EUROPEAN CHEMICALS AGENCY

Decision number: CCH-D-2114302944-52-01/F Helsinki, 30 June 2015

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

For 2-phenoxyethanol, CAS No 122-99-6 (EC No 204-589-7), 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 2-phenoxyethanol, CAS No 122-99-6 (EC No 204-589-7), submitted by [redacted] (Registrant). ECHA notes that in the joint submission covering the current registration, the Chemical Safety Report (CSR) is not provided by the lead registrant on behalf of the member registrants. The scope of this compliance check is limited to the standard information requirements of Annex I and Section 2 of Annex VI, while the compliance check concerning the information requirements laid down in Annexes VII to X was done on the lead registrant dossier of this joint submission.

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 5 March 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 23 October 2013.

On 3 December 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 17 January 2014 ECHA received comments from the Registrant on the draft decision. On 25 March 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 5 March 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 related to chemical safety assessment and chemical safety report

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

1. Revised DNELs for workers and for the general population for long term dermal exposure – systemic effects (Article 14(3) and Annex I) using the recommended assessment factors by ECHA[1] or a full justification for not using the recommended assessment factors in the DNEL derivation, as specified in Section III.B.1 below;
2. Documentation that risks to workers are adequately controlled (Article 14(6), Annexes I,) as further specified under section III.B.2

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 **7 January 2016**.

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 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 (CSR) 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) of the REACH Regulation, the chemical safety assessment shall include human health, physicochemical and environmental hazard assessment. If the substance fulfils the criteria for any of the hazard classes or categories referred to in Article 14(4) 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 additional steps of the CSA shall be carried out in accordance with Section 5 (for the exposure assessment) and 6 (for Risk characterisation) of Annex I of the REACH Regulation.

[1] Link to ECHA guidance document R.8 is: http://echa.europa.eu/documents/10162/17224/information_requirements_r8_en.pdf

1. DNELs for long term dermal exposure – systemic effects for workers and for the general population

According to Article 14(3) and Annex I, 1.0.3 and 1.4.1 of the REACH Regulation, DNEL(s) (Derived No-Effect Levels) shall be established for the substance, reflecting the likely route(s), duration and frequency of exposure. Depending on the available information and the exposure scenarios it may be necessary to identify different DNELs for each relevant human population (e.g. workers, consumers). The following factors shall, among others, be taken into account when deriving DNELs:

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

Annex I, 1.4.1 also requires that a full justification for the establishment of DNELs is given specifying, among others, the choice of information used, the route of exposure and the duration and frequency of exposure of the substance for which the DNEL is valid.

The ECHA "Guidance on information requirements and chemical safety assessment" (Volume 8, R8[2]) provides further details and specifically provides default factors which should be applied to derive DNELs in the absence of substance specific information.

In the present case, ECHA points out that since the dermal absorption of the registered substance is, according to the technical dossier, high, >[redacted] % and rapid and the substance is used in coatings, paints, cosmetics, textile processing aids, plant production products, cleaning agents and functional fluids, there may be a concern for workers and general population. Accordingly, it is necessary to identify a respective DNEL for these relevant human populations.

In identifying respective DNELs for these two human populations, ECHA observes that the Registrant has not followed 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 used the default AF of 5 (workers) and 10 (general population) for intraspecies differences (ECHA guidance R 8; chapter R.8.4.3.3) to derive a DNEL for long term exposure for systemic effects. Instead, the Registrant has used the AF of 3 (workers) and 5 (general population). This means that higher DNELs than those based on the ECHA Guidance are derived.

The Registrant, in his comments submitted according to Article 51(1) of the REACH Regulation, proposed to further justify the use of the ECETOC assessment factors in the derivation of the DNELs and referred to distributions of human data for various toxicokinetic and toxicodynamic parameters. Moreover, the Registrant has stated that "the 95th percentile is considered sufficiently conservative to account for intraspecies variability in the general population".

[2] Link to ECHA guidance document R.8 is: http://echa.europa.eu/documents/10162/17224/information_requirements_r8_en.pdf

ECHA points out that, according to ECHA Guidance R.8, deviations from default assessment factors should be justified with substance-specific arguments. More specifically the introductory part of paragraph R.8.4.3, page 22 reports: "However, when the available data do not allow the derivation of substance-specific or analogue-specific assessment factors, default assessment factors should be applied." The guidance document R.8 was developed and approved in cooperation with the Member States, industry and non-governmental organisations in order to define further the derivation of DNELs according to the provisions of Annex I section 1.4.1.
In the present case,ECHA Secretariat notes that on one hand some of the Registrant's justification is only based on general considerations and do not provide substance-specific information. Furthermore, the above reference to the 95th percentile is an arbitrary opinion of the Registrant on the level of protection regarded sufficient for the human population; it is not a scientific justification. In addition, ECHA's default factors are based on the available relevant publications and reports. The Registrant's reasoning does not provide ECHA with reasons to alter its default assessment factors.
On the other hand, the information provided by the Registrant which is substance specific does not provide information about inter-human variation in toxic response to the registered substance for the following reasons:
1) The registrant provides pharmacokinetic information on the metabolism of the parent compound, assuming that 2-phenoxyethanol is the toxicophore. However, the Registrant has not provided information to prove that the metabolites of 2-phenoxyethanol are harmless. ECHA cannot therefore verify the Registrant's conclusion that 2-phenoxyethanol is the (only) toxicophore. If the metabolites of 2-phenoxyethanol have appreciable toxicity, then information on the disappearance of the parent compound does not directly inform on the toxicity of the metabolites of 2-phenoxyethanol. Thus the pharmacokinetic information on 2-phenoxyethanol does not provide information on inter-human differences in toxicity of 2-phenoxyethanol.
2) The Registrant provides information comparing the metabolism of 2-phenoxyethanol, particularly noting that metabolism in human is faster in human (including premature newborn infants) than in experimental animals. However, this argument addresses inter-species variation in metabolism, and not inter-human variation in metabolism (i.e. intraspecies variation). The Registrant has not provided in his comment quantification of the variation in metabolism of 2-phenoxyethanol in humans, including premature newborn infants, and so there is not an argument to justify that the lower assessment factor for intra-species variation is valid even in terms of the metabolism of the registered substance.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, the Registrant shall submit in the CSR either revised DNELs for workers and for the general population for long term dermal exposure - systemic effects using the recommended assessment factors or a full justification why the recommended assessment factors are not used in the DNEL derivation by specifying how the following has been taken into account:

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

2. Documentation that risks to workers are adequately controlled

Article 14(6) as well as Annex I, 0.1, 5.1.1, 5.2.4 and 6.2 of the REACH Regulation require registrants to identify and apply appropriate measures to adequately control the risks identified in a CSR. The exposure shall be estimated and risks shall be characterised in the CSR under the assumption that relevant risk management measures have been implemented. According to Annex I, section 0.7, if the substance is placed on the market, the relevant exposure scenarios, including the risk management measures and operational conditions, shall be included in an annex to the safety data sheet in accordance with Annex II to the REACH Regulation (as amended by Commission Regulation (EU) No 453/2010).

Pursuant to Annex VI, Section 5 and Annex II, section 0.1.2 of the REACH Regulation the information provided in the Safety Data Sheet shall be consistent with that in the CSR. The requirements of Safety Data Sheets are specified in Annex II (amended by Commission Regulation (EU) No 453/2010).

According to Annex I, 5.2.5, appropriate models can be used for the estimation of the exposure levels.

In the present case, ECHA notes that the Registrant has used ECETOC TRA model to predict the dermal challenge. In ECHA's view, this model cannot, however, be considered appropriate for the following reasons:

- Key exposure scenarios provided by the Registrant relate to metal working fluid use and cleaning with high pressure washers where exposure may occur to all body parts. Within the CSR, there is however a lack of advice on protective clothing to protect against wetting and spillage to body parts other than the hands. This is not modelled by the ECETOC TRA and leads to a requirement to address protective clothing as a risk management measure within the CSR.

- Professional spraying during cleaning has been modelled with exposure modification provided through use of gloves alone. It is likely that dermal exposure will be more than to the hands only, especially for operations intended to be wide and dispersive, so a reduction in exposure through use of gloves alone is unrealistic for such a spraying task.

- With the predicted [redacted]% dermal absorption for this substance, it is critical to have the correct risk management measures in place to prevent those exposures that fall outside the ECETOC TRA modelled range. The ECETOC TRA is not validated and is considered a poor model for estimating dermal exposure and generally only considers exposure to the hands and forearms, whereas exposure can occur to other body parts. The model is a poor tool upon which to determine the appropriate suite of risk management measures for a substance with the physical properties, use profile and skin penetration characteristics of 2-phenoxyethanol.

In ECHA's view, the ECETOC TRA model thus has the potential to under-predict dermal challenge, i.e, what gets on the skin especially when compared to other specifically developed models, based on real data (e.g. RISKOFDERM, REACH Guidance R14[3]). This is a particular concern for substances that are highly absorbed, such as the registered substance. ECHA Guidance R14 (R 14; chapter R.14.4.6.2) further states dermal exposure is a complex issue and requires registrants to consider also the possibility of peak internal dose when substances are suspected of having a high rate of dermal absorption.

ECHA considers that RISKOFDERM, a dermal exposure model cited in ECHA guidance R14, generates predicted estimates of potential dermal exposure that are often higher than those predicted by ECETOC TRA. RISKOFDERM also provides information on the distribution of exposure. These estimates can be reduced through proposed implementation of appropriate protective work wear that would include gloves (EN 374) and protective clothing to the minimum standard EN 13034:2005 (Protective clothing against liquid chemicals. Chemical protective clothing offering limited protection against liquid chemicals (type 6 and type PB [6] equipment)). In conclusion, RISKOFDERM provides much more specific information on potential dermal exposure and provides the necessary information upon which to base sound advice on risk management measures.

Taking account of the likely unreliability of the ECETOC TRA model, comparison with the outputs from other models, the potential for exposure to other body parts and the partial advice on risk management measures within the dossier for tasks where professional and industrial workers may come into direct contact with concentrated solutions ([redacted]% is a concentrated solution), the Registrant is requested to provide appropriate advice on those measures that prevent such exposure across the range of proposed exposure scenarios.

The Registrant, in his update, has removed almost any reference to protective clothing as a risk management measure in the CSR. The only references to "protective clothing" are now under classification and labelling (p 17 of CSR) and under carcinogenicity (p 65 of CSR: "*Exposure via dermal route is also considered to be negligible in most use scenarios since the employees are wearing gloves and protective clothing*)."

The Registrant is requested to ensure that the information provided in the CSR on skin protection measures (Annex I, Section 5.1.1.), including to the hands and other parts of the body is, in addition to the type of gloves sufficient for the supplier to fulfill their obligations related to the safety data sheet – currently there is insufficient information in the chemical safety report on which to make a sound judgement on requirements for risk management measures.

Therefore, the Registrant shall, in line with Article 14(6), 41(1) and 41(3) of the REACH Regulation, provide a revised CSR documenting appropriate risk management measures to adequately reflect the uncertainty arising from the exposure modeling, the potential for real dermal challenge other than to the hands, rapid absorption through the skin, and the deficiencies in the current proposals for personal protective equipment. The workers and professionals should wear, as a minimum, protective clothing to the standard EN 13034:2005, Chemical protective clothing offering limited protection against liquid chemicals (type 6 and type PB [6] equipment). Furthermore, the Registrant is requested to provide documentation for the recommended material type, its thickness and the typical or minimum breakthrough time for the glove type recommended, with regard to the amount and duration of dermal exposure in the CSR. If it is necessary to protect a part of the body

[3]Link to ECHA guidance document R.14 is :http://echa.europa.eu/documents/10162/13632/information_requirements_r14_en.pdf

other than the hands, the type and quality of protection equipment required shall also be specified.

The Registrant is reminded that other models proposed in the REACH guidance R14 do provide a more scientifically-based estimation of potential dermal challenge – RISKOFDERM is specifically described and will provide estimates of challenge for specified operational conditions.

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.

[redacted]
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