOM has not been agreed by the Member State Committee nor has the document been modified as result of the MSC discussions. The table does not contain any confidential information.

PART I: Comments and responses to comments on the SVHC proposal and its justification

General comments on the SVHC proposal

No.	Date	Submitted by (name, Organisation/ MSCA)	Comment	Response
1	2014/10/13	Member State Germany	*Confidential attachment removed*	The response to this confidential comment is given in a separate confidential document.
4	2014/10/15	Industry or trade association EUROPEAN RIGID PVC-FILM ASSOCIATION Germany	Comments see Part IV Attachments 4_15102014 DOTE_MOTE_PC comments_DU ERPA.docx	Response to comment on harmonised classification of DOTE based on Regulation 944/2013/EU: REACH Article 57 does not require harmonised classification to be in force and included in the CLP Regulation before a substance addressed by this classification can be subject to SVHC identification. Article 57 (a-c) only requires that a substance meets the criteria for classification as C, M or R, category 1A or 1B, to be eligible for SVHC identification in accordance with the mentioned paragraphs of Article 57. Harmonised classification of DOTE as Repr. 1B has been agreed by the Commission and will be included in Annex VI of the CLP regulation. This is considered as sufficient evidence that the respective classification criteria are met. A comprehensive assessment of the data took place in the Risk Assessment Committee (RAC) and reference has been made to the final RAC opinion in Annex I of the Annex XV SVHC

				report submitted for DOTE. At this stage of the process information on the identification of the reaction mass DOTE:MOTE as SVHC is taken into account. Information on uses, exposure, release, alternatives and proposals for exemptions from the authorisation requirement will be forwarded for discussion at later stages of the authorization process (prioritization, possible exemptions if applicable) in case the substance is identified as SVHC. Possible alternatives and their suitability are foreseen to be examined in the authorisation process by the applicant. Based on the discussion there, authorisation will be permitted for a period of time for cases where appropriate alternatives are missing. This should enable industry to finally develop alternative techniques or to find alternative substances to substitute the reaction mass DOTE:MOTE. It should be mentioned, that it is no prerequisite for the inclusion of a substance in the candidate list that well-established alternative substances and technologies are already in place. In fact, Title VII of REACH is particularly designed for cases where there is currently no alternative for certain uses available.
5	2014/10/15	Industry or trade association IVK INDUSTRIEVERBAND KUNSTSTOFFBAHNEN E. V. IVK Europe Germany	Comments see Part IV Attachment 5_15102014 MDRM PC comments DU IVK.docx	Please see responses given to comment # 4.

6	2014/10/15	Company Galata Chemicals GmbH Germany	6_Appendix 1 DOTE Hydrolysis Study.pdf 6_Appendix 2 Discussion of Different Hydrolytic Data.pdf *Confidential attachment removed*	<u>Ad Appendix 1)</u> <u>Ad) Comments on the read-across approach validity:</u> Abbreviations: DOTE: Dioctyltin bis (2-Ethylhexyl mercaptoacetate), CAS: 15571-58-1 DOTI: Dioctyltin di(isooctyl thioglycolate), CAS: 26401-97-8 DOTC: Di-n-ocytyltin dichloride, CAS: 3542-36-7 DOTECl: Dioctyltin (2-ethylhexyl mercatoacetate) mono chloride The in vitro gastric simulation study carried out on behalf of Galata Chemicals GmbH (Naßhan et al., 2014) has several drawbacks and does not provide enough evidence that the read across approach using DOTI (structural analogue of DOTE) and DOTC (metabolite of DOTE and DOTI) for the target chemical DOTE is invalid. The read across approach has been in-depth discussed and accepted by RAC and OECD (RAC, 2012, OECD, 2006). Basis for the acceptance of the read across approach has been the fact that DOTI and DOTE are only slightly different in the structure of the C-8 alcohol of the mercapto-ester ligand and the formation of the metabolite DOTC. DOTC is formed during gastric digestion under acidic conditions due to presence of HCL. This assumption has been proven by a gastric simulation hydrolysis study, the data indicate that DOTE is 100% hydrolysed to DOTC (ORTEP, 2000). However, no guideline comparable toxicokinetic study is available for DOTE and/or other dioctyltins, which could provide more information on toxicokinetic behaviour. The new in vitro study by Naßhan et al. (2014) aims to prove that not DOTC (di-chloride) but only DOTECL (mono-chloride) is formed under gastric conditions. The authors of the study postulate that under gastric environment within 72hrs DOTE was degraded to a product, which could be most likely characterised as DOTECL (the mono-chloride form). The Sn NMR demonstrates that tin species are present after hydrolyses but it is not proven that the peak refers to DOTECL. No reference spectra are available. Considering the limitations of Sn NMR analysis, it is concluded that the chemical structure (and/or identity) cannot be clarified unambiguously based on the 119 SN NMR spectra.

				The exact chemical structure (identity) should have been analysed for example with a high resolved mass spectrometer. Furthermore, taking into consideration that hypothetically under particular conditions DOTECL (monochlorid) is present, further metabolism - under different physiological conditions (e.g. pH, organic solvent present, metabolic activation) - to DOTC (dichloride) cannot be excluded. We assume that DOTC and DOTECl may be present in the body in an equilibrium depending on physiological conditions present in the body. The ORTEP study which lead to the assumption that DOTE is 100% hydrolysed to DOTC has been accepted previously (ORTEP, 2000, RAC, 2006). The study results of Naßhan et al. 2014 give further evidence that EHTG groups are deliberated and substituted by chloride. However, the assumption of formation of ultimate toxicants (e.g. DOTO, DOTC) under physiological conditions (see also comment below), for which positive findings in developmental toxicity studies have been observed, cannot be withdrawn on the basis of study results of Naßhan et al. 2014. More data are needed to demonstrate the invalidity of the category and read across approach. Furthermore, even if hydrolysis would stop at the mono-chloride from (DOTECL), the read across assumption employed by RAC on the basis of structural similarity would not be fully nullified given that the mono-chloride bears significant structural similarity with DOTC (di-chloride from). <u>Ad Appendix 2) – Discussion of different hydrolytic data:</u> A document describing three different hydrolysis studies of tin compounds was submitted. The studies have been considered, in order to highlight that the read across to DOTC is questionable. The studies and the study interpretation, however, fail to give unambiguous evidence that DOTC is not formed under gastric conditions. One hydrolysis study considered by RAC and OECD which demonstrates that DOTE is hydrolysed to DOTC under gastric conditions (ORTEP, 2000) needs further consideration. The plausibility of the ORTEP study needs in detail discussed before withdrawing the conclusions of RAC and OECD. The study report of the ORTEP study has not been presented. To date it cannot be excluded that toxic metabolites DOTC

				and DOTO are formed under physiologic conditions. In contrast, due to our understanding, it is possible that DOTC (di -chloridform, DOTCL (mono-chlorid form) and DOTO are present in an equilibrium, formation of the substances varies on different factors, pH, presence of Cl atoms, solvents. A testguideline toxickinetic study has not been carried out so fare with DOTE. On the basis of the hydrolysis study provided (Appendix 1) it cannot be excluded that DOTC is not formed under physiological conditions. References: Naßhan H. 2014. In vitro metabolism study DOTE. Sponsor: Galata Chemicals GmbH. OECD, 2006. SIDS Initial assessment profile. Dioctyltin chloride and selected thioesters. SIAM 23, 17-20 October 2006 US/ICCA ORTEP Association Stabilizer Task Force (2000). Summary Report – The simulated gastric hydrolysis of tin mercaptide stabilizers. Owner company: ORTEP Association stabilizer task force. Report date: 2000-05-01. RAC, 2012. Opinion proposing harmonised classification and labelling at EU level of Dioctyltin bis(2-ethylhexyl mercaptoacetate). ECHA/RAC/CLH-0-000000243-78-01/F. Response to confidential comment given in Appendix 3 is given in a separate confidential document.
8	2014/10/15	Industry or trade association IVK INDUSTRIEVERBAND KUNSTSTOFFBAHNEN E. V., IVK Europe Germany	Comments see Part IV Attachments 8_15102014 MDRM PC comments DU IVK.docx	Please see responses given to comment # 4.

9	2014/10/15	Company Klöckner Pentaplast Europe GmbH & Co. KG Germany	9_MDRM_PC comments_DU_kp_151014.pdf	At this stage of the process information on the identification of the reaction mass DOTE:MOTE as SVHC is taken into account. Information on uses, exposure, release, alternatives and proposals for exemptions from the authorisation requirement will be forwarded for discussion at later stages of the authorization process (prioritization, possible exemptions if applicable) in case the substance is identified as SVHC. Possible alternatives and their suitability are foreseen to be examined in the authorisation process by the applicant. Based on the discussion there, authorisation will be permitted for a period of time for cases where appropriate alternatives are missing. This should enable industry to finally develop alternative techniques or to find alternative substances to substitute the reaction mass DOTE:MOTE. It should be mentioned, that it is no prerequisite for the inclusion of a substance in the candidate list that well-established alternative substances and technologies are already in place. In fact, Title VII of REACH is particularly designed for cases where there is currently no alternative for certain uses available.
10	2014/10/15	Industry or trade association ETINSA (ESPA aisbl) Belgium	ETINSA comments on the Annex XV on the Reaction Mass of MOTE and DOTE ETINSA notes concerning the Annex XV on DOTE and the Reaction Mass MOTE-DOTE: (The comments hereunder and the references refer specifically to the Annex XV on DOTE. However as the Annexes XV are almost identical for both the Reaction Mass and DOTE they are broadly applicable to the RM as well). General remark: DOTE is NOT used in the production of PVC (= the resin), it is used in the production of PVC articles (= conversion of PVC compounds in articles). Heading 8.1 Uses > General function >Penultimate §: Since 2006/2007, the classes of the organotins used as PVC stabilizers in Europe changed	Thank you for the information provided. At this stage of the process information on the identification of the reaction mass DOTE:MOTE as SVHC is taken into account. Information on uses, exposure, release, alternatives and proposals for exemptions from the authorisation requirement will be forwarded for discussion at later stages of the authorization process (prioritization, possible exemptions if applicable) in case the substance is identified as SVHC. Possible alternatives and their suitability are foreseen to be examined in the authorisation process by the applicant. Based on the discussion there, authorisation will be permitted for a period of time for cases where appropriate alternatives are missing. This should enable industry to finally develop alternative techniques or to find alternative substances to substitute the reaction mass DOTE:MOTE. It should be mentioned, that it is no prerequisite for the inclusion of a substance in the candidate list that well-established alternative substances and technologies are already in place. In fact, Title VII of REACH is particularly designed for cases where there is currently no alternative for

			drastically: as of today, butyltins have almost completely being replaced, in most of the cases by a corresponding amount of octyltins. Heading 8.2 > 8.2.1 Description of use > Penultimate §: Organotin stabilizers, such as DOTE, are not used as biocides, and organotins specifically designed to act as biocides are not useful as PVC stabilizers. Hence, this paragraph has nothing to do with DOTE. Ultimate § (just before Table 3): The PVC industry, in its efforts to promote a sustainable use of PVC and its stabilizer (Vinyl 2010 and, now VinylPlus), has already performed a Targeted Risk Assessment (ref. RPA Impact Assessment of Potential Restrictions on the Marketing and Use of Certain Organotin Compounds, 2007) showing that those restricted uses account for less than 5% of the market of DOTE, while more than 95% of the DOTE use is safe. Last paragraph below Table 7: Contrary to what reported, that limited the investigation to Sweden (that represents about 1% of the organotin stabilizers European market), the total European market of the organotin stabilizers has not significantly declined, and is dominated by the use of DOTE. Heading 9.3.2 1st line of 2nd paragraph: add "articles" after "PVC": This heading does not take into account the "grass sampling study" conducted around a PVC processing plant, which was conducted by ETINSA after the release of the RPA 2005 report, and which shows that the exposure is below the TDI. Heading 9.6 – Summary of releases	certain uses available. More generally it is noted that socio-economic aspects are taken explicit account of in the decision on individual applications for authorization at a later step. For responses to comments on new data on metabolism and developmental toxicity please see responses given to # 6. <u>Response to comment on article service life (attachment part 2):</u> In the Annex XV dossier for the reaction mass DOTE:MOTE information on uses and exposure is based on registration data submitted in 2010. After the submission of the Annex XV dossier updates of the registration dossiers of DOTE and MOTE have been submitted. The registrants removed the exposure scenarios for professionals using articles containing DOTE and MOTE. Although these uses still exist, they were not considered in the risk assessment anymore. The argument given in the comment of this public consultation is that professionals use only articles, which in the opinion of the commenter is a use outside the obligations for chemical safety assessment. We do not agree with this presumption. In Annex I, chapter 0.3 of the REACH Regulation it is stated that the chemical safety assessment shall consider all stages of the life-cycle of the substance resulting from the manufacture and identified uses. This is further elaborated in the ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building. In section D.4.2. it is stated that the assessment shall include also service life of the substance that has been processed into an article, including e.g. substances in plastic, rubber, glass, metal, paper, textile or wood matrix (…) <u>Response to comment in Attachment part 1:</u> DOTE is present on the market in a multi-constituent substance, with the corresponding monooctyltin compound MOTE. The registrants have made use of the option allowing the registration of individual constituents for multi-constituent substances and have submitted registration dossiers for DOTE and MOTE as individual substances. In the ECHA Guideline „Guidance for identification and

			2nd paragraph: The CSR has been revised for what concerns the exposure of professional workers and consumers; hence the data reported in § from 9.4 to 9.6 are no longer applicable. Heading 10.2 > Conclusions> 2nd § on SUBSPORT: The example reported on hydrotalcites is misleading, since, hydrotalcite cannot replace DOTE as a drop-in substance. Moreover, concerning the last sentence, PVC is a versatile material, which has been subject to a severe and responsible sustainability programme - see www.vinylpluseu. Before considering any possible substitution with alternative materials, it would be strongly advisable to study in detail the potential risks of introducing any alternative material, as long as not fully assessed in terms of sustainability, as PVC is. Heading 12 - §3: As correctly mentioned, the European Commission risk assessments, has already concluded restriction measures for organotin compounds of concern, now included in Reach Annex XVII. Additional restriction/authorization measures would not enhance the protection of health and environment while posing serious threats to the European Industry. In case DOTE would become a SVHC, the production of DOTE-stabilised articles would likely move outside the EU. Indeed articles produced with stabilizers with a low DOTE content will remain below the 0.1 % threshold requiring notification upon re-import in the EU. This could potentially lead to the loss of thousands of jobs without improving health and environment protection. The native document, properly formatted, is in attachment in Section IV.	naming of substances under REACH and CLP" (Version 1.3 – February 2014), chapter 4.2.2 – Multi-constituent substances – it is stated that (cit.) "A multi-constituent substance is a substance, defined by its quantitative composition, in which more than one main constituent is present in a concentration ≥ 10% (w/w) and < 80% (w/w). A multi-constituent substance is the result of a manufacturing process." Chapter 4.2 of the guidance further states that a multi-constituent substance is named as a reaction mass of two or more main constituents. The exact name of the entry for MDRM suggested for the candidate list has been clarified in advance with ECHA. CAS and EC numbers are no prerequisites for candidate listing. In order to take into account the form in which DOTE is on the market a separate Annex XV SVHC dossier has been submitted for the reaction mass DOTE:MOTE in addition to the dossier for DOTE, which is the toxicologically relevant substance of concern. The triggering of Article 7 and Article 33 duties applies to all reaction masses or UVCB substances which fall into the SVHC scope (see above) and which are incorporated into an article. The reason behind this is that Title VII of REACH refers to "substances" (and not constituents) as the entries with associated obligations. This is generally valid and not only for MDRM. If reaction masses or UVCB substances are identified as an SVHC and added to the Candidate List, the entry is treated in the same manner as a "substance" and the corresponding obligations in Article 7 and Article 33 REACH have to fully apply. If that would not be the case no information can be obtained about articles containing MDRM (irrespective of the fact that one of its constituents is DOTE). Therefore, the mere listing of DOTE in the Candidate List would not be sufficient to satisfy any concern with respect to MDRM. DOTE and MDRM are not the first cases of substances on the candidate list, for which different concentration limits apply for the same substance (but containing different concentrations of the SVHC component) to fulfil the requirements of Article 33, see for example entries for Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2). This is a matter of general concern and does not specifically address DOTE containing reaction masses.

			END 10_ETINSA-MDRM-PC-comments-Annex-XV_20141015.pdf 10_ETINSA-MDRM-PC-comments-part-1_20141015.pdf 10_ETINSA-MDRM-PC-comments-part-2_20141015.pdf	
15	2014/10/16	International NGO Health and Environment Alliance Belgium	We support the nomination of reaction mass DOTE:MOTE to the candidate list.	Thank you for the support.
16	2014/10/16	Company Klöckner Pentaplast Europe GmbH & Co. KG Germany	See comments in Part IV Attachments 16_MDRM_PC comments 2_DU_kp 161014.pdf	Please see responses given to comment # 4.
17	2014/10/16	Company Alfatherm S.p.A. Italy	See comments in Part IV Attachments 17_DOTE_MOTE_Alfatherm_comment.docx	Please see responses given to comment # 9.

Specific comments on the justification

No	Date	Submitted by (name, Organisation/ MSCA)	Comment	Response
1	2014/10/13	Member State Germany	In table 1.1 of the report the Index-No. for DOTE is stated. Please indicate that this Index-No. does only cover DOTE as the reaction mass does not have an entry in Annex VI of Regulation (EC) No. 1272/2008. *Confidential attachment removed*	Thank you for the advice, the support document for the reaction mass has been revised accordingly.
4	2014/10/15	Industry or trade association EUROPEAN RIGID PVC-FILM	Comments see Part IV Attachments 4_15102014 DOTE_MOTE_PC comments_DU ERPA.docx	Please see responses given above to comment # 4 of the general comments section, Part I.

		ASSOCIATION Germany		
5	2014/10/15	Industry or trade association IVK INDUSTRIEVERBAND KUNSTSTOFFBAHNEN E. V. IVK Europe Germany	Comments see Part IV Attachment 5_15102014 MDRM PC comments DU IVK.docx	Please see responses given above to comment # 4 of the general comments section, Part I.
6	2014/10/15	Company Galata Chemicals GmbH Germany	Comments on the specific concentration limit: The reaction mass of DOTE and MOTE itself has no harmonized classification. Although not said explicitly, the so-called mixture's rule is obviously applied to identify the reaction mass as meeting the criteria for the classification as toxic for reproduction in accordance with Article 57 (c) of REACH. It is the commentator's view that in a procedure with potentially significant socio-economic impacts such as the inclusion to the candidate list, it is not enough to rely only on the generic cut-off limit of 0.1% while applying the mixture's rule. It is scientifically more sound and reliable if the specific concentration limit of DOTE is experimentally determined first. Comments on the read-across approach validity: As the Annex XV dossier pointed out, DOTE will be listed in Table 3.1 (List of harmonized classification and labeling of hazardous substances) of Annex VI, part 3, of Regulation (EC) No 1272/2008 as toxic for reproduction Repr. 1B, H360D (May damage the unborn child). Therefore, this classification of the substance in Commission Regulation (EC) No 944/2013 shows that the substance meets the criteria for classification in the hazard class: Reproductive toxicity category 1B in accordance with Article 57 (c) of REACH. This comment provides new scientific evidence	The assignment of specific concentration limits is part of the classification process. No specific concentration limits have been proposed in the CLH dossier that had been submitted to ECHA in 2011 and have not been set by RAC in their opinion on the classification of DOTE as Repr 1B. Changes to the current harmonised classification need to follow Article 37(6) of the CLP Regulation. As stated in the Annex XV dossier for MDRM, any obligations from possible candidate listing of MDRM apply according to the definition of multi-constituent substances to reaction masses containing DOTE in concentrations > 10%. Further, please see responses given above to comment # 6 of the general comments section, Part I.

			related to the background of the decision of the harmonized classification. In the decision ECHA/RAC/CLH-O-000000243-78-01/F, section "RAC remarks on read-across and category approach to a common metabolite", it was written that: "None of the studies of concern for reproductive toxicity were conducted on the DOT(2-EHMA) (Dioctyltin bis(2-ethyhexyl mercaptoacetate, DOTE), which is proposed for classification. The key studies referred to in the proposal used Dioctyltin bis(IOMA) [CAS no. 26401-97-8, DOTI]:Octyltin tris(IOMA) [CAS no. 26401-86-5, MOTI] mixture (≥80:<20%) (two rat studies, one study in rabbits, one study in mice) and DOTC (Dioctyltin dichloride, EC no. 222-583-2, CAS no. 3542-36-7))(one rat study)." The Dossier Submitter's view in the original CLH dossier was that DOTC is an appropriate surrogate for the mammalian toxicity of the corresponding thioesters DOT(2-EHMA/(IOMA) due to its 100% hydrolysis in simulated mammalian gastric contents within 30 min, and RAC shares this view. In conclusion DOTC is considered by RAC as the active moiety causing developmental effects in mammalian species. According to RAC, "DOTC is a hydrolysis product of DOT(2-EHMA) and of DOT(IOMA), which are structurally similar and immediately form DOTC at comparable hydrolysis rates after oral administration. Therefore read-across from DOT(IOMA) and DOTC to DOT(2-EHMA) appears to be justified" The commentator has attached a recent study "in vitro metabolism study of DOTE" in Appendix 1. The study was designed to answer a scientific question: Is DOTE metabolized via a hydrolytic mechanism at mammalian gastric pH, and if so what is the hydrolytic product using a non-standard in vitro test? The results showed that under the simulated gastric environment (pH 1.2, 40 °C, 0.1 % detergent) no DOTC was detected by 119Sn-NMR	

			after 72 hours of incubation. The conclusion of the study was that DOTE does not hydrolyze rapidly (within hours) to DOTC. The discussion of the differences in findings now and before in respect to the hydrolytic pathway is attached in Appendix 2. This in effect takes away the basis of the decision on the harmonized classification using the read-across method based on the common metabolic pathway. Comments on the new evidence concerning DOTE's developmental toxicity: During the classification deliberations for DOTE, the registrants maintained that deficiencies in the developmental studies, such as the documented presence of maternal disease, confounded the results, and therefore the read-across from the existing DOTI studies to DOTE based on structural similarity is also questionable. In a recent study conducted outside of Europe for other legislative purposes showed that in two species DOTE did not show adverse effects on the major developmental endpoints (Appendix 3). Combined with the facts stated before, it is the commentator's conclusion that the existing harmonized classification based on read-across data has no basis any more. Classification on DOTE's developmental toxicity should not, and need not to be based on read-across data any more. The classification decision in 2012 could potentially be wrong and should therefore be reviewed based on the new scientific evidences. Conclusion: Because the new information challenges the basis for the RAC's decision on DOTE's classification as a Repr. 1B substance and the first direct evidence of DOTE shows no adverse effects on major developmental endpoints, the commentator believes that there is considerable doubt on the	

			current harmonized classification. In addition, no specific concentration limit has been determined for DOTE, based on which the mixture's rule can be applied. Since the listing of the reaction mass of DOTE and MOTE to the candidate list will have detrimental economic effect on the manufacturing industry as well as some downstream users industries, the new evidences deserves a decent chance to be reviewed by a scientific committee and more evidence on the specific concentration limit to be established first. Combined with the fact that there is currently no process to de-list any substance from the candidate list, it is therefore appropriate to delay the inclusion of the reaction mass of DOTE and MOTE to the candidate list until a thorough scientific review has been performed. Appendix 1. Study on the hydrolytic study 2. Discussion on the differences of findings before and now in respect to DOTE hydrolytic pathway. 3. Combined Assessment summary and two interim reports of the pre-natal developmental toxicity studies.	
			6_Appendix 1 DOTE Hydrolysis Study.pdf 6_Appendix 2 Discussion of Different Hydrolytic Data.pdf *Confidential attachment removed*	
8	2014/10/15	Industry or trade association IVK INDUSTRIEVERBAND KUNSTSTOFFBAHNEN E. V., IVK Europe Germany	Comments see Part IV Attachments 8_15102014 MDRM PC comments DU IVK.docx	Please see responses given above to comment # 4 of the general comments section, Part I.

9	2014/10/15	Company Klöckner Pentaplast Europe GmbH & Co. KG Germany	9_MDRM_PC comments_DU_kp_151014.pdf	Please see responses given above to comment # 9 of the general comments section, Part I.
10	2014/10/15	Industry or trade association ETINSA (ESPA aisbl) Belgium	ETINSA Comments on the Reaction Mass of DOTE and MOTE Part 1 - proposed SVHC property DOTE (EC # 239-622-4 ; CAS # 15571-58-1) is currently subject to the Public Consultation launched by ECHA for identification as a SVHC. This substance is classified as Reprotox 1B in the 5th ATP to CLP. This substance placed on the market contains also MOTE in various concentration ratios, depending on the manufacture of the mixture and on the technical needs. MOTE is not classified as Reprotoxic. The registrants have made use of the option allowing the registration of individual constituents for multi-constituent substances and have submitted registration dossiers for DOTE and MOTE as individual substances. DOTE is the toxicologically relevant substance of concern and the DOTE registration contains all relevant exposure scenarios (taking pure DOTE as a generic worst case). The reaction mass is not identified by any CAS or EINECS # and the term "Reaction Mass" does not appear in the SDS of the compound placed on the market or in any other document available to DU. Therefore listing of this reaction mass for identification as an SVHC is without object and thus not necessary. Moreover listing of the MDRM as an SVHC would create a conflict with REACH Art. 7.2 (notification to ECHA) and Art. 33 (duty to communicate	Please see responses given above to comment # 10 of the general comments section, Part I.

			information on substances in articles). By including the reaction mass on the SVHC list it forces the MOTE content of the reaction mass to be considered SVHC when determining notification requirements for the final article, even though MOTE is not reprotoxic. This unintended consequence is not in the spirit of the laws in place (possibly even conflicting - see Appendix 1) and would have a severe detrimental impact on the industry. Comments on the specific concentration limit: The reaction mass of DOTE and MOTE itself has no harmonized classification. Although not said explicitly, the so-called mixture's rule is obviously applied to identify the reaction mass as meeting the criteria for the classification as toxic for reproduction in accordance with Article 57 (c) of REACH. It is ETINSA's view that in a procedure with potentially significant socio-economic impacts such as the inclusion to the candidate list, it is not enough to rely only on the generic cut-off limit of 0.1% while applying the mixture's rule. It is scientifically more sound and reliable if the specific concentration limit of DOTE is experimentally determined first. Comments on the read-across approach validity: As described in the decision ECHA/RAC/CLH-O-000000243-78-01/F, section "RAC remarks on read-across and category approach to a common metabolite", it was written that: "None of the studies of concern for reproductive toxicity were conducted on the DOT(2-EHMA) (Dioctyltin bis(2-ethyhexyl mercaptoacetate, DOTE), which is proposed for classification. The key studies referred to in the proposal used Dioctyltin bis(IOMA) [CAS no. 26401-97-8, DOTI]:Octyltin tris(IOMA) [CAS no. 26401-86-5, MOTI] mixture (≥80:<20%) (two rat studies, one study in rabbits, one study in mice) and DOTC (Dioctyltin dichloride, EC no. 222-583-2, CAS no. 3542-36-7))(one rat study). The Dossier Submitter's view in the original CLH	

			dossier was that DOTC is an appropriate surrogate for the mammalian toxicity of the corresponding thioesters DOT(2-EHMA/(IOMA) due to its 100% hydrolysis in simulated mammalian gastric contents within 30 min, and RAC shares this view. In conclusion DOTC is considered by RAC as the active moiety causing developmental effects in mammalian species. DOTC is a hydrolysis product of DOT(2-EHMA) and of DOT(IOMA), which are structurally similar and which immediately form DOTC at comparable hydrolysis rates after oral administration. Therefore read-across from DOT(IOMA) and DOTC to DOT(2-EHMA) appears to be justified." ETINSA wants to refer to a recent study "in vitro metabolism study of DOTE" provided as an attachment to the comments from the lead registrant of DOTE Galata Chemicals GmbH. The study was designed to answer a scientific question: is DOTE metabolized via a hydrolytic mechanism at mammalian gastric pH, and if so what is the hydrolytic product using a non-standard in vitro test? The results showed that under the simulated gastric environment (pH 1.2, 40 °C, 0.1 % surfactant) no DOTC was detected by 119Sn-NMR after 72 hours of incubation. The conclusion of the study was that DOTE does not hydrolyze rapidly (within hours) to DOTC. A discussion of the differences in findings now and before in respect to the hydrolytic pathway is also attached to Galata Chemicals GmbH's comment. This in effect takes away the basis of the decision on the harmonized classification using the read-across method based on the common metabolic pathway. In other words, the DOTC and DOTI studies used to classify DOTE should not be considered valid. Comments on the new evidence concerning DOTE's developmental toxicity: During the classification deliberations for DOTE, the	

			registrants maintained that deficiencies in the developmental studies, such as the documented presence of maternal disease, confounded the results, and therefore the read-across from the existing DOTI studies to DOTE based on structural similarity is also questionable. In a recent study conducted outside of Europe for other legislative purposes showed that in two species DOTE did not show adverse effects on the major developmental endpoints (provided as an attachment to Galata Chemicals GmbH's comment). Combined with the facts stated before, it is ETINSA's conclusion that the existing harmonized classification based on read-across data has no basis any more. Classification on DOTE's developmental toxicity should not, and need not be based on read-across data any more. The classification decision in 2012 could potentially be wrong and should therefore be reviewed based on the new scientific evidences. Conclusion Because the new information challenges the basis for the RAC's decision on DOTE's classification as a Repr.1B substance and the first direct evidence that DOTE shows no adverse effects on major developmental endpoints, ETINSA believes that there is considerable doubt on the current harmonized classification. In addition, no specific concentration limit has been determined for DOTE, based on which the mixture's rule can be applied. Since the listing of the reaction mass of DOTE and MOTE to the candidate list will have detrimental economic effect on the manufacturing industry as well as some downstream users industries, the new evidences deserves a decent chance to be reviewed by a scientific committee and more evidence on the specific concentration limit need to be established first. Combined with the fact that there is currently no process to de-list any substance from the candidate list, it is therefore appropriate to delay the inclusion of the reaction mass of DOTE and MOTE to the candidate list until a thorough scientific review has been performed.	

			Appendix 1 Potential incoherence arising in case the MDRM would be identified as SVHC based on the application of the principle of non-contradiction of the classical logic We consider that the two following statements are true: 1) MOTE is not fulfilling Art. 57 requirements and, in particular, is not Repro. 1 and thus not to be identified as SVHC. 2) Producers of Articles are obliged to indicate the presence of DOTE as SVHC at > 0,1% We consider, then, two additional statements and, in the following table, an example of composition that fulfills the MDRM definition of Annex XV §1.2 (10% DOTE, 79% MOTE): Name; % in substance; Threshold of SVHC(%)* DOTE 10 0,01 MOTE 79 0,08 MDRM 100 0,10 *Threshold of SVHC to be indicated in articles (%) 3) MDRM is SVHC, thus Article producers are obliged to indicate its presence at > 0,1%. -> Thus, Article producers are obliged to indicate the presence of DOTE at > 0,01% as SVHC. ->Thus Article producers are obliged to indicate its presence of DOTE as SVHC at < 0,1% 4) MDRM is SVHC, thus Article producers are obliged to indicate its presence at > 0,1%. -> Thus, Article producers are obliged to indicate the presence of MOTE as SVHC at > 0,08% -> MOTE is SVHC	

			According to the principle of non-contradiction of classical logic, it is not possible that statements Alpha and non-Alpha are both true, thus: - it is not possible that statement 2 (Alpha: indicate SVHC at > 0,1%) and 3 (non-Alpha: indicate SVHC at < 0,1%) are both true. Thus, statement 3 must be false. - it is not possible that statement 1 (Alpha: MOTE is not SVHC) and 4 (non-Alpha: MOTE is SVHC) are both true. Thus, statement 4 should be false. The argument that MDRM takes the Rep. 1B classification of DOTE because it contains > 0,3% DOTE, and thus is an SVHC itself, is not be applicable to this case. If it was true, in fact, infinite subsequent dilutions of an SVHC would lead to Articles indicating SVHC content even if few ppb are present. The native document, properly formatted, is in attachment in Section IV. END	
			10_ETINSA-MDRM-PC-comments-Annex-XV_20141015.pdf 10_ETINSA-MDRM-PC-comments-part-1_20141015.pdf 10_ETINSA-MDRM-PC-comments-part-2_20141015.pdf	

12	2014/10/16	Member State Finland	The Finnish CA agrees that reaction mass of DOTE and MOTE meets the criteria as SVHC according to Article 57 c. However, we have concern about the practicality on including such entries to the candidate list. It needs to be clear how to interpret and fulfil obligations resulting from inclusion in the Candidate List when it is one constituent of the reaction mass (with varying concentration ratios) that fulfils the criteria for inclusion. It would be helpful to know if there is any experience gained on entries where inclusion into candidate list was based on impurities. There is also need for clarification how to handle this kind of entries in the future when they enter to the authorisation process. The Finnish CA considers that after inclusion of the substance in the candidate list (for eventual inclusion in the annex XIV) it still needs to be further considered which risk management measures would be the most appropriate. The coverage of existing measures shall be taken into account.	Thank you for the agreement. Please note that an RMO-analysis for the substance has already been performed and discussed in the Risk Management Experts Meeting (RiME). The triggering of Article 7 and Article 33 duties applies to all reaction masses or UVCB substances which fall into the SVHC scope (see above) and which are incorporated into an article. The reason behind this is that Title VII of REACH refers to "substances" (and not constituents) as the entries with associated obligations. This is generally valid and not only for MDRM. If reaction masses or UVCB substances are identified as an SVHC and added to the Candidate List, the entry is treated in the same manner as a "substance" and the corresponding obligations in Article 7 and Article 33 REACH have to fully apply. If that would not be the case no information can be obtained about articles containing MDRM (irrespective of the fact that one of its constituents is DOTE). Therefore, the mere listing of DOTE in the Candidate List would not be sufficient to satisfy any concern with respect to MDRM. DOTE and MDRM are not the first cases of substances on the candidate list, for which different concentration limits apply for the same substance (but containing different concentrations of the SVHC component) to fulfil the requirements of Article 33, see for example entries for Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2). This is a matter of general concern and does not specifically address DOTE containing reaction masses.
13	2014/10/16	National NGO CHEM Trust United Kingdom	CHEM Trust supports the inclusion of reaction mass DOTE:MOTE in the REACH candidate list according to article 57 c) given the classification of DOTE as toxic for reproduction cat 1B.	Thank you for the support.
14	2014/10/16	Member State Norway	The Norwegian CA supports that the reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE) should be identified as a substance of very high concern and should be included in the Candidate List.	Thank you for the support.

16	2014/10/16	Company Klöckner Pentaplast Europe GmbH & Co. KG Germany	See comments in Part IV Attachments 16_MDRM_PC comments 2_DU_kp 161014.pdf	Please see responses given above to comment # 4 of the general comments section, Part I.
17	2014/10/16	Company Alfatherm S.p.A. Italy	See comments in Part IV Attachments 17_DOTE_MOTE_Alfatherm_comment.docx	Please see responses given above to comment # 9 of the general comments section, Part I.
18	2014/10/16	International NGO ChemSec Sweden	Comments on the proposed SVHC properties summarised on page 6 of the Annex XV SVHC report: We fully support the inclusion of this substance on the REACH candidate list based on the hazardous properties for CAS 15571-58-1, se below. This substance is a mixture of CAS 15571-58-1 and CAS 27107-89-7. CAS 15571-58-1 is officially classified as being toxic to reproduction (Repr.1B) according to CLP. CAS 15571-58-1 and CAS 27107-89-7 are structurally very similar which indicates an increased probability for similar hazards. CAS 15571-58-1 is listed on the SIN List since October 2014 and has been proposed by Denmark to be included on the candidate list.	Thank you for the support.

PART II: Comments and responses to comments on uses, exposures, alternatives and risks

Specific comments on use, exposure, alternatives and risks

No	Date	Submitted by (name, Organisation/ MSCA)	Comment	Response
1	2014/10/13	Member State Germany	*Confidential attachment removed*	Please see responses given above to comment # 1 of the general comments section,

				Part I.
2	2014/10/15	Company Bilcare Research GmbH Germany	Page 1/1 Comments on the Wide Dispersive Uses: As downstream users of the reaction mass of DOTE and MOTE (MDRM), we confirm that we use MDRM in an industrial setting only. We are not aware of any use of MDRM outside an industrial setting by professionals or consumers. We confirm that our products fulfill the article definition under REACH. Any use of our products are part of the article life. Comments on the likelihood of the release during article service life and waste phase: We as the downstream users of MDRM agrees with the following statement: In order to continue to stabilize the articles throughout its life-cycle stabilizers must not be washed off from the articles. Therefore those molecules are designed to have inherently low leaching rates and this is the case for octyltins which have a very low water solubility (high Octanol/Water partition coefficient). Moreover, MDRM are used extensively in rigid PVC films for food-contact and comply with the applicable Specific Migrations Limit of 6 µg/kg food, which confirms the low leaching rate in aqueous media. For many years in the USA, MDRM based stabilizers have complied with the strict guidelines set out by NSF/ ANSI 61 standards for use in drinking water applications. Like all additives, leaching in contact with water is limited to a thin diffusion layer and does almost not affect the bulk of the material. This has been demonstrated indirectly by measuring the residual concentration of a tin stabilizer throughout the 6 mm wall of a 22-year old water pipe dug out. The depletion of tin was observed in the 1.5 micron boundary layer, representing 0.05 % of the pipe volume, whilst no depletion was observed in the bulk. It is therefore the commentator's conclusion that it is unlikely for the release of MDRM during the article service life and waste phase. Additionally after many decades of use in these applications we are not aware of any reported adverse impact on users of articles containing MDRM. Comments on the Technical Feasibility of Calcium-based stabilizers as a substitute for MDRM: Section 10.4 of the Annex XV dossier mentions Calcium/Zinc-based stabilizers as a substitute for MDRM. After extensive testing and formulation work, we have not been able to find an adequate technical substitute that is based on Calcium/Zinc to date.	Please see responses given above to comment # 9 of the general comments section, Part I.

3	2014/10/15	Company Bilcare Research S. r. l. Italy	Page 1/1 Comments on the Wide Dispersive Uses: As downstream users of the reaction mass of DOTE and MOTE (MDRM), we confirm that we use MDRM in an industrial setting only. We are not aware of any use of MDRM outside an industrial setting by professionals or consumers. We confirm that our products fulfill the article definition under REACH. Any use of our products are part of the article life. Comments on the likelihood of the release during article service life and waste phase: We as the downstream users of MDRM agrees with the following statement: In order to continue to stabilize the articles throughout its life-cycle stabilizers must not be washed off from the articles. Therefore those molecules are designed to have inherently low leaching rates and this is the case for octyltins which have a very low water solubility (high Octanol/Water partition coefficient). Moreover, MDRM are used extensively in rigid PVC films for food-contact and comply with the applicable Specific Migrations Limit of 6 µg/kg food, which confirms the low leaching rate in aqueous media. For many years in the USA, MDRM based stabilizers have complied with the strict guidelines set out by NSF/ ANSI 61 standards for use in drinking water applications. Like all additives, leaching in contact with water is limited to a thin diffusion layer and does almost not affect the bulk of the material. This has been demonstrated indirectly by measuring the residual concentration of a tin stabilizer throughout the 6 mm wall of a 22-year old water pipe dug out. The depletion of tin was observed in the 1.5 micron boundary layer, representing 0.05 % of the pipe volume, whilst no depletion was observed in the bulk. It is therefore the commentator's conclusion that it is unlikely for the release of MDRM during the article service life and waste phase. Additionally after many decades of use in these applications we are not aware of any reported adverse impact on users of articles containing MDRM. Comments on the Technical Feasibility of Calcium-based stabilizers as a substitute for MDRM: Section 10.4 of the Annex XV dossier mentions Calcium/Zinc-based stabilizers as a substitute for MDRM. After extensive testing and formulation work, we have not been able to find an adequate technical substitute that is based on Calcium/Zinc to date.	Please see responses given above to comment # 9 of the general comments section, Part I.
4	2014/10/15	Industry or trade association EUROPEAN	Comments see Part IV Attachments 4_15102014 DOTE_MOTE_PC comments_DU ERPA.docx	Please see responses given above to comment # 4 of the general comments section, Part I.

		RIGID PVC-FILM ASSOCIATION Germany		
5	2014/10/15	Industry or trade association IVK INDUSTRIEVERBAND KUNSTSTOFFBAHNEN E. V. IVK Europe Germany	Comments see Part IV Attachment 5_15102014 MDRM PC comments DU IVK.docx	Please see responses given above to comment # 4 of the general comments section, Part I.
6	2014/10/15	Company Galata Chemicals GmbH Germany	6_Appendix 1 DOTE Hydrolysis Study.pdf 6_Appendix 2 Discussion of Different Hydrolytic Data.pdf *Confidential attachment removed*	Please see responses given above to comment # 6 of the general comments section, Part I.

7	2014/10/15	Company Galata Chemicals GmbH Germany	Comments on the identified Uses and Exposures: In the Annex XV dossiers (Tables 4-7) for the reaction mass of DOTE and MOTE, it was incorrectly mentioned that the registrant(s) have registered for professional and consumer uses in addition to industrial use. The identified professional workers' uses and consumer uses as stated in Tables 4-7 in the Annex XV dossier are in fact the uses of the end products, which are considered articles under REACH (Art. 3(3)), i.e. "an object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition". For example, such product could be rigid PVC films, it has to have certain thickness which qualifies it as an article. Article uses are not a use under REACH (Art. 3(24)), but part of the article service life. The last use is the incorporation of the substance/mixture into an article. So there is in fact no uses by professional workers or consumers. The exposure scenarios have been discussed with the Austrian competent Authority (Annex XV dossier Provider) and have been adjusted in a spontaneous update of the DOTE Dossier. Comments on safe handling and use: For decades Galata Chemicals GmbH has been safely manufacturing DOTE-based products. In order to do this the company equips the workers with the appropriate personal protective equipment and procedures to limit their exposure to this substance. In addition workers' urine is tested routinely for mono-, di- and tri-octyl-tin components plus the corresponding mono-, di- and tri-butyl-tins, offered to employees each year. No abnormality has been observed as long as can be confirmed by the physician in charge. As a result it is the commentator's opinion that the safe handling and use history demonstrates that in an industrial setting DOTE-based products can be consistently handled in a safe manner. Comments on the likelihood of the release during article service life and waste phase: In ECHA's General approach for prioritization of substances of very high concern (SVHCs) for inclusion in the Authorization List (Annex XIV) document it was said: "However, if registration data or other relevant information demonstrate that the substance ends up in articles and that there is no reliable information that releases are unlikely during article service life and waste phase, this can be taken into account in assigning the WDU score. In such case (which applies for any substance, not only for CMRs) a score between 5 and 15 can be considered,	In the Annex XV dossier for the reaction mass DOTE:MOTE information on uses and exposure is based on registration data submitted in 2010. After the submission of the Annex XV dossier updates of the registration dossiers of DOTE and MOTE have been submitted. The registrants removed the exposure scenarios for professionals using articles containing DOTE and MOTE. Although these uses still exist, they were not considered in the risk assessment anymore. The argument given in the comment of this public consultation is that professionals use only articles, which in the opinion of the commenter is a use outside the obligations for chemical safety assessment. We do not agree with this presumption. In Annex I, chapter 0.3 of the REACH Regulation it is stated that the chemical safety assessment shall consider all stages of the life-cycle of the substance resulting from the manufacture and identified uses. This is further elaborated in the ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building. In section D.4.2. it is stated that the assessment shall include also

			depending on the specific situation and the available information (see also Section 5.3.1 below)." Against this, the commentator wants to draw the reviewers' attention the following statement: In order to continue to stabilize the articles throughout its life-cycle stabilizers must not be washed off from the articles. Therefore those molecules are designed to have inherently low leaching rates and this is the case for octyltin stabilizers which have very low water solubility (high Octanol/Water partition coefficient). Moreover, the reaction mass of DOTE and MOTE are used extensively in rigid PVC films for food-contact and comply with the applicable Specific Migrations Limit of 6 µg/kg food , which confirms the low leaching rate in aqueous media. In the USA it is extensively used also for drinking water pipes and complies with the NSF requirements. Like all additives, leaching in contact with water is limited to a thin diffusion layer and does almost not affect the bulk of the material. This has been demonstrated indirectly by measuring the residual concentration of a tin stabilizer throughout the 6 mm wall of a 22-year o old water pipe dug out. The depletion of tin was observed in the 1.5 micron boundary layer, representing 0.05 % of the pipe volume, whilst no depletion was observed in the bulk. It is therefore the commentator's conclusion that it is unlikely for the release of the constituents of the reaction mass of DOTE and MOTE during the article service life and waste phase.	service life of the substance that has been processed into an article, including e.g. substances in plastic, rubber, glass, metal, paper, textile or wood matrix (…) At this stage of the process information on the identification of DOTE as SVHC is taken into account. Information on uses, exposure, release, alternatives and proposals for exemptions from the authorisation requirement will be forwarded for discussion at later stages of the authorization process (prioritization, possible exemptions if applicable) in case the substance is identified as SVHC.
8	2014/10/15	Industry or trade association IVK INDUSTRIEVERBAND KUNSTSTOFFBAHNEN E. V., IVK Europe Germany	Comments see Part IV Attachments 8_15102014 MDRM PC comments DU IVK.docx	Please see responses given above to comment # 4 of the general comments section, Part I.
9	2014/10/15	Company Klöckner Pentaplast Europe GmbH & Co. KG Germany	see document in IV. Attachement - Information on Use, Alternatives, Exposure and Risks 9_MDRM_PC comments_DU_kp_151014.pdf	Please see responses given above to comment # 9 of the general comments section, Part I.
10	2014/10/15	Industry or	ETINSA comments on the Reaction Mass of DOTE and MOTE	Please see responses given to

		trade association ETINSA (ESPA aisbl) Belgium	Part 2 - Information on Use, Exposure and Risks Comments on the identified Uses and Exposures: In the Annex XV dossiers for the reaction mass of DOTE and MOTE, it was mentioned that the registrant(s) have registered the uses reported in the Tables hereafter. First of all, no registration dossier exists for the reaction mass itself. The uses listed in the Annex XV dossier of the reaction mass are in fact extracted from the registration dossier of DOTE. The identified professional workers' uses and consumer uses as stated above are in fact the uses of the end products, which are considered articles under REACH (Art. 3(3)), i.e. "an object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition". For example, such product could be rigid PVC films, it has to have certain thickness which qualifies it as an article. Article uses are not a use under REACH (Art. 3(24), but part of the article service life. The last use is the incorporation of the substance/mixture into an article. So there are in fact no uses by professional workers or consumers. The exposure scenarios have been discussed with the Austrian competent Authority (Annex XV dossier Provider) and have been adjusted in a spontaneous update of the DOTE Dossier. The uses are reported in Tables 4 to 7 of the Annex XV report on the Reaction Mass. Comments on the likelihood of the release during article service life and waste phase: In ECHA's General approach for prioritisation of substances of very high concern (SVHCs) for inclusion in the Authorisation List (Annex XIV) document it was said: "However, if registration data or other relevant information demonstrate that the substance ends up in articles and that there is no reliable information that releases are unlikely during article service life and waste phase, this can be taken into account in assigning the WDU score. In such case (which applies for any substance, not only for CMRs) a score between 5 and 15 can be considered, depending on the specific situation and the available information (see also Section 5.3.1 below)." Against this, ETINSA wants to draw the reviewers' attention to the following statement:	comment # 7 of this comments section. Further, please see responses given above to comment # 10 of the general comments section, Part I.

			In order to continue to stabilize the articles throughout its life-cycle stabilizers must not be washed off from the articles. Therefore those molecules are designed to have inherently low leaching rates and this is the case for octyltin stabilizers which have very low water solubility (high Octanol/Water partition coefficient). Moreover, the reaction mass of DOTE and MOTE are used extensively in rigid PVC films for food-contact and comply with the applicable Specific Migrations Limit of 6 µg/kg food , which confirms the low leaching rate in aqueous media. For many years in the USA, DOTE-based stabilizers have complied with the strict guidelines set out by NSF/ ANSI 61 standards for use in drinking water applications. Like all additives, leaching in contact with water is limited to a thin diffusion layer and does not significantly affect the bulk of the material. This has been demonstrated indirectly by measuring the residual concentration of a tin stabilizer throughout the 6 mm wall of a 22-year old water pipe that was dug out of the ground. The depletion of tin was observed in the 1.5 micron boundary layer, representing 0.05 % of the pipe volume, whilst no depletion was observed in the bulk. It is therefore ETINSA's view that it is unlikely for the release of the constituents of the reaction mass of DOTE and MOTE during the article service life and waste phase. The native document, properly formatted, is in attachment in Section IV. END	
			10_ETINSA-MDRM-PC-comments-Annex-XV_20141015.pdf 10_ETINSA-MDRM-PC-comments-part-1_20141015.pdf 10_ETINSA-MDRM-PC-comments-part-2_20141015.pdf	

11	2014/10/15	Company Lubrizol Advanced Materials bvba Belgium	Comments on the Wide Dispersive Uses: As downstream users of the reaction mass of DOTE and MOTE (MDRM), we confirm that we use MDRM in an industrial setting only. We are not aware of any use of MDRM outside an industrial setting by professionals or consumers. Comments on the likelihood of the release during article service life and waste phase: We as the downstream users of MDRM agrees with the following statement: In order to continue to stabilize the articles throughout its life-cycle stabilizers must not be washed off from the articles. Therefore those molecules are designed to have inherently low leaching rates and this is the case for octyltins which have a very low water solubility (high Octanol/Water partition coefficient. For many years in the USA, MDRM based stabilizers have complied with the strict guidelines set out by NSF/ ANSI 61 standards for use in drinking water applications. Like all additives, leaching in contact with water is limited to a thin diffusion layer and does almost not affect the bulk of the material. This has been demonstrated indirectly by measuring the residual concentration of a tin stabilizer throughout the 6 mm wall of a 22-year old water pipe dug out. The depletion of tin was observed in the 1.5 micron boundary layer, representing 0.05 % of the pipe volume, whilst no depletion was observed in the bulk. It is therefore the commentator's conclusion that it is unlikely for the release of MDRM during the article service life and waste phase. Additionally after many decades of use in these applications we are not aware of any reported adverse impact on users of articles containing MDRM. Comments on the Technical Feasibility of Calcium-based stabilizers as a substitute for MDRM: Section 10.4 of the Annex XV dossier mentions Calcium/Zinc-based stabilizers as a substitute for MDRM. After extensive testing and formulation work, we have not been able to find an adequate technical substitute that is based on Calcium/Zinc to date.	Please see responses given above to comment # 9 of the general comments section, Part I.
16	2014/10/16	Company Klöckner Pentaplast Europe GmbH & Co. KG Germany	See comments in Part IV Attachments 16_MDRM_PC comments 2_DU_kp 161014.pdf	Please see responses given above to comment # 4 of the general comments section, Part I.
17	2014/10/16	Company Alfatherm S.p.A. Italy	See comments in Part IV Attachments 17_DOTE_MOTE_Alfatherm_comment.docx	Please see responses given above to comment # 9 of the general comments section, Part I.