ECHA
EUROPEAN CHEMICALS AGENCY

Decision number: CCH-D-2114296532-44-01/F Helsinki, 9 March 2015

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

For Formaldehyde, reaction products with ethylenediamine, CAS No 84066-92-2 (EC No 281-928-5), 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 Formaldehyde, reaction products with ethylenediamine, CAS No 84066-92-2 (EC No 281-928-5), submitted by [redacted] (Registrant).
The scope of this compliance check decision is limited to the standard information requirements of Annex VI, 2 and Annex VIII, 8.4.3. of the REACH Regulation.

This decision is based on the registration as submitted with submission number [redacted], for the tonnage band of 100 to 1000 tonnes per year. This decision does not take into account any updates submitted after 15 January 2015, 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 25 August 2014.

On 28 October 2014 ECHA sent the draft decision to the Registrant and invited him to provide comments within 30 days of the receipt of the draft decision.

By 5 December 2014 the Registrant did not provide any comments on the draft decision to ECHA.

On 15 January 2015 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.

As no proposal for amendment was submitted, ECHA took the decision pursuant to Article 51(3) of the REACH Regulation.

II. Information required

A. Information in the technical dossier related to the identity of the substance

Pursuant to Articles 41(1), 41(3), 10(a)(ii) and Annex VI, Section 2 of the REACH Regulation the Registrant shall submit the following information for the registered substance subject to the present decision:

1) Composition of the substance (Annex VI, Section 2.3.);

2) Description of the analytical methods (Annex VI, Section 2.3.7. of the REACH Regulation).

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

Pursuant to Articles 41(1), 41(3), 3(28), 10(a)(vii), 12(1)(e) and 111, as well as Annexes VII, XI and I of the REACH Regulation the Registrant shall the following information for the registered substance subject to the present decision:

3) Robust study summary in the IUCLID format for the information requirement of *in vitro* gene mutation in mammalian cells (Annex VIII, Section 8.4.3.) as specified in Section III.B.

C. Deadline for submitting the required information

Pursuant to Articles 41(4) and 22(2) of the REACH Regulation the Registrant shall submit to ECHA by **16 June 2015** an update of the registration dossier containing the information required by this decision, including, where relevant, an update of the Chemical Safety Report.

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 related to the identity of the substance

Pursuant to Article 10(a)(ii) of the REACH Regulation, the technical dossier shall contain information on the identity of the substance as specified in Annex VI, Section 2 of the REACH Regulation. In accordance with Annex VI, Section 2 the information provided shall be sufficient to enable the identification of the registered substance.

1) Composition of the substance (Annex VI, Section 2.3.)

The substance composition corresponds to the chemical representation of what the substance consists of and is therefore an essential part of substance identification and the cornerstone of all the REACH obligations. ECHA notes that the registration does not contain information that is sufficient for establishing the composition of the registered substance, as required under Annex VI, Section 2.3. of the REACH Regulation.

More specifically, ECHA notes that one generic reference substance ("Formaldehyde, reaction products with ethylenediamine"), covering all constituents of this substances of unknown or variable composition, complex reaction products or biological materials (UVCB substance), has been reported in the IUCLID section 1.2. However, the dossier is missing detailed information on the constituents and groups of constituents expected to be present in the composition of the registered substance.

According to chapter 4.3 of the Guidance for identification and naming of substances under REACH and CLP (Version: 1.3, February 2014), the Registrant shall note that, for UVCB substances such as the registered substance, the following applies:

- All constituents present in the substance with a concentration of ≥ 10 % shall be identified and reported individually;
- All known constituents and constituents relevant for the classification and/or PBT assessment of the registered substance (e.g formaldehyde) shall be identified and reported individually; and
- Unknown constituents shall be identified as far as possible by a generic description of their chemical nature.

For each constituent and group of constituents, the minimum, maximum and typical concentration shall be reported.

ECHA notes that, although only one generic reference substance is reported, additional information on the constituents of the substance is available in the dossier:

- In the remarks field of the "*Molecular and structural information*" of the generic reference substance the constituents of the substance are described as being:
  - Isomers of [redacted]
  - Isomers of [redacted]
  - "*numerous unidentified molecules ... formed from the reaction*".

  However, the information on the concentration of all the constituents is missing and additionally for the "*numerous unidentified molecules*", no information is provided on the identity of the constituents that are meant to be covered.
- In IUCLID section 1.4, the analytical report "[redacted]" specifies the presence of water, formaldehyde and ethylenediamine in the composition of the substance; however these constituents are not mentioned in the remarks field of the generic reference substance.

The Registrant is accordingly requested to provide the information on the composition of the substance needed to unambiguously identify the registered substance subject to the present decision by reporting in IUCLID section 1.2 all the constituents and group of constituents present in the substance. The Registrant shall ensure that the information is consistent throughout the dossier. Therefore, considering the information reported in the remarks field of the "*Molecular and structural information*" and in IUCLID section 1.4 as representative of the composition of the substance, the following constituents and group of constituents and respective typical, maximum and minimum concentrations are expected to be reported in IUCLID section 1.2:

- [redacted],
- [redacted],
- Isomers of [redacted],
- Isomers of [redacted],
- other "*numerous unidentified molecules*",
- water,
- formaldehyde, and
- ethylenediamine.

Additionally, for the other "*numerous unidentified molecules*", the Registrant shall provide as far as possible details on the chemical identity of the constituents covered by this generic group.

ECHA considers that the water which is reported in IUCLID section 1.4 acts as a solvent. The Registrant shall note that in accordance to Article 3(1) of the REACH Regulation, solvents are not regarded as a part of a substance as a substance is defined as a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

The Registrant is accordingly requested to indicate in IUCLID section 1.2 only that amount of water which cannot be removed without affecting the stability or the composition of the substance. For any quantity of water which cannot be removed, the Registrant shall include a scientific justification in the Remarks field of the reference substance dataset of "water" in IUCLID section 1.2 and provide analytical data for the determination of the composition of the substance, including the amount of water in IUCLID section 1.4.

Further technical details on how to report the composition of UVCB substances in IUCLID are available in paragraphs 2.1 and 2.2.2 of the Data Submission Manual – Part 18: How to report the substance identity in IUCLID 5 for registration under REACH (version: 2.0, July 2012) on the ECHA website. Information on how to report several compositions in IUCLID is specified in paragraph 2.3, Q&A8 of that manual.

2) Description of the analytical methods (Annex VI Section 2.3.7. of the REACH Regulation).

"Description of the analytical methods" is an information requirement as laid down in Annex VI, Section 2.3.7. of the REACH Regulation. Adequate information needs to be present in the technical dossier for the registered substance to meet this information requirement.

ECHA observes that the Registrant did not provide sufficient description of the analytical methods used for the identification and quantification of the constituents and groups of constituents required to be reported in the composition of the registered substance, as requested according to Annex VI section 2.3.7.

ECHA notes that the description of the methods used for the quantification of the substance is not consistent and does not allow to unambiguously verify the composition of the substance. More specifically, in the report "[redacted]" submitted in IUCLID section 1.4:

- The Registrant reported as constituents of the substance: [redacted]% of water, [redacted]% of ethylenediamine, [redacted]% of formaldehyde and [redacted]% of the compounds identified with GC. However the sum up of the concentrations of the constituents is above 100% and therefore the reported concentrations are not consistent; and

- The Registrant stated that due to the experimental conditions of the method used for the quantification of formaldehyde and ethylenediamine, the reported concentrations are "*higher than the true values*". Additionally, the reported NMR data does not support the presence of the two constituents in the composition of the substance (the expected signals for the two type of substances are not present in the spectra). Therefore, it is not possible to verify the content of the two starting materials in the composition of the substance.

The Registrant is accordingly requested to provide a consistent description of the analytical methods and the results thereof, used for the identification and quantification of the constituents and groups of constituents required to be reported in the composition of the registered substance. More specifically the Registrant shall report the description of analytical methods that:

- Provide consistent results on the composition of the substance (where the sum of the concentrations of the different constituents and group of constituents is not above 100%); and

- Unambiguously support the presence or not of formaldehyde and ethylenediamine in the composition of the substance and report as far as possible their concentrations.

The description of the analytical methods shall be sufficient for the methods to be reproduced and shall therefore include details of the experimental protocol followed, any calculation made and the results obtained.

The Registrant shall ensure that the information is consistent throughout the dossier.

The Registrant shall also note that any analytical data shall be generated on the actual substance for which the registration refers to after removing the amount of water which is not necessary for the stabilisation of the substance.

As for the reporting of the above data in the registration dossier, the information shall be attached in IUCLID section 1.4.

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

Pursuant to Articles 10(a)(vi) and/or (vii), 12(1)(d) of the REACH Regulation, a technical dossier for a substance manufactured or imported by the Registrant in quantities of 100 to 1000 tonnes per year shall contain as a minimum the information specified in Annexes VII to IX of the REACH Regulation.

3) *In vitro* gene mutation study in mammalian cells (Annex VIII, Section 8.4.3.)

Pursuant to Articles 10(a)(vii) and 12(1)(d) of the REACH Regulation, a registration for a substance produced in quantities of 100 to 1000 tonnes per year shall contain robust study summaries of the information derived from the application of Annexes VII to IX and XI if required under Annex I. According to Annex I, 1.1.4., if one study is available, a robust study summary should be prepared for that study. If there are several studies addressing the same effect, normally the study or studies giving rise to the highest concern shall be used to establish the DNEL and a robust study summary shall be prepared. Pursuant to Articles 10(a)(vii) and 111, the technical dossier containing robust study summaries shall be provided in the IUCLID format.

According to Article 3(28) of the REACH Regulation, a robust study summary is a detailed summary of the objectives, methods, results and conclusions of a full study report providing sufficient information to make an independent assessment of the study minimising the need to consult the full study report. ECHA has described how to report robust study summaries in the Practical Guide 3 (How to report robust study summaries, Version 2.0 – November 2012).

ECHA notes that the Registrant covered the information requirement for *in vitro* gene mutation study in mammalian cells (Annex VIII, Section 8.4.3.) for the registered substance by a study referred to as "[redacted]" in the IUCLID dossier.

In the conclusions of this study flagged as a key study the Registrant states "Formaldehyde, reaction product with ethylenediamine is considered to be mutagenic in the *in vitro* mammalian cell gene mutation assay (thymidine kinase locus) in mouse lymphoma L5178Y cells. In addition, a clastogenic effect of the test item extract should be considered because of the increased percentage of small colonies." ECHA considers that the reporting detail provided by the Registrant precludes ECHA to verify the Registrant's reported findings.

More in detail, the Registrant solely indicated in the results section of the study "[redacted]" that "in the main experiment a biologically relevant increase of mutants was found after treatment with the test item (with and without metabolic activation). The Global Evaluation Factor was exceeded by the induced mutant frequency at huge number of the concentrations." and "in the main experiment, colony-sizing showed clastogenic effects induced by the test item under the experimental conditions (with and without metabolic activation)". The Registrant failed to provide individual results for the different tested concentrations and provided no information regarding the size of the colonies observed. In the absence of such data it is impossible for ECHA to assess the clastogenic nature of the effect observed in this test.

The level of detail with which the study results are reported is insufficient. No detailed results are included in the endpoint study record. The test method EU B.17./OECD 476 requires that, the following information is reported:

- signs of toxicity;
- signs of precipitation;
- data on pH and osmolality during the exposure to the test substance, if determined;
- colony size if scored for at least negative and positive controls;
- laboratory's adequacy to detect small colony mutants with the L5178Y TK
- +/- system, where appropriate;
- dose-response relationship, where possible;
- statistical analyses, if any;

- concurrent negative (solvent/vehicle) and positive control data;
- historical negative (solvent/vehicle) and positive control data with ranges, means;
- standard deviations; and
- mutant frequency.

ECHA considers that the information currently provided for the *in vitro* gene mutation study in mammalian cells reported under the endpoint study record "[redacted]" do not meet the requirements of Article 3(28) of the REACH Regulation governing the content of robust study summaries. More particularly, important detailed information on the results obtained from this study is missing from the endpoint study record "[redacted]". In line with Article 3(28) of the REACH Regulation, the information in the IUCLID dossier should allow ECHA to make independent assessment of the study and their use in human health hazard assessment.

Pursuant to Article 41(1) and (3) of the REACH Regulation, the Registrant is therefore requested to provide a robust study summary with the above missing elements for the *in vitro* gene mutation study in mammalian cells "[redacted]" flagged as key study in IUCLID section 7.6.1.

IV. 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://www.echa.europa.eu/regulations/appeals. The notice of appeal will be deemed to be filed only when the appeal fee has been paid.

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Leena Ylä-Mononen
Director of Evaluation