EUROPEAN CHEMICALS AGENCY

Decision number: CCH-D-2114289309-36-01/F Helsinki, 28 November 2014

DECISION ON A COMPLIANCE CHECK OF A REGISTRATION PURSUANT TO ARTICLE 41(3) OF REGULATION (EC) NO 1907/2006

For hexahydro-4-methylphthalic anhydride, CAS No 19438-60-9 (EC No 243-072-0), registration number: [redacted]

Addressee: [redacted]

The European Chemicals Agency (ECHA) has taken the following decision in accordance with the procedure set out in Articles 50 and 51 of Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH Regulation).

I. Procedure

Pursuant to Article 41(1) of the REACH Regulation ECHA has performed a compliance check of the registration for hexahydro-4-methylphthalic anhydride, CAS No 19438-60-9 (EC No 243-072-0), submitted by [redacted] (Registrant).

This decision is based on the registration as submitted with submission number [redacted], for the tonnage band of 1000 tonnes or more per year. This decision does not take into account any updates submitted after 12 June 2014, the date upon which ECHA notified its draft decision to the Competent Authorities of the Member States pursuant to Article 51(1) of the REACH Regulation.

This compliance check decision does not prevent ECHA from initiating further compliance checks on the present registration at a later stage.

The compliance check was initiated on 16 July 2013.

On 5 November 2013 ECHA sent the draft decision to the Registrant and invited him to provide comments within 30 days of the receipt of the draft decision. That draft decision was based on submission number [redacted]

On 4 December 2013 ECHA received comments from the Registrant agreeing to ECHA's draft decision. The Registrant acknowledged the information gaps identified by ECHA for the human health endpoints and proposed a read-across approach for providing the required information. Regarding the required information related to the chemical safety assessment and the chemical safety report, the Registrant agreed to update the chemical safety report accordingly.

On 7 February 2014 the Registrant updated his registration dossier with the submission number [redacted]

The ECHA Secretariat considered the Registrant's comments and update.
On basis of this information, Section II was amended. The Statement of Reasons (Section III) was changed accordingly.

On 12 June 2014 ECHA notified the Competent Authorities of the Member States of its draft decision and invited them pursuant to Article 51(1) of the REACH Regulation to submit proposals for amendment of the draft decision within 30 days of the receipt of the notification.

Subsequently, proposals for amendment to the draft decision were submitted.

On 18 July 2014 ECHA notified the Registrant of the proposals for amendment to the draft decision and invited him pursuant to Article 51(5) of the REACH Regulation to provide comments on the proposals for amendment within 30 days of the receipt of the notification.

The ECHA Secretariat reviewed the proposals for amendment received and amended the draft decision.

The present decision relates solely to a compliance check requesting information in form of sub-chronic toxicity study (90-day) (Annex IX, 8.6.2), pre-natal developmental toxicity study (Annex IX, 8.7.2.), revised DNELs for workers and for the general population (Annex I, 1.4.1.), a revised exposure assessment and risk characterisation for the environment (Annex I, sections 5 and 6) and revised exposure assessment and risk characterization for workers (Annex I, sections 5 and 6). The other compliance check requirement of two-generation reproductive toxicity study is addressed in a separate decision although all endpoints were initially addressed together in the same draft decision.

On 28 July 2014 ECHA referred the draft decision to the Member State Committee.

By 18 August 2014, in accordance to Article 51(5), the Registrant provided comments on the proposals for amendment. The Member State Committee took the comments on the proposals for amendment of the Registrant into account.

A unanimous agreement of the Member State Committee on the draft decision relating to the sub-chronic toxicity study, pre-natal developmental toxicity study, revised DNELs for workers and for the general population, a revised exposure assessment and risk characterisation for the environment and revised exposure assessment and risk characterization for workers was reached on 1 September 2014 in a written procedure launched on 21 August 2014.

ECHA took the decision pursuant to Article 51(6) of the REACH Regulation.

II. Information required

A. Information in the technical dossier derived from the application of Annexes VII to XI

Pursuant to Articles 41(1), 41(3), 10(a)(vii), 12(1)(e), 13 and Annexes IX, X of the REACH Regulation the Registrant shall submit the following information using the indicated test methods and the registered substance subject to the present decision:

1. Sub-chronic toxicity study (90-day), oral route (Annex IX, 8.6.2.; test method: EU B.26./OECD 408) in rats;
2. Pre-natal developmental toxicity study (Annex IX, 8.7.2.; test method: EU B.31./OECD 414) in rats or rabbits, oral route;

B. Information related to chemical safety assessment and chemical safety report

Pursuant to Articles 41(1), 41(3), 10(b), 14 and Annex I of the REACH Regulation the Registrant shall submit in the chemical safety report:

1. Revised DNELs for workers and for the general population using the assessment factors recommended by ECHA and re-assessment of related risks or a full justification for not using the recommended assessment factors in DNEL derivation (Annex I, 1.4.1.), as specified under section III.B.1. below;
2. Revised exposure assessment and risk characterisation for the environment (Annex I, sections 5 and 6), as specified under section III.B.2. below;
3. Revised exposure assessment and risk characterization for workers (Annex I, sections 5 and 6), as specified under section III.B.3. below.

Pursuant to Article 41(4) of the REACH Regulation the Registrant shall submit the information in the form of an updated registration to ECHA by **5 December 2016**. The timeline has been set to allow for sequential testing.

Note for consideration by the Registrant:

The Registrant may adapt the testing requested above according to the specific rules outlined in Annexes VI to X and/or according to the general rules contained in Annex XI of the REACH Regulation. In order to ensure compliance with the respective information requirement, any such adaptation will need to have a scientific justification, referring to and conforming with the appropriate rules in the respective Annex, and an adequate and reliable documentation.

Failure to comply with the requests in this decision, or to fulfil otherwise the information requirements with a valid and documented adaptation, will result in a notification to the Enforcement Authorities of the Member States.

III. Statement of reasons

Pursuant to Article 41(3) of the REACH Regulation, ECHA may require the Registrant to submit any information needed to bring the registration into compliance with the relevant information requirements.

A. Information in the technical dossier derived from the application of Annexes VII to XI

Pursuant to Articles 10(a)(vii), 12(1)(e) of the REACH Regulation, a technical dossier for a substance manufactured or imported by the Registrant in quantities of 1000 tonnes or more per year shall contain as a minimum the information specified in Annexes VII to X of the REACH Regulation.

1. Sub-chronic toxicity study (90-day), oral route (Annex IX, 8.6.2.)

A "sub-chronic toxicity study (90 day)" is a standard information requirement as laid down in Annex IX, Section 8.6.2. of the REACH Regulation. Adequate information on this endpoint needs to be present in the technical dossier for the registered substance to meet this information requirement.

In the technical dossier the Registrant has provided a study record for a "repeated dose 28-day oral toxicity study" (test method: OECD 407). However, this study does not provide the information required by Annex IX, Section 8.6.2., because exposure duration is less than 90 days and the number of animals per dose group is significantly lower. Therefore, the sensitivity of a 28-day study is much lower than that of a 90-day study.

In addition, the Registrant has sought to adapt this information requirement. In the justification of the adaptation provided, the Registrant is referring to sub-acute and sub-chronic data for substances that the Registrant considers substances with "*a similar structure*" and thus, the Registrant considers that a sub-chronic toxicity study with the registered substance is not required.

ECHA notes that no robust study summary was provided for the referred data in the justification of the adaptation and, therefore, this information cannot be evaluated.

Furthermore, according to Annex XI, Section 1.5. of the REACH Regulation, "*substances whose physicochemical, toxicological and ecotoxicological properties are likely to be similar or follow a regular pattern as a result of structural similarity may be considered as a group*" and that the "*application of the group concept requires that physicochemical properties, human health effects and environmental effects or environmental fate may be predicted [...] by interpolation*". It continues by stating that the results should "*have adequate and reliable coverage of the key parameters addressed in the corresponding test method referred to in Article 13(3)*", "*cover an exposure duration comparable to or longer than the corresponding test method referred to in Article 13(3) if exposure duration is a relevant parameter*" and "*adequate and reliable documentation of the applied method shall be provided*".

ECHA notes that the Registrant has not provided and documented a read-across justification assessing the structural similarity and a systematic comparison of toxicological properties and thus, the requirements in Annex XI, Section 1.5. have not been fulfilled.

Therefore, the adaptation of the information requirement suggested by the Registrant cannot be accepted.

As explained above, the information available on this endpoint for the registered substance in the technical dossier does not meet the information requirement. Consequently there is an information gap and it is necessary to provide information for this endpoint.

In light of the physical and chemical and other properties of the substance (liquid with low vapour pressure classified as skin sensitiser and respiratory sensitiser) and the information provided on the uses and human exposure, ECHA considers that testing by the oral route is most appropriate.

According to the test method EU B.26/OECD 408 the rat is the preferred species. ECHA considers this species as being appropriate and testing should be performed with the rat.

In his comments, following the procedure set out in Article 50(1) of the REACH Regulation, as well as in his update (Submission No. [redacted]), the Registrant has provided a justification for the use of read-across approach for several endpoints including sub-chronic toxicity study (90-day), pre-natal developmental toxicity study and two-generation reproductive toxicity study endpoints. In addition, the Registrant has provided robust study summaries for repeated dose toxicity, reproductive and developmental toxicity, and CICAD (Concise International Chemical Assessment Document 75) document on Cyclic acid anhydrides: Human health aspects.

ECHA notes that Annex XI, Section 1.5. states that "*substances whose physicochemical, toxicological an ecotoxicological properties are likely to be similar or follow a regular pattern as a result of structural similarity may be considered as a group, or 'category' of substances*". It also states that the "*application of the group concept requires that physicochemical properties, human health effects and environmental effects or environmental fate may be predicted from data for reference substance(s) within the group by interpolation to other substances in the group (read-across approach)*".

Based on the information provided, ECHA understands that the hypothesis is based on i) the (bi)cyclic ring structures with a common 5-member ring carboxylic acid anhydride group as the only reactive functional group, ii) the carboxylic acid anhydride group is responsible for the (eco)toxicological effects in the group of substances, and iii) structural differences have no or only negligible influence with regard to systemic toxicity.

ECHA notes that although the substances share a common functional group (i.e. 5-member ring carboxylic acid anhydride) the Registrant has failed to prove that the common functional group is the responsible for the (eco)toxicological effects and why the structural differences have only negligible influence with regard to systemic toxicity. In this regard the Registrant states that "*structural differences such as the level of saturation in the ring structure, presence or different location of substituted functional group are expected to have no or only negligible influence with regard to eco- and systemic toxicity*". However, ECHA notes that, based on the data provided, different structures seem to result in different effects in the repeated dose toxicity which indicates that the structural differences have an influence with regard to systemic toxicity. In particular, in two sub-chronic toxicity studies (90-day) and a two-generation reproductive toxicity study it was observed that maleic anhydride (MA) causes renal effects which were not observed in studies with other substances. In addition, it can be seen a high variability in the NOAELs provided by the Registrant for the different substances with data for sub-acute repeated dose toxicity (i.e. 100 to 1250 mg/kg) and this variability does not follow an evident trend.

Therefore, ECHA notes that the Registrant's hypothesis is not justified and the read-across is not adequately and reliably documented. Consequently, ECHA considers that the read-across approach provided by the Registrant does not fulfil the requirements defined in Annex XI, Section 1.5 of the REACH Regulation. Namely, human health effects cannot be predicted from data for reference substance(s) within the group by interpolation, and the registrant has not provided adequate and reliable documentation of the applied method.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, the Registrant is requested to submit the following information derived with the registered substance subject to the present decision: Repeated dose 90-day oral toxicity study (test method: EU B.26./OECD 408) in rats.

2. Pre-natal developmental toxicity study (Annex IX, 8.7.2.)

A "pre-natal developmental toxicity study" for a first species is a standard information requirement as laid down in Annex IX, Section 8.7.2. of the REACH Regulation. Adequate information on this endpoint needs to be present in the technical dossier for the registered substance to meet this information requirement.

The Registrant has not provided any study record of a pre-natal developmental toxicity study in the dossier that would meet the information requirement of Annex IX, Section 8.7.2. Instead, the Registrant has sought to adapt this information requirement. The justification of the adaptation given by the Registrant is that no effects regarding developmental toxicity were observed in a "reproduction/ developmental toxicity screening test" (test method: OECD 421). However, this study does not provide the information required by Annex IX, Section 8.7.2., because it does not cover key parameters of a pre-natal developmental toxicity study like examinations of foetuses for skeletal and visceral alterations.

In addition, in the justification of the adaptation provided, the Registrant is referring to data for substances that the Registrant considers substances with "*a similar structure*" and thus, the Registrant considers that a pre-natal developmental toxicity study with the registered

substance is not required.

ECHA notes that no robust study summary was provided for the referred data in the justification of the adaptation and, therefore, this information cannot be evaluated.

Furthermore, according to Annex XI, Section 1.5. of the REACH Regulation, "*substances whose physicochemical, toxicological and ecotoxicological properties are likely to be similar or follow a regular pattern as a result of structural similarity may be considered as a group*" and that the "*application of the group concept requires that physicochemical properties, human health effects and environmental effects or environmental fate may be predicted [...] by interpolation*". It continues by stating that the results should "*have adequate and reliable coverage of the key parameters addressed in the corresponding test method referred to in Article 13(3)*", "*cover an exposure duration comparable to or longer than the corresponding test method referred to in Article 13(3) if exposure duration is a relevant parameter*" and "*adequate and reliable documentation of the applied method shall be provided*".

ECHA notes that the Registrant has not provided and documented a read-across justification assessing the structural similarity and a systematic comparison of toxicological properties and thus, the requirements in Annex XI, Section 1.5. have not been fulfilled.

Therefore, the adaptation of the information requirement suggested by the Registrant cannot be accepted.

As explained above, the information available on this endpoint for the registered substance in the technical dossier does not meet the information requirement. Consequently there is an information gap and it is necessary to provide information for this endpoint.

According to the test method EU B.31/OECD 414, the rat is the preferred rodent species, the rabbit the preferred non-rodent species and the test substance is usually administered orally. ECHA considers these default parameters appropriate and testing should be performed by the oral route with the rat or the rabbit as a first species to be used.

In his comments, following the procedure set out in Article 50(1) of the REACH Regulation, as well as in his update (Submission No. [redacted]), the Registrant has provided a justification for the use of read-across approach for several endpoints including sub-chronic toxicity study (90-day), pre-natal developmental toxicity study and two-generation reproductive toxicity study. In addition, the Registrant has provided robust study summaries for repeated dose toxicity, reproductive and developmental toxicity, and CICAD (Concise International Chemical Assessment Document 75) document on Cyclic acid anhydrides: Human health aspects.

ECHA notes however, as explained in detail in section III.A.1 above, that the Registrant's hypothesis is not justified and the read-across approach is not adequately and reliably documented.

In addition, ECHA notes that for this endpoint the Registrant has provided mainly reproductive and developmental toxicity screening studies that do not cover the key parameters of the pre-natal developmental toxicity study like examinations of foetuses for skeletal and visceral alterations, or the studies have not been conducted according to any accepted guideline and cannot be assessed due to the lack of data in the reporting. The Registrant has also provided a pre-natal developmental toxicity study with maleic acid (MA) but the toxicological effects for MA are differentiated from the other substances and the Registrant has failed to prove that the structural differences have only negligible influence with regard to systemic toxicity.

Therefore, ECHA considers that the read-across approach provided by the Registrant does not fulfil the requirements defined in Annex XI, Section 1.5. Namely, human health effects cannot be predicted from data for reference substance(s) within the group by interpolation, there is no adequate and reliable coverage of the key parameters addressed in the corresponding test method, and the registrant has not provided adequate and reliable documentation of the applied method.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, the Registrant is requested to submit the following information derived with the registered substance subject to the present decision: Pre-natal developmental toxicity study (test method: EU B.31./OECD 414) in rats or rabbits by the oral route.

Notes for consideration of the Registrant

In addition, a pre-natal developmental toxicity study on a second species is part of the standard information requirements as laid down in Annex X, Section 8.7.2. for substances registered for 1000 tonnes or more per year (see sentence 2 of introductory paragraph 2 of Annex X).

The Registrant should firstly take into account the outcome of the pre-natal developmental toxicity on a first species and all other relevant available data to determine if the conditions are met for adaptations according to Annex X, 8.7. column 2, or according to Annex XI; for example if the substance meets the criteria for classification as toxic for reproduction Category 1B: May damage the unborn child (H360D), and the available data are adequate to support a robust risk assessment, or alternatively, if weight of evidence assessment of all relevant available data provides scientific justification that the study in a second species is not needed. If the Registrant considers that testing is necessary to fulfill this information requirement, he should include in the update of his dossier a testing proposal for a pre-natal developmental toxicity study on a second species. If the Registrant comes to the conclusion that no study on a second species is required, he should update his technical dossier by clearly stating the reasons for adapting the standard information requirement of Annex X, 8.7.2.

B. Information related to the chemical safety assessment and chemical safety report

Pursuant to Articles 10(b) and 14(1) of the REACH Regulation the registration shall contain a chemical safety report which shall document the chemical safety assessment conducted in accordance with Article 14(2) to (7) and with Annex I of the REACH Regulation.

According to Article 14(3) and Annex I, Section 0.6.1., the chemical safety assessment shall include human health, physicochemical and environmental hazard assessments.

Further, according to Article 14(4) and Annex I, Section 0.6.2, if the substance fulfills the criteria for any of the hazard classes or categories referred to in Article 14(4) and Annex I section 0.6.3. of the REACH Regulation, the chemical safety assessment shall also include exposure assessment including the generation of exposure scenarios (or the identification of relevant use and exposure categories if appropriate) and exposure estimation, as well as risk characterisation.

The registered substance is classified as Eye Damage 1, Resp. Sens. 1, Skin Sens. 1 and thus, fulfilling the criteria set out in Article 14(4).

1. Revised DNELs for workers and for the general population using the assessment factors recommended by ECHA and re-assessment of related risks or a full justification for not using the recommended assessment factors in DNEL derivation (Annex I, 1.4.1.)

Annex I, 1.4.1. of the REACH Regulation requires that the following factors shall, among others, be taken into account when deriving DNELs:

a) the uncertainty arising, among other factors, from the variability in the experimental information and from intra- and inter-species variation;
b) the nature and severity of the effect;
c) the sensitivity of the human (sub-)population to which the quantitative and/or qualitative information on exposure applies;
d) and that the DNELs reflect the likely route(s), duration and frequency of exposure.

The ECHA *Guidance on information requirements and chemical safety assessment* Volume 8, Chapter R.8 provides further details and specifically provides default factors which should be applied to derive DNELs in the absence of substance specific information.

ECHA observes that the Registrant has not followed the recommendations of ECHA's Guidance R.8 and has not provided a full justification for the derivation of DNELs in line with Annex I, 1.4.1. In particular, ECHA notes that the Registrant has not taken into account the inter-species variation and variation in the exposure duration of the studies for the derivation of DNELs.

As explained above, the information provided on DNEL for the registered substance in the chemical safety report does not meet the general provisions for preparing a chemical safety report as described in Annex I, 1.4.1. because the Registrant has not used all the necessary assessment factors in accordance with ECHA *Guidance on information requirements and chemical safety assessment* Volume 8, Chapter R.8. and the deviations are not fully justified. Consequently it is necessary to revise the DNELs or to provide a full justification.

The Registrant is given two options: The Registrant shall revise the DNELs for workers and for the general population by applying the assessment factors recommended by ECHA that are appropriate in this case. Subsequently, the Registrant shall re-assess related risks.

In the alternative, the Registrant shall, in accordance with Annex I, 1.4.1, provide a full justification for the DNELs derived for workers and for the general population provided in the chemical safety report by specifying how the following has been taken into account:

a) the uncertainty arising, among other factors, from the variability in the experimental information and from intra- and inter-species variation;
b) the nature and severity of the effect;
c) the sensitivity of the human (sub-)population to which the quantitative and/or qualitative information on exposure applies;
d) and that the DNELs reflect the likely route(s), duration and frequency of exposure.

In his comments, the Registrant indicated his intention to revise the DNEL derivation once the final decision is received since new hazard data might be necessary to be generated that can have an impact in the DNEL derivation.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, the Registrant is requested to submit in the chemical safety report either of the following information: Revised DNELs for workers and for the general population using the assessment factors recommended by ECHA and re-assessment of related risks *or* a full justification for not using the recommended assessment factors in DNEL derivation.

Notes for consideration by the Registrant

The results of the studies requested under section II.A.1-3 shall be taken into account when revising the DNELs.

2. Revised exposure assessment and risk characterisation of environment (Annex I, sections 5 and 6)

Annex I, Section 5 of the REACH Regulation requires the Registrant to consider, in the exposure assessment, all stages of the life-cycle of the substance resulting from the manufacture and identified uses and shall cover any exposures that may relate to the identified hazards.

Annex I, Section 6 of the REACH Regulation requires the Registrant to characterize the risk for each exposure scenario and shall consider the human population (exposed as workers, consumer or indirectly via the environment and if relevant a combination thereof) and the environmental spheres for which exposure to the substance is known or reasonably foreseeable, under the assumption that the risk management measures described under exposure scenario in the Section 5 have been implemented. In addition, the overall environmental risk caused by the substance shall be reviewed by integrating the results for the overall releases, emissions and losses from all sources to all environmental compartments.

According to Article 3(37) of the REACH Regulation, exposure scenario is defined as "*the set of conditions, including operational conditions and risk management measures, that describe how the substance is manufactured or used during its life-cycle and how the manufacturer or importer controls, or recommends downstream users to control, exposures of humans and the environment*".

Pursuant to Articles 10(b) and 14(4) as well as Annex I, section 5.1.1. of the REACH Regulation, generated exposure scenarios shall cover a description of the operational conditions and risk management measures applied to reduce or avoid direct and indirect exposure to humans and the different environmental compartments to the substance.

In the chemical safety report provided, the Registrant assumes that the emission to water and soil is zero and claims that all waste, substance residuals or cleaning solutions are incinerated and thus "*there is practically no direct release to water and soil*" (emphasis added). In addition, for the air the Registrant claims that "*emissions to air reduced by technical equipment (95% removal efficiency, e.g. thermal oxidisers)*" or "*Local exhaust ventilation is installed, with exhaust air scrubbers/filters (95% removal efficiency)*". ECHA notes that if default release factors related to the uses and conditions of use of the substance (ERC) were used the Risk Characterisation Ratios would be much greater than 1.

ECHA furthermore notes that the information provided by the Registrant for water and soil does not seem to be consistent. The Registrant assumes a zero emission for both compartments but does not discard any release by stating that "*there is practically no direct release to water and soil*".

ECHA also notes that, for the release to the air, the statement "*emissions to air reduced by technical equipment (95% removal efficiency, e.g. thermal oxidisers)*" (emphasis added) is not specific enough to describe how exposure is controlled. The Registrant does not specifically describe the type of technical equipment, adequate for the registered substance, used to reduce emissions of the substance to air by 95%. The same applies for the statement "*Local exhaust ventilation is installed, with exhaust air scrubbers/filters (95% removal efficiency)*".

In his comments, the Registrant indicated his intention to revise the exposure assessment and risk characterisation for environment once the final decision is received since new hazard data might be necessary to be generated that can have an impact in the assessment.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation of the REACH Regulation, the Registrant is requested to revise the exposure assessment and risk characterisation for the environment by providing a justified assessment of exposure:

- describing the operational conditions and risk management measures to be applied; and
- demonstrating that the risk characterisation leads to an adequate control of the risks.

Notes for consideration by the Registrant

In relation to the revision of the exposure assessment, and in particular the consideration of biodegradation processes, ECHA notes that the Registrant has changed the conclusion on biodegradability of the registered substance. In the registration dossier (submission No. [redacted]), the Registrant concluded that the registered substance is not readily biodegradable based on ready biodegradability study from Fiebig S. (2009), which showed only 2% biodegradation after 28 days. In the updated dossier (submission No. [redacted]), the Registrant has provided QSAR results (BIOWIN) predicting ready biodegradability of the registered substance. The Registrant now concludes that registered substance is ready biodegradable. ECHA disagrees with this conclusion since: i) the experimental results are more robust than a QSAR prediction, and ii) in-house predictions with the same tool (BIOWIN) do not predict ready biodegradability of the registered substance as the Registrant indicates.

3. Revised exposure assessment and risk characterization for workers (Annex I, sections 5 and 6)

In addition to the general requirements of Annex I, Sections 5 and 6 outlined under III.C.2., ECHA notes that Annex I, section 6.5. of the REACH Regulation states that "for those human effects and those environmental spheres for which it was not possible to determine a DNEL or a PNEC, a qualitative assessment of the likelihood that effects are avoided when implementing the exposure scenario shall be carried out".

The Registrant has provided a quantitative approach to carry out the exposure assessment and the risk characterization for the registered substance using the model ECETOC TRA.

ECHA notes that the quantitative approach to estimate the exposure contains the following deficiencies:

- The Registrant used model ECETOC TRA which, according to ECETOC's own guidance, should be used with caution for CMR and sensitizer substances. ECHA notes that the registered substance is classified as a skin and respiratory sensitizer (Skin Sens. 1 and Resp. Sens. 1). The exposure levels will need to be controlled to a much lower level than those predicted by the model due to the sensitizing properties.
- The Registrant has used the local exhaust ventilation (LEV) modifiers within the ECETOC TRA model when modeling dermal exposure. ECHA notes that ECHA's Guidance on information requirements and chemical safety assessment (Version 2.1, November 2012) Chapter R.14, section R.14.4.8, pages 20 to 25, outlines that the dermal exposure is underestimated compared to measured data in situations with LEV. Therefore, to compensate this limitation, the LEV should be set to "0" to reach a

conservative estimate. ECHA notes that the substance is a liquid with a low vapour pressure and application of LEV will have little effect on potential for exposure.

ECHA notes that the quantitative approach to carry out the risk characterization contains the following deficiencies:

- Comparison with long term systemic DNELs cannot demonstrate safe use in relation to prevention of induction of either respiratory or skin sensitization.
- ECHA also notes that the registered substance is classified as a skin and respiratory sensitizer (Skin Sens. 1 and Resp. Sens. 1) and therefore, according to ECHA's Guidance on information requirements and chemical safety assessment, Chapter E, section E.3.4, pages 18 to 32, a qualitative assessment to define risk management measures (RMMs) and operational conditions (OCs) should have been the first step. Therefore, considering the recommendations in ECHA's Guidance on information requirements and chemical safety assessment, section E.3.4., ECHA notes that the Registrant should have used a qualitative approach.
- Furthermore, the Registrant has provided non-specific advice about risk management measures and personal protective equipment stating that "*sensitization and eye irritation properties are sufficiently controlled by applied risk minimization methods including respiratory masks, protective suit, gloves and safety glasses*", "*protection of hands: PVC or other plastic material gloves*" or "*body protection: light weight protective clothing*". ECHA notes that pursuant to Annex VI, section 5 of the REACH Regulation the information provided in the registration dossier must be consistent with that in the Safety Data Sheet. The requirements of Safety Data Sheets are specified in Annex II (amended by Commission Regulation (EC) No 453/2010). According to Annex I section 8.2.2.2. of Annex II, "*detailed specifications shall be given on which equipment will provide adequate and suitable protection*". More specifically, the type of gloves including the type of material and its thickness and the typical or minimum breakthrough times of the glove material and if it is necessary to protect a part of the body other than the hands, the type and quality of protection equipment required. This is particularly more important taking into account the sensitizing properties of the substance. Further, Annex I section 8.2.2.2. requires that where parts of the body other than the hands may be exposed, the type and quality of protection equipment such as gauntlets, boots, bodysuit are specified based on the hazards associated with the substance. If necessary, any additional skin protection measures and specific hygiene measures shall be indicated.

In his comments, the Registrant indicated his intention to revise the exposure assessment and risk characterization for workers once the final decision is received since new hazard data might be necessary to be generated that can have an impact in the assessment.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, the Registrant is requested to provide an adequate qualitative assessment related to controlling the risk of inhalation and skin sensitization for all the identified uses and detailing the operational conditions and risk management measures required. The chemical safety report shall be amended accordingly.

C. Deadline for submitting the required information

In the draft decision communicated to the Registrant the time indicated to provide the requested information was 36 months from the date of adoption of the decision. This period of time took into account the fact that the draft decision also requested another study (two-generation reproductive toxicity study, Annex X, Section 8.7.3). As this study is not addressed in the present decision, ECHA considers that a reasonable time period for providing the required information in the form of an updated IUCLID5 dossier is 24 months from the date of the adoption of the decision. The decision was therefore modified accordingly.

IV. Adequate identification of the composition of the tested material

In carrying out the studies required by the present decision it is important to ensure that the particular sample of substance tested is appropriate to assess the properties of the registered substance, taking into account any variation in the composition of the technical grade of the substance as actually manufactured by each registrant. If the registration of the substance by any registrant covers different grades, the sample used for the new studies must be suitable to assess these grades.

Furthermore, there must be adequate information on substance identity for the sample tested and the grade(s) registered to enable the relevance of the studies to be assessed.

V. Information on right to appeal

An appeal may be brought against this decision to the Board of Appeal of ECHA under Article 51(8) of the REACH Regulation. Such an appeal shall be lodged within three months of receiving notification of this decision. Further information on the appeal procedure can be found on ECHA's internet page at http://echa.europa.eu/regulations/appeals. The notice of appeal will be deemed to be filed only when the appeal fee has been paid.

[redacted]
Leena Ylä-Mononen
Director of Evaluation