EUROPEAN CHEMICALS AGENCY

Helsinki, 26 March 2020

Addressee: [redacted]

Decision number: CCH-D-2114502139-57-01/F
Substance name: Butanedioic acid, sulfo-, 4-C12-14 (even numbered) alkyl esters, disodium salts
EC number: 939-638-8
CAS number: NS
Registration number: [redacted]
Submission number: [redacted]
Submission date: 08/06/2016
Registered tonnage band: 100-1000

DECISION ON A COMPLIANCE CHECK

Based on Article 41 of Regulation (EC) No 1907/2006 (the REACH Regulation), ECHA requests you to submit information on:

1. ***In vitro* gene mutation study in bacteria (Annex VII, Section 8.4.1.) with the registered substance**

2. **In vitro cytogenicity study in mammalian cells or in vitro micronucleus study (Annex VIII, Section 8.4.2.) with the registered substance**

3. **In vitro gene mutation study in mammalian cells (Annex VIII, Section 8.4.3.) with the registered substance, provided that a negative result in Annex VII, Section 8.4.1. and Annex VIII, Section 8.4.2." is obtained**

4. **Screening study for reproductive/developmental toxicity (Annex VIII, Section 8.7.1.; test method: OECD TG 421 or 422) in rats, oral route with the registered substance**

5. **Sub-chronic toxicity study (90-day), oral route (Annex IX, Section 8.6.2.; test method: EU B.26./OECD TG 408) in rats with the registered substance**

6. **Pre-natal developmental toxicity study (Annex IX, Section 8.7.2.) in a first species with the registered substance**

7. **Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: CO2 evolution test, OECD TG 301B) or**

   Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: MITI test (I), OECD TG 301C) or

   Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: Closed bottle test, OECD TG 301D) or

   Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: Manometric respirometry test, OECD TG 301F) or

Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: Ready biodegradability – CO2 in sealed vessels (headspace test), OECD TG 310);

8. **Long-term toxicity testing on aquatic invertebrates (Annex IX, Section 9.1.5.; test method: Daphnia magna reproduction test, EU C.20./OECD TG 211) with the registered substance;**

9. **Long-term toxicity testing on fish (Annex IX, Section 9.1.6.1.; test method: Fish, early-life stage (FELS) toxicity test, OECD TG 210) with the registered substance;**

10. **Simulation testing on ultimate degradation in surface water (Annex IX, Section 9.2.1.2.; test method: Aerobic mineralisation in surface water – simulation biodegradation test, EU C.25./OECD TG 309) at a temperature of 12 °C with the registered substance;**

11. **Soil simulation testing (Annex IX, Section 9.2.1.3.; test method: Aerobic and anaerobic transformation in soil, EU C.23./OECD TG 307) at a temperature of 12 °C with the registered substance;**

12. **Sediment simulation testing (Annex IX, Section 9.2.1.4.; test method: Aerobic and anaerobic transformation in aquatic sediment systems, EU C.24./OECD TG 308) at a temperature of 12 °C with the registered substance;**

13. **Identification of degradation products (Annex IX, 9.2.3.) using an appropriate test method with the registered substance;**

14. **Bioaccumulation in aquatic species (Annex IX, Section 9.3.2.; test method: Bioaccumulation in fish: aqueous and dietary exposure, OECD TG 305, aqueous exposure) with the registered substance;**

You are required to submit the requested information in an updated registration dossier by ***3 October 2024*** except for the information requested under points 1 – 7 and 10 – 13, for 1. In vitro gene mutation study in bacteria; 2. In vitro cytogenicity study in mammalian cells or in vitro micronucleus study; 3. In vitro gene mutation study in mammalian cells provided that both studies requested under 1. and 2. have negative results; 4. Screening for reproductive/developmental toxicity; 5. Sub-chronic toxicity study (90-day), oral route; 6. Pre-natal developmental toxicity study; 7. Ready biodegradability; 10. Simulation testing on ultimate degradation in surface water; 11. Soil simulation testing; 12. Sediment simulation testing; 13. Identification of degradation products which shall be submitted in an updated registration dossier by ***3 January 2023***. For each deadline, you shall also update the chemical safety report, where relevant. The deadlines have been set to allow for sequential testing.

The reasons of this decision are set out in Appendix 1. The procedural history is described in Appendix 2 and advice and further observations are provided in Appendix 3.

Appeal

This decision can be appealed to the Board of Appeal of ECHA within three months of its notification. An appeal, together with the grounds thereof, has to be submitted to ECHA in writing. An appeal has suspensive effect and is subject to a fee. Further details are described under: http://echa.europa.eu/regulations/appeals.

Approved[1] under the authority of Christel Schilliger-Musset, Director of Hazard Assessment

[1] As this is an electronic document, it is not physically signed. This communication has been approved according to ECHA's internal decision-approval process.

Appendix 1: Reasons

Your registration dossier contains for multiple endpoints adaptation arguments in the form of a grouping and read-across approach according to Annex XI, 1.5. of the REACH Regulation. ECHA has assessed first the scientific and regulatory validity of your Grouping and read-across approach in general before the individual endpoints.

0. Grouping and read-across approach for toxicological information

Your registration dossier contains adaptation arguments which are based on a grouping and read-across approach in accordance with Annex XI, Section 1.5. of the REACH Regulation. You have grouped registered substances and formed a group (category) of 'mono-ester sulphosuccinates' to predict from data for reference substance(s) missing toxicological properties for other substances within this group (read-across approach). You seek to adapt the information requirements for the following standard information requirements by grouping substances in the category and applying a read-across approach in accordance with Annex XI, Section 1.5:

- In vitro gene mutation study in bacteria (Annex VII, Section 8.4.1.)
- In vitro cytogenicity study in mammalian cells or in vitro micronucleus study (Annex VIII, Section 8.4.2.);
- In vitro gene mutation study in mammalian cells (Annex VIII, Section 8.4.3.);
- Screening for reproductive/developmental toxicity (Annex VIII, Section 8.7.1.);
- Sub-chronic toxicity study (90-day; Annex IX, Section 8.6.2.);
- Pre-natal developmental toxicity study (Annex IX, Section 8,7.2);

ECHA has considered the scientific and regulatory validity of your grouping and read-across approach in general before assessing the individual properties in this appendix.

According to Annex XI, Section 1.5., two conditions shall be necessarily fulfilled. Firstly, there needs to be structural similarity between substances which results in a likelihood that the substances have similar physicochemical, toxicological and ecotoxicological properties so that the substances may be considered as a category. Secondly, it is required that the relevant properties of a substance within the category may be predicted from data for reference substance(s) within this category (read-across approach). ECHA considers that the generation of information by such alternative means should offer equivalence to the information generated by prescribed tests or test methods.

Based on the above, a grouping and read-across hypothesis needs to be provided. This hypothesis establishes why a prediction for a specific toxicological property is reliable and should be based on recognition of the structural similarities and differences between the source and registered substances. This hypothesis explains why the differences in the chemical structures should not influence the toxicological properties or should do so in a regular pattern. The read-across approach must be justified scientifically and documented thoroughly, also taking into account the differences in the chemical structures. There may be several lines of supporting evidence used to justify the grouping and read-across hypothesis, with the aim of strengthening the case.

Due to the different nature of each endpoint and consequent difference in scientific considerations (e.g. key parameters, biological targets), a read-across must be specific to the endpoint or property under consideration. Key physicochemical properties may determine the fate of a compound, its partitioning into a specific phase or compartment and largely influence the availability of compounds to organisms, e.g. in bioaccumulation and toxicity tests. Similarly, biotic and abiotic degradation may alter the fate and bioavailability of compounds

as well as be themselves hazardous, bioaccumulative and/or persistent. Thus, physicochemical and degradation properties influence the human health and environmental properties of a substance and should be considered in read-across assessments. However, the information on physicochemical and degradation properties is only a part of the read-across hypothesis, and it is necessary to provide additional justification which is specific to the endpoint or property under consideration.

The ECHA Read-across assessment framework[2,3] foresees that there are two options which may form the basis of the read-across hypothesis- (1) (Bio)transformation to common compound(s)- the read-across hypothesis is that different substances give rise to (the same) common compounds to which the organism is exposed and (2) Different compounds have the same type of effect(s)- the read-across hypothesis is that the organism is exposed to different compounds which have similar toxicological and fate properties as a result of structural similarity (and not as a result of exposure to common compounds).

Finally, Annex XI, Section 1.5. lists several additional requirements, which deal with the quality of the studies which are to be read-across.

0.1. Scope of the category

You have provided two read-across documents in Section 13 of IUCLID. In the first document [redacted] the 'sulfosuccinates' are divided into five sub-categories. The second document [redacted] is a detailed read-across argumentation for the sub-category 'mono-ester sulfosuccinates'.

You have identified the following substances as 'mono-ester sulfosuccinates' category members:

1. butanedioic acid, sulfo-, mono (c16-18 and c18-unsatd. alkyl) esters, ammonium sodium salts (CAS No 147993-66-6; EC No 604-617-1);
2. disodium isodecyl sulfosuccinate (CAS No 37294-49-8; EC No 253-452-8);
3. 90268-37-4 butanedioic acid, sulfo-, 4-c12-14 (even numbered)-alkyl esters, disodium salts (CAS No 90268-37-4; EC No 939-638-8);
4. 1141 sulfosuccinat, i-c10, di-na-salz (CAS No 90268-39-3; EC No 944-611-9); and
5. 90268-36-3_master_butanedioic acid, sulfo-, 1-c12-18-alkyl esters, disodium salts (CAS No 90268-36-3; EC No 290-836-4).

These substances are hereafter indicated as substances [1] to [5].

With regard to the proposed grouping ECHA has the following observations:

0.1.1. Applicability domain of the category

As stated above, a group or category needs to defined in such a manner, based on chemical similarity, that the boundaries of the group are clearly indicated, which is referred here to as Applicability domain of the category. The applicability domain of a category is defined by the set of inclusion and/or exclusion criteria that identify the range of values within which reliable predictions can be made for category members.

Wide structural varation

[2] Read-Across Assessment Framework (RAAF). 2017 (March) ECHA, Helsinki. 60 pp. Available online: https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across

[3] Read-across assessment framework (RAAF) - considerations on multi-constituent substances and UVCBs. 2017 (March) ECHA, Helsinki. 40 pp. Available online: https://echa.europa.eu/publications/technical-scientific-reports

In your read-across justification document, the applicability domain of your category is defined by the basic structure of the category members as *"All members of the mono-ester Sulfosuccinate subgroup, are mono-esters of sulfosuccinates. Beside the sulfosuccinate group they do not contain other bonds than C-C and C-H. The rests may be linear or branched. The regular variation of the C-chain length leads to small but systematic changes of physicochemical properties which are essential for the bioavailability which is a prerequisite for potential toxicological interactions."* Furthermore you have indicated that *"The subgroup comprises different sulfosuccinates (monoconstituents and UVCBs substances) varying in C-chain length (C10-C18)"*

Based on this information, ECHA understands that the length and the linear, or branched nature of the carbon chain constitute the main structural differences among the members of your category. The range of the linear carbon chain length allowed within the category is well defined, ranging from C10 to C18, and the only cations applicable for the category members are sodium and ammonium.

Thus, concerning the chemical similarity of the members of the category, ECHA notes that one member of the category, (CAS No 147993-66-6; EC No 604-617-1) includes ammonium, which makes that substance structurally different from the other category members and is likely to have an effect on the toxicity of that substance.

Furthermore, ECHA observes that you have not provided inclusion and exclusion criteria defining the allowed structural and positioning variations in relation with the branching of the structure of the category members. In particular, no information on the distribution of the carbon chain length between the linear and the branched alkyl rests, i.e. the carbon chain length of the linear and the carbon chain length and positioning of the alkyl branching alkyl rests, is provided apart from referring to an overall range of C10 to C18.

In conclusion, ECHA notes that you have not addressed the variation induced by branching of the structure of substances, and that you have included a category member that contains ammonium. Therefore, ECHA considers that you have failed to adequately characterise the boundaries and the applicability domain of the category. Therefore, the range of substances for which the properties can be predicted within this category cannot be determined. Refined inclusion and exclusion criteria addressing these aspect are necessary to unambiguously establish the boundaries of the applicability domain of your category.

One source substance is not a member of the Monoester category

You have suggested that for reproductive toxicity, and pre-natal developmental toxicity one source substance for the read-across is CAS No 577-11-7, which is not a member of the category of mono-esters, as you have defined it in "applicability domain" of the justification document.

You have not provided a justification on the selection of this substance as a source substance, apart from a claim that based on "toxicological similarity between subgroups, read-across was also performed between the subgroups (e.g. between the monoester and the di-ester subgroup)". ECHA notes that the similarity between the sub-groups has not been demonstrated. Furthermore, no details on the structure or other toxic properties of this substance were included.

ECHA concludes that because there is a wide structural variation among the member of the category, you have not demonstrated that these substances are chemically similar. Furthermore, by inclusion of a substance, which is not a member of the category of monoesters, you have contradicted with the boundaries of the applicability domain and the inclusion criteria, as you have defined them.

In your comments to the draft decision, you indicated that you intend to provide more detailed information on the read-across and further justification of the read-across on the aspects raised above.

0.1.2. Characterisation of the composition of the category members

The characterisation of the substances identified as members of a category needs to be as detailed as possible in order to confirm category membership and to assess whether the attempted predictions are not compromised by the composition and/or impurities. The information provided on the substance characterisation of the category members must establish a clear picture of the chemical structures of the constituents of the members of the category. It is recommended to follow the ECHA *Guidance for identification and naming of substances under REACH and CLP* for all source substances within the category.[4].

Branching

You indicated that the members of this category differ based on the "*The variation of the C-chain length / alkyl -group*". ECHA understands from this information that quantitative and qualitative differences with regard to the alkyl chains exist in the composition of the members of this category. You have provided, for each category member, information on the amount of one alcohol of defined carbon chain length used in the respective manufacturing process.

However, no other quantitative and qualitative information detailing the branched nature (or branching) of the specific alcohol is provided in the read-across justification document.

Since branching of the molecules may affect on toxicity of the substance, ECHA notes that you have failed to explain why different branching of the strucuture of some category members (or their constituents) would not compromise the attempted prediction of the toxic properties of the target substances within the category.

UVCB nature of the substances

Four of the five members of the category are UVCB substances. Concerning the registered substance, you reported the constituents with their chemical name and numerical identifiers, and concentration ranges. However, ECHA has observed that the constituents are reported with a very broad concentration range, i.e.

- [redacted] for "disodium 4-dodecyl 2-sulphonatosuccinate / disodium 4-(dodecyloxy)-4-oxo-2-sulfonatobutanoate / 13192-12-6 / 236-149-5",
- [redacted] for "disodium 4-tetradecyl 2-sulphonatosuccinate / disodium 4-oxo-2-sulfonato-4-(tetradecyloxy)butanoate / 13192-13-7 / 236-150-0",
- [redacted] for "trisodium sulphonatosuccinate / trisodium 2-sulfonatosuccinate / 13419-59-5 / 236-524-3",
- [redacted] for "disodium 4-hexadecyl 2-sulphonatosuccinate / disodium 4-

[4] Guidance for identification and naming of substances under REACH and CLP (version 2.1, May 2017). ECHA, Helsinki. 127 pp. Available online: https://echa.europa.eu/guidance-documents/guidance-on-reach

(hexadecyloxy)-4-oxo-2-sulfonatobutanoate / 13197-74-5 / 236-163-1", and
- [redacted] for sodium sulphate / disodium sulfate / 7757-82-6 / 231-820-9"

Considering the wide ranges of constituents in the UVCBs, the composition of this UVCB substance and other UVCB substances in the category varies widely. You have not explained whether and how the highly variable composition may effect the toxicity of the category members. Therefore, ECHA considers that you have not demonstrated that the composition of the substances within the category is sufficiently similar to allow prediction of the toxicity of the target substance(s) of the category.

In conclusion, because of branching of the substances, and UVCB nature of the substances, ECHA considers that the level of information provided on the composition of the category members and the information provided on the composition of the substance subject to this decision are not adequate to establish the similarity of the structure and in the composition of these substances.

Consequently, ECHA notes that you have not demonstrated that the attempted predictions of the toxicity are not compromised by the varying composition of the category members.

In your comments to the draft decision, you indicated that you intend to provide more detailed information on the read-across and further justification of the read-across on the aspects raised above.

0.2. Predictions within the category

0.2.1. Description of your predictions of toxicological properties

In Annex XI, Section 1.5., it is provided that the relevant properties of a substance within the group may be predicted from data for reference substance(s) within the group by interpolation. Therefore, the data matrix that specifies the available data should be prepared that includes the available toxicological data of the reference substance(s). Furthermore, you shoud indicate the method of prediction within the category, i.e. you should explain how the data that is available of the category members can be used to predict the toxicity of the category member(s) that lack that toxicity data. The "hypothesis", which the prediction is based on, may be e.g. that the category members share similar toxic property(ies) or that there is a trend within the category and the a given member of a category can be placed orderly (with)in this trend.

Your read-across justification document for the proposed 'mono-ester sulfosuccinates' category [redacted] covers:
- compositional information;
- the reasoning for the grouping based on structural similarity;
- information to support the read-across approach based on physico-chemical properties;
- data matrixes showing the available physico-chemical, environmental fate and (eco)toxicological data and how the data is to be read-across within the category.

You use the following arguments to support the prediction of properties within the category:
"*The subgroup [...] is built on the following characteristics:*
- similarities in the chemical process
- similar functional groups
- similar general composition [...]
The assumption that the properties of the subgroup members are similar can be shown in a first comparison of the physical-chemical and toxicological data."

You have provided the following hypothesis for the prediction of toxicological properties "*irrespective of chain length, logKow and water solubility, toxicological properties are similar between subgroup members*".

In order to support your hypothesis, you further refer to similarities in the acute toxicity, skin irritation, eye irritation, and skin sensitisation properties of the category members. You also poin at the outcome of bacterial mutagenicity assays and sub-acute and sub-chronic repeated dose toxicity studies conducted with the category members.

ECHA understands that on the basis of structural similarity and similarity or regular pattern in toxicological properties for some members of the category, you consider it possible to predict the human health and environmental toxicity properties of the registered substance from the other members of the proposed 'mono-ester sulfosuccinates' category. As an integral part of this prediction, you propose that the source and registered substances have properties that are similar. ECHA considers that this information is your read-across hypothesis.

0.2.2. ECHA analysis of your predictions of toxicological properties in light of the requirements of Annex XI, Section 1.5

ECHA has evaluated your read-across hypothesis and considered whether the justification you have provided to support your hypothesis are relevant and adequate to allow prediction of toxicological properties for the endpoints under consideration. In this regard, a number of deficiencies are identified in your justification used to support the read-across hypothesis and these are listed below.

Inconsistent results of the studies

Annex XI, Section 1.5 of the REACH Regulation requires that "*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*". According to the ECHA *Guidance on information requirements and chemical safety assessment* Chapter R.6.2, Section R.6.2.2.2, (version 1.0, May 2008) "*a demonstration of consistent trends (*or similarity*) in the behaviour of a group of chemicals is one of the desirable attributes of a chemical category and one of the indicators that a common mechanism for all chemicals is involved*"

Consequently, it is expected that you provide a category hypothesis, which explains why and how the unknown toxicity of the target substances can be predicted using the toxicity and other data on the sources substance(s) within the category. The data that you provide for the members of the category has to support and demonstrate the validity of your hypothesis.

Repeated dose toxicity

ECHA considers that your read-across hypothesis is based upon **similarity** in physico-chemical properties and the observation of "*irrespective of chain length, logKow and water solubility, toxicological properties are similar between subgroup members*". With this consideration, you have used read-across to predict properties of category members for the endpoints genotoxicity, repeated dose toxicity, reproductive toxicity, and developmental toxicity.

In your comments to the draft decision, you indicated that the NOAEL of 60 mg/kg bw/day in the OECD 422 study (2013) with read across substance CAS 90268-36-3 is

based on oral gavage dosing. The NOAEL in the 90 day study (1975) is reported to be 174 mg/kg, based on a 0.25% dietary application. Although the NOAEL is still higher in the 90-day study, the conditions of both studies were considered to be different, therefore this is not considered as a difference in toxicity. You agree that further investigation is needed. Route is only one of the variables between these two studies and you have not ruled out the possibility that there are other reasons to the toxicity difference ECHA acknowledges your agreement that further investigations is needed.

To support the read-across for repeated dose toxicity and pre-natal developmental toxicity, you have submitted the oral screening test, with rats (OECD 422) made with one member of the category [5] resulting in the NOAEL of 60 mg/kg bw/day. However, the NOAEL of the 90-day oral study with another category member [2] was 750 mg/kg bw/day in rats. ECHA notes that the results of these two studies suggest that there is a difference in toxicity between these substances.

Observation that indicates different toxicity was also made in a 14-day range finding studies performed with these two members of the category. i.e. [5] and [2], by the same laboratory in 2013. In these studies the NOAEL values were the same, but significantly more severe effects (e.g. mortality) were noticed with [5]. These findings are further supported by the LD50-values of the two substances, i.e. 580 mg/kg bw for [5] and 2340 mg/kg for [2].

In your comments to the draft decision, you indicated that CAS 90268-36-3 indeed provides lowest LD50 of 580 mg/kg, however CAS 37294- 49-8 also reports an LD50 between 300 and 2000 mg/kg bw compared to LD50>2000 mg/kg for CAS 147993-66-6. Probably there is a slightly higher toxicity profile at the lower end of the Mono-ester category, which might be based on lower molecular weight fractions. The NOAEL of 60 mg/kg bw/day was used as a worst case NOAEL for the category. ECHA agrees that you can in principle apply a worst case approach in your predition based on read-across. However, currently there are limited information on the higher human health studies to demonstrate that the specified substances represent a worst case within the category.

ECHA concludes that your read-across justification which is based on 'similarity' among in the category members, is not supported, as there is evidence of different toxicity between two members of the category, i.e. [2] and [5]. Consequently, you have not demonstrated the validity of your hypothesis.

In your comments to the draft decision, you indicated that the wording on similarity among category member may need to be adapted, and additional testing will be discussed under the Substance specific section. ECHA takes note of your intentions to adapt the current text.

Acute toxicity, skin and eye irritation, and skin sensitisation

In the data matrix given in your category justification document [redacted] you have provided the summary of the data that is available for physico-chemical properties, ecotoxicity and for human health endpoints.

In order to support your claim that the substances included in the category have similar properties for the endpoints under consideration in the read-across approach, you refer to the acute toxicity, skin irritation, eye irritation, skin sensitisation properties of the category members.

You have pointed out that "*For the toxicological endpoints, in general there was low systemic toxicity in the whole subgroup (LD50 oral and dermal > 2000 mg/kg bw), except for one substance with mainly C12 carbon chain length composition (CAS No 90268-36-3) which showed an oral LD50 of 580 mg/kg bw. For the local skin and eye irritation, a general common behaviour was observed for the mono-ester subgroup: skin irritation (CLP category 2), and eye irritating (CLP category 1). Toxicological data further demonstrated that the substances of this subgroup were not sensitizing.* "

ECHA notes that some of the substances are not classified for skin irritation or eye damage based on experimental data, whereas some other substances are classified for these effects. ECHA therefore observes, that the category members have dissimilar toxic properties for these endpoints. The same applies to the acute toxicity, where the test results differ.

ECHA concludes that you have provided data, which suggests that the repeated dose toxicity of two category members differs. Furthermore, you have reported different acute toxicity values and different classification concerning skin and eye irritation among the category members. This information contradicts with your proposed prediction, which is based on similar toxicological properties. Consequently, you have not demonstrated the validity of your hypothesis.

Data matrix, missing data

Annex XI, Section 1.5 of the REACH Regulation requires that "*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, or "category" of substances*". A number of factors contribute to the robustness of a category. According to the ECHA *Guidance on information requirements and chemical safety assessment* Chapter R.6.2, Section R.6.2.1.5.f, (version 1.0, May 2008), one of these factors is the density and distribution of the available data across the category. In order to identify a regular pattern and/or to derive reliable prediction of the properties of the members of the category, adequate and reliable information covering the range of structural variations identified among the category members needs to be available.

Consequently, the category justification should include a comparison of the existing experimental data for the category members, e.g. in a from of a data matrix. There should be sufficient existing data to support your hypothesis and the method of prediction.

You have referred to the available source information for the endpoints under consideration and concluded that the category members are "*not genotoxic (nor carcinogenic) and not toxic to reproductive and developmental toxicity*". ECHA observes that the **data density** across the category is limited based on the information provided in the read-across justification document and technical dossier of category members. Specifically, *In vitro* cytogenicity test (CA) and *in vitro* gene mutation test in mammalian cells data are available for **only one** category member [5]. Also for reproductive toxicity and developmental toxicity, information is only available for **one** member of the category, substance [5].

Moreover, for one category member, i.e. substance [4] no toxicity study has been provided, and therefore any read-across *from* that substance or *for* that substance cannot be justified with similarity of toxicologal effects.

ECHA considers that one data point or study cannot not cover the structural variation within

the category domain. Furthermore, ECHA considers that with only one study, **similarity among** the category members cannot be established for the endpoints in question (i.e. genotoxicity and reproductive toxicity). Consequently, the data do now allow overall conclusions on the endpoints under consideration. Therefore, predictions cannot be based on the matrix you have provided as it fails to demonstrate similarity among the category members.

In your comments to the draft decision, you indicated that you agree that the data is limited to CAS 90268-36-3; additional testing will be discussed under the Substance specific section. You provide a concise table which outlines the studies as requested by ECHA for all member of the Monoester group. You indicate that you agree that limited toxicological information is available, and that 'bridging studies' for the mutagenicity, developmental and reproductive toxicity properties will strengthen the read across approach. You indicate in Table 2, your testing plan, the studies that will be performed as 'bridging' studies in Phase 1. ECHA acknowledges your testing plan in Table 2. ECHA recognises that it partly follows the information requirement in the draft decisions on the member substances of the category. Concerning the Phase 3 of the plan, ECHA understands that the testing made at that phase depends on the results obtained in the phases 1 and 2. ECHA cannot pre-approve a testing plan that depends on study results, which will only be available in future. Therefore, ECHA will not amend or revise the information requirement made in the draft decision. In case the registrant will, in their dossier update, provide an adaptation of data that has been requested, based on phase 1 and 2 study results, it is the responsibility of the registrant to justify and document their adaptation according to the rules set out in REACH Annex XI or in column two of the relevant Annexes (VIII-IX). ECHA will evaluate those adaptations in the follow-up phase of the compliance check.

You also request prolongation of the decision deadline in line with your testing plan. ECHA has assessed and responded to your request to prolong the decision deadline below.

ii. Conclusion on the read-across approach for toxicological properties

Because of the deficiencies explained above, ECHA considers that your read-across justification and documentation do not support your claim of 'similarity' among in the category members. Your read-across justification lacks evidence substantiated by adequate and reliable data that are required to support the read-across hypothesis. Therefore, your read-across hypothesis is not a reliable basis, whereby the properties of the members of the category may be predicted from data for source substance(s) within the group by interpolation to other substances in the group.

Thus, the adaptation does not comply with the general rules of adaptation as set out in Annex XI, Section 1.5. Therefore, ECHA rejects all adaptations in the technical dossier that are based on Annex XI, Section 1.5.

II. SPECIFIC CONSIDERATIONS ON THE INFORMATION REQUIREMENTS

In accordance with Articles 10(a) and 12(1) of the REACH Regulation, a technical dossier registered at 100 to 1000 tonnes per year must contain, as a minimum, the information specified in Annexes VII to IX to the REACH Regulation. The information to be generated for the dossier must fulfil the criteria in Article 13(4) of the same regulation.

1. *In vitro* gene mutation study in bacteria (Annex VII, Section 8.4.1.)

An "*In vitro* gene mutation study in bacteria" is a standard information requirement as laid

down in Annex VII, Section 8.4.1. 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.

You have sought to adapt this information requirement according to Annex XI, Section 1.5. of the REACH Regulation by providing a study record for an Ames test (OECD TG 471) made with analogue substance (EC No 290-836-4, CAS No 90268-36-3), made in 2013, reliability 2, according to GLP. The studies included five strains, positive controls and vehicle control were included in the test. The test result is negative with and without metabolic activation.

However, as explained above in Appendix 1, section 0 of this decision, your adaptation of the information requirement is rejected.

Therefore, your adaptation of the information requirement is rejected.

As explained above, the information provided 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.

ECHA considers that the bacterial reverse mutation test (test method EU B.13/14. / OECD TG 471) is appropriate to address the standard information requirement of Annex VII, Section 8.4.1. of the REACH Regulation.

In your comments you have indicated your principal agreement to perform the requested test in Appendix 1 of the draft decision and your step-wise testing plan. ECHA acknowledges that but has not, at this stage, accepted the step-wise testing plan or the further adaptations that may follow from it, as explained in chapter "Data matrix" above. ECHA will evaluate any further information in the follow-up stage of the process.

Concerning your request to prolong the decision deadline, ECHA has assessed and responded to it below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision: Bacterial reverse mutation test (test method: EU B.13/14. / OECD TG 471)

2. *In vitro* cytogenicity study in mammalian cells or *in vitro* micronucleus study (Annex VIII, Section 8.4.2.)

An "*In vitro* cytogenicity study in mammalian cells or an *in vitro* micronucleus study" is a standard information requirement as laid down in Annex VIII, Section 8.4.2. 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.

You have sought to adapt this information requirement according to Annex XI, Section 1.5. of the REACH Regulation by providing a study record for an *in vitro* micronucleus test OECD 487, made in 2013, with read across substance, Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts, (EC No 290-836-4, CAS No 90268-36-3), reliability 2, according to the GLP, vehicle and positive controls were included, the test result is negative.

However, as explained above in Appendix 1, section 0 of this decision, your adaptation of the information requirement is rejected.

As explained above, the information provided 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.

ECHA considers that the *in vitro* mammalian chromosome aberration test (test method OECD TG 473) and the *in vitro* mammalian cell micronucleus test (OECD TG 487) are appropriate to address the standard information requirement of Annex VIII, Section 8.4.2. of the REACH Regulation.

In your comments you have indicated your principal agreement to perform the requested test in Appendix 1 of the draft decision and your step-wise testing plan. ECHA acknowledges that but has not, at this stage, accepted the step-wise testing plan or the further adaptations that may follow from it, as explained in chapter "Data matrix" above. ECHA will evaluate any further information in the follow-up stage of the process.

Concerning your request to prolong the decision deadline, ECHA has assessed and responded to it below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision: *In vitro* mammalian chromosome aberration test (test method: OECD TG 473) or *in vitro* mammalian cell micronucleus study (test method: OECD TG 487).

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

An "*In vitro* gene mutation study in mammalian cells" is an information requirement as laid down in Annex VIII, Section 8.4.3. of the REACH Regulation, "if a negative result in Annex VII, Section 8.4.1. and Annex VIII, Section 8.4.2." is obtained.

You have sought to adapt this information requirement according to Annex XI, Section 1.5. of the REACH Regulation by providing a study record for an *in vitro* mammalian cell gene mutation test waived, OECD 476 made in 2013, with analogue substance Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts, (EC No 290-836-4, CAS No 90268-36-3), reliability 2, vehicle and positive controls included, the test result is negative.

However, as explained above in Appendix 1, section 0 of this decision, your adaptation of the information requirement is rejected.

As explained above, the information provided 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.

ECHA considers that the *in vitro* mammalian cell gene mutation tests using the *Hprt* and *xprt* genes (OECD TG 476) and the *in vitro* mammalian cell gene mutation tests using the thymidine kinase gene (OECD TG 490) are appropriate to address the standard information requirement of Annex VIII, Section 8.4.3.

In your comments you have indicated your principal agreement to perform the requested test in Appendix 1 of the draft decision and your step-wise testing plan. ECHA acknowledges that but has not, at this stage, accepted the step-wise testing plan or the further adaptations that may follow from it, as explained in chapter "Data matrix" above. ECHA will evaluate any further information in the follow-up stage of the process.

Concerning your request to prolong the decision deadline, ECHA has assessed and responded

to it below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision: *In vitro* mammalian cell gene mutation test (test method: OECD TG 476 *or* OECD TG 490) provided that both studies requested under 1. and 2. have negative results.

4. Screening study for reproductive/developmental toxicity (Annex VIII,

"Screening for reproductive/developmental toxicity" (test method OECD TG 421 or 422) is a standard information requirement as laid down in Annex VIII, Section 8.7.1. of the REACH Regulation if there is no evidence from available information on structurally related substances, from (Q)SAR estimates or from *in vitro* methods that the substance may be a developmental toxicant. No such evidence is presented in the dossier. Therefore, adequate information on this endpoint needs to be present in the technical dossier for the registered substance to meet this information requirement.

You have sought to adapt this information requirement according to Annex XI, Section 1.5. of the REACH Regulation by providing the following study records:

- A combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422) with analogue substance, (EC No 290-836-4, CAS 90268-36-3), made in 2013, in rats, gavage, reliability 2, according to GLP yes.
- A three-generation study OECD 416, with analogue substance (EC No 209-406-4, CAS 577-11-7), made in 1986 was provided, reliability 2, according to GLP. This substance was not included in the data matrix of the sub-category. Structural comparison of the registered substance and this source substance was not provided.
- An old (1970) two-generation study, with analogue substance (EC No 209-406-4, CAS 577-11-7), made in 1970, in rats, gavage.

However, as explained above in Appendix 1, section 0 of this decision, your adaptation of the information requirement is rejected.

Therefore, your adaptation of the information requirement is rejected.

As explained above, the information provided 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 methods OECD TG 421/422, the test is designed for use with rats. On the basis of this default assumption ECHA considers testing should be performed with rats.

ECHA considers that the oral route is the most appropriate route of administration for substances except gases to focus on the detection of hazardous properties on reproduction as indicated in ECHA *Guidance on information requirements and chemical safety assessment* (version 6.0, July 2017) Chapter R.7a, Section R.7.6.2.3.2. Since the substance to be tested is a dust, ECHA concludes that testing should be performed by the oral route.

In your comments you have indicated your principal agreement to perform the requested test in Appendix 1 of the draft decision and your step-wise testing plan. ECHA acknowledges that but has not, at this stage, accepted the step-wise testing plan or the further adaptations that

may follow from it, as explained in chapter "Data matrix" above. ECHA will evaluate any further information in the follow-up stage of the process.

Concerning your request to prolong the decision deadline, ECHA has assessed and responded to it below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision: Reproductive/developmental toxicity screening test (test method: OECD TG 421) *or* Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (test method: OECD TG 422) in rats by the oral route.

For the selection of the appropriate test, please consult ECHA *Guidance on information requirements and chemical safety assessment*, Chapter R.7a, Section R.7.5 and 7.6 (version 6.0, July 2017).

You should also carefully consider the order of testing of the requested screening (OECD TG 421/422) and the developmental toxicity studies (OECD TG 414) to ensure that unnecessary animal testing is avoided, paying particular attention to the endpoint specific guidance (https://echa.europa.eu/documents/10162/13632/information_requirements_r7a_en.pdf) Section R.7.6.2.3.2., pages 484 to 485 of version 6.0 – July 2017."

5. Sub-chronic toxicity study (90-day), oral route (Annex IX, Section 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 you have provided the following study records:

- A combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422) with analogue substance, (EC No 290-836-4, CAS No 90268-36-3), made in 2013, in rats, gavage, reliability 2, according to GLP,
- In addition, a dose range finding study for the OECD TG 422 study with analogue substance, (EC No 290-836-4, CAS No 90268-36-3) was provided, made in 2013, in rats, gavage, reliability 2, according to GLP, and
- In addition, 14 days dose range finding study for OECD 421 with read across substance, (EC No 253-452-8, CAS No 37294-49-8), made in 2013, in rats, gavage, reliability 2, according to GLP.

However, these studies does not provide the information required by Annex IX, Section 8.6.2., because a combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (test method: OECD TG 422) and the dose range finding studies do not provide the information required by Annex IX, Section 8.6.2., because the exposure duration is less than 90 days and the number of animals examined per dose group for histopathology and clinical chemistry is significantly lower than in the 90 day sub-chronic toxicity study (OECD TG 408).

The 14 days dose range finding 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 than in the 90 day sub-chronic toxicity study (OECD TG 408). Therefore, the sensitivity of that study is much lower than that of a 90-day study.

In addition, you have sought to adapt this information requirement according to Annex XI,

Section 1.5. of the REACH Regulation by providing study records for

- a sub-chronic oral toxicity study made in 1975 in dogs, feeding, OECD TG 409, with analogue substance Disodium 4-[(8-methylnonyl)oxy]-4-oxo-2-sulfonatobutanoate, (EC No 253-452-8, CAS No 37294-49-8), reliability 2, not under GLP, and
- a sub-chronic oral toxicity study made in 1975 in rats, feeding, OECD TG 409, with analogue substance Disodium 4-[(8-methylnonyl)oxy]-4-oxo-2-sulfonatobutanoate, (EC No 253-452-8, CAS No 37294-49-8), reliability 2, not under GLP.

However, as explained above in Appendix 1, section 0 of this decision, your adaptation of the information requirement is rejected.

ECHA has evaluated the quality of two sub-chronic studies, and note that these studies are old (1975) and were not performed according to GLP. For the oral study in rats, (OECD TG 408) you have pointed out that there are *"Limited parameters measured for haematology, serum analysis and urinalysis, only gross lesions examined histopathologically."* Therefore, ECHA concludes that there is a quality issue in this study, which would prevent it from being used as a source study for read-across, as according to Annex XI, section 1.1.2.

As explained above, the information provided 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.

ECHA has evaluated the most appropriate route of administration for the study. Based on the information provided in the technical dossier and/or in the chemical safety report, ECHA considers that the oral route - which is the preferred one as indicated in ECHA Guidance on information requirements and chemical safety assessment (version 5.0, December 2016) Chapter R.7a, Section R.7.5.4.3 - is the most appropriate route of administration. More specifically, the substance is reported to occur as a dust, but no significant proportion (>1% on weight basis) of particles are of inhalable size (mass median is 79 µm).

Hence, the test shall be performed by the oral route using the test method EU B.26./OECD TG 408.

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

In your comments you have indicated your principal agreement to perform the requested test in Appendix 1 of the draft decision and your step-wise testing plan. ECHA acknowledges that but has not, at this stage, accepted the step-wise testing plan or the further adaptations that may follow from it, as explained in chapter "Data matrix" above. ECHA will evaluate any further information in the follow-up stage of the process.

Concerning your request to prolong the decision deadline, ECHA has assessed and responded to it below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are 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 TG 408) in rats.

6. Pre-natal developmental toxicity study (Annex IX, Section 8.7.2.) in a first species

A "pre-natal developmental toxicity study" (test method EU B.31./OECD TG 414) 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.

You have sought to adapt this information requirement according to Annex XI, Section 1.5. of the REACH Regulation by providing the following study records:

- Key study is development toxicity study, "similar to" OECD TG 414, with analogue substance Butanedioic acid, sulfo-, 1,4-bis (2-ethylhexyl) ester, sodium salt; sodium 1,4-bis[(2-ethylhexyl)ox..., (EC No 209-406-4, CAS No 577-11-7), made in 1976, in rats, feeding, reliability 2, not under GLP. The source substance is not covered in the justification document. No structural comparison between the target substance and this source substance was provided, and this source substance is not addressed in the data matrix.
- In addition, another old developmental toxicity study was provided, "similar to" OECD 414, made with a analogue substance Butanedioic acid, sulfo-, 1,4-bis (2-ethylhexyl) ester, sodium salt; sodium 1,4-bis[(2-ethylhexyl)ox..., (EC No 209-406-4, CAS No 577-11-7), made in 1976, reliability 2, not under GLP.
- Furthermore, an old (1975) non-guideline "combined reproduction- teratogenicity" study was provided, with the analogue substances disodium 4-[(8-methylnonyl)oxy]-4-oxo-2-sulfonatobutanoate, (EC No 253-452-8, CAS No 37294-49-8), reliability 2, not under GLP.

However, as explained above in Appendix 1, section 0 of this decision, your read-across adaptation of the information requirement is rejected.

In the technical dossier you have also provided a study record for

- a combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422), with analogue substance, Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts, (EC No 290-836-4, CAS No 90268-36-3), made in 2013, in rats, gavage, reliability 2, according to GLP.

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. Therefore, your adaptation of the information requirement is rejected.

As explained above, the information provided 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 TG 414, the rat is the preferred rodent species and the rabbit the preferred non-rodent species. On the basis of this default assumption ECHA considers testing should be performed with rats or rabbits as a first species.

ECHA considers that the oral route is the most appropriate route of administration for substances except gases to focus on the detection of hazardous properties on reproduction as indicated in ECHA *Guidance on information requirements and chemical safety assessment* (version 6.0, July 2017) Chapter R.7a, Section R.7.6.2.3.2. Since the substance to be tested is a dust, ECHA concludes that testing should be performed by the oral route.

In your comments you have indicated your principal agreement to perform the requested test in Appendix 1 of the draft decision and your step-wise testing plan. ECHA acknowledges that

but has not, at this stage, accepted the step-wise testing plan or the further adaptations that may follow from it, as explained in chapter "Data matrix" above. ECHA will evaluate any further information in the follow-up stage of the process.

Concerning your request to prolong the decision deadline, ECHA has assessed and responded to it below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are 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 TG 414) in a first species (rat or rabbit) by the oral route.

7. Ready biodegradability (Annex VII, Section 9.2.1.1.)

"Ready biodegradability" is a standard information requirement as laid down in Annex VII, section 9.2.1.1. 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.

You have sought to adapt this information requirement according to Annex XI, Section 1.5. of the REACH Regulation by providing a study record for a Biodegradation in water: screening test (OECD TG 301B) with the analogue substance butanedioic acid, sulfo-, 1-c12-18 (even numbered)-alkyl esters, disodium salts (EC no 290-836-4), i.e. Substance [5].

You have provided read-across justification document for the proposed category [redacted] in Section 13 of IUCLID. You have provided the following argument for the prediction of ready biodegradability in this document: *"Biodegradation tests are available for two of the six subgroup members. They show that the substances are readily biodegradable."*

ECHA has evaluated the information and documentation provided in the registration dossier in light of the requirements of Annex XI, Section 1.5 of the REACH Regulation. ECHA considers that provided adaptation, contrary to adaptations of other endpoints discussed under Section *"Grouping of substances and read-across approach"* above, is relevant and limited only to the endpoint of Ready biodegradability. Therefore, ECHA's assessment of this adaptation is discussed under this endpoint specific section of the decision.

ECHA notes that the documentation that you provided in your dossier does not contain any specific justification for this endpoint whereby relevant properties of the registered substance may be predicted from data for the source substances. Specifically, your dossier does not address why such prediction would be possible.

In the absence of this information, ECHA cannot verify that the properties of the registered substance can be predicted from the data on the source substance for this endpoint.

Hence, for this endpoint you have not established that relevant properties of the registered substance can be predicted from data on the analogue substance. Since your adaptation does not comply with the general rules of adaptation as set out in Annex XI, Section 1.5., it is rejected and it is necessary to perform testing on the registered substance.

In addition to the reasons indicated above for which your adaptation cannot be accepted, ECHA notes that there are specific considerations which also indicate a failure to meet the requirement of Annex XI, Section 1.5. Specifically, you have not demonstrated that the source substance (Substance [5]) is the worst-case for the prediction of ready biodegradability for

the registered substance (Substance [3]).

Annex I, Section 3.1.5 requires that *"the study or studies giving rise to the highest concern shall be used to draw a conclusion"*. In the context of a read-across approach this is related to the selection of the source study and of the source substance. ECHA notes that the data matrix includes ready biodegradability data only for Substances [1], [3] and [5] showing that these source substances are ready biodegradable. However, ECHA notes that there is a substance in the proposed category, i.e. disodium isodecyl sulfosuccinate (EC nr 253-452-8, i.e. Substance [2]), that is not ready biodegradable based on a study not included in the data matrix, hence it is of higher concern than the readily biodegradable source substances. However, you merely claim that category members are readily biodegradable, but you have not provided any justification on why this study on Substance [2] was not included in the data matrix and hence why Substance [2] was not considered as source substance for the prediction of ready biodegrability. In the absence of such justification, ECHA considers that you have not demonstrated that the source substance used as the basis for the prediction of ready biodegradability is the one which gives rise to the highest concern for this endpoint in accordance with Annex I, Section 3.1.5.

Furthermore, ECHA observes that you have sought to adapt this information requirement according to Annex XI, Section 1.3. by providing a supporting study for the ready biodegradability, which is *"Estimation of biodegradability by BIOWIN™ v4.10 of EPI Suite™ v.4.11"*. ECHA notes that according to Annex XI, section 1.3 results of Qualitative or Quantitative structure-activity relationship models (QSARs) may be used instead of testing when 4 main conditions listed in this section are met, including that adequate and reliable documentation of the applied method is provided. *Guidance on information requirements and chemical safety assessment, Chapter R.6: QSARs and grouping of chemicals* (May 2008) describes different types of QSAR reporting formats which would include information addressing other three conditions necessary to be met for results of QSAR to be used instead of testing. ECHA notes that such documentation is not provided in the registration dossier. Therefore, ECHA cannot assess that for the used model scientific validity has been established, that the substance falls within the applicability domain of the used model and whether results are adequate for the purpose of classification and labelling, and risk assessment. Consequently, the QSAR information submitted does not fulfil the requirements of Annex XI, Section 1.3.

Therefore, your adaptation of the information requirement cannot be accepted.

As explained above, the information provided 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.

Regarding the test method, depending on the substance profile, you may conclude on ready biodegradability, by applying the most appropriate and suitable test guideline among those listed in the ECHA *Guidance on information requirements and chemical safety assessment, Chapter R.7b* (version 4.0, June 2017) and in the paragraph below. The test guidelines include the description of their applicability domain.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to perform one of the following tests with the registered substance subject to the present decision:

Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: CO2 evolution test, OECD TG 301B)

or

Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: MITI test (I), OECD TG 301C)

or

Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: Closed bottle test, OECD TG 301D)

or

Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: Manometric respirometry test, OECD TG 301F)

or

Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: Ready biodegradability – CO2 in sealed vessels (headspace test), OECD TG 310) with the registered substance

In your comments to the draft decision, you agree to provide the requested information according to OECD 301/310.

8. Long-term toxicity testing on aquatic invertebrates (Annex IX, Section 9.1.5.)

"Long-term toxicity testing on aquatic invertebrates" is a standard information requirement as laid down in Annex IX, Section 9.1.5. 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.

You have sought to adapt this information requirement according to Annex IX, Section 9.1.5 column 2. You provided the following justification for the adaptation:

"According to REACH Annex IX section 9.1 column 2, "long-term toxicity testing shall be proposed by the registrant if the chemical safety assessment ... indicates the need to investigate further the effects on aquatic organisms." According to COMMISSION REGULATION (EC) No 134/2009 amending Annex XI of Regulation (EC) No 1907/2006 (REACH legal text) exposure-based waiving is possible provided "that it is demonstrated and documented that exposure in all scenarios is well below an appropriate derived no-effect level (DNEL) or predicted no effect concentration (PNEC) derived under specific conditions." Based on the outcome of the risk assessment, this test is not needed."

However, ECHA notes that your adaptation does not meet the specific rules for adaptation of Annex IX, Section 9.1.5., column 2 and to the general rule for adaptation of Annex XI, Section 3. The ready biodegradability data available in the technical dossier cannot be considered reliable, as discussed in point 7 above. As a result, the exposure assessment based on the conclusion that the substance is ready biodegradable and consequently the risk characterisation are not reliable. Therefore, the Chemical Safety Assessment (CSA) including the exposure assessment and the risk characterisation sections cannot, with the available information, be used to adapt this information requirement. Moreover, you refer to the outcome of the risk assessment without explaining how the different conditions of Annex XI section 3 are met.

ECHA additionally notes that your adaptation is solely based on risk considerations. However, column 2 of Annex IX, Section 9.1. requires to generate data from long-term aquatic toxicity studies if a need is indicated by the chemical safety assessment (CSA) according to Annex I, including PBT assessment. ECHA notes that in the technical dossier there is no long-term aquatic toxicity data available on the registered substance.

Furthermore, ECHA notes that the information on degradation simulation and bioaccumulation is requested for the substance. Thus, there is uncertainty on persistency (P) and bioaccumulation potential (B) of the substance. According to *Guidance on information requirements and chemical safety assessment, Chapter R.7b* (version 4.0, June 2017) aquatic toxicity data, including long-term aquatic invertebrates toxicity testing, "*are generated for environmental hazard assessment of substances (i.e. classification, derivation of PNEC) and (PB)T assessment*". Therefore, ECHA concludes that the PBT assessment is currently not complete and long-term toxicity testing on aquatic invertebrates is currently needed to address toxicity (T) of the substance in the PBT assessment.

Therefore, your adaptation of the information requirement cannot be accepted.

As explained above, the information provided 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 ECHA *Guidance on information requirements and chemical safety assessment, Chapter R.7b* (version 4.0, June 2017) *Daphnia magna* reproduction test (test method EU C.20. / OECD TG 211) is the preferred test to cover the standard information requirement of Annex IX, Section 9.1.5.

In your comments to the draft decision, it was indicated that the need for the chronic studies on the borders of the category (OECD 210 and 211) will be decided if the CSA (including PBT/vPvB assessment) indicates the need to investigate further aquatic toxicity. These chronic tests can be started at anytime. ECHA-S notes the agreement to perform chronic testing if testing should be needed based on the outcome of the CSA (including PBT assessment). ECHA awaits for further information to be submitted in the registration dossier by the deadline indicated in the decision for chronic testing which is 54 months.

A prolongation of the decision deadline in line with the testing plan has been requested. ECHA has assessed and responded to the request to prolong the decision deadline below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision: Daphnia magna reproduction test (test method: EU C.20./OECD TG 211).

However, if the substance and/or none of its constituents and/or degradation products identified above 0.1% (w/w) would meet P and B criteria, no further aquatic toxicity testing is necessary. Also, no further testing is necessary, if the substance and/or any of its constituents and/or degradation products identified above 0.1% (w/w) would meet vPvB criteria.

Notes for your consideration

Once results of the test on long-term toxicity to aquatic invertebrates are available, you shall revise the chemical safety assessment as necessary according to Annex I of the REACH Regulation.

According to ECHA *Guidance on information requirements and chemical safety assessment* (version 3.0, June 2017), Chapter R.11 PBT/vPvB Assessment , including Figure R.11-5) chronic aquatic toxicity testing should be firstly carried out on non-vertebrate species, unless there are indications that fish is the most sensitive group.

Due to the possible presence of the substance in the dissociated form and surface activity of the subtance you should consult OECD Guidance Document on Aquatic Toxicity Testing of Difficult Substances and Mixtures, ENV/JM/MONO (2000)6/REV1 (6 July 2018) and ECHA *Guidance on information requirements and chemical safety assessment* (version 4.0, June 2017), Chapter R7b, Table R.7.8-3 summarising aquatic toxicity testing of difficult substances for choosing the design of the requested ecotoxicity test(s) and for calculation and expression of the result of the test(s).

In addition, regarding the use of the Water Accommodated Fraction (WAF) approach, please note that the WAF approach is problematic when used with a test substance containing several constituents, as in the case of the registered substance. In such cases the toxicity cannot be allocated to specific constituents directly and interpretation of the results in the risk assessment requires careful consideration taking into account differences in fate of the constituents in the environment. When constituents of varying solubility are present there can be partitioning effects which limit dissolution in the water. These effects should be minimised and appropriate loadings selected accordingly to allow an appropriate determination of the toxicity of the different constituents. In that respect, it is critical that a robust chemical analysis is carried out to identify those constituents present in the water to which the test organisms are exposed. Additionally, chemical analysis to demonstrate attainment of equilibrium in WAF preparation and stability during the conduct of the test is required. Methods capable of identifying gross changes in the composition of WAFs with time are required. Methods such as ultra-violet spectroscopy or total peak area have been used successfully for this purpose. The method used to prepare the WAF should be fully described in the test report and evidence of its compositional stability over time should be provided.

9. Long-term toxicity testing on fish (Annex IX, Section 9.1.6.1.)

Long-term toxicity testing on fish" is a standard information requirement as laid down in Annex IX, Section 9.1.6. of the REACH Regulation. Adequate information on Fish, early-life stage (FELS) toxicity test (Annex IX, 9.1.6.1.), or Fish, short-term toxicity test on embryo and sac-fry stages (Annex IX, 9.1.6.2.), or Fish, juvenile growth test (Annex IX, 9.1.6.3.) needs to be present in the technical dossier for the registered substance to meet this information requirement.

You have sought to adapt this information requirement according to Annex IX, Section 9.1.6 column 2. You provided the following justification for the adaptation:

"According to REACH Annex IX section 9.1 column 2, "long-term toxicity testing shall be proposed by the registrant if the chemical safety assessment ... indicates the need to investigate further the effects on aquatic organisms." According to COMMISSION REGULATION (EC) No 134/2009 amending Annex XI of Regulation (EC) No 1907/2006 (REACH legal text) exposure-based waiving is possible provided "that it is demonstrated and documented that exposure in all scenarios is well below an appropriate derived no-effect level (DNEL) or predicted no effect concentration (PNEC) derived under specific conditions." Based on the outcome of the risk assessment, this test is not needed. ."

However, ECHA notes that your adaptation does not meet the specific rules for adaptation of Annex IX, Section 9.1.5., column 2 and to the general rule for adaptation of Annex XI, Section 3. The ready biodegradability data available in the technical dossier cannot be considered

reliable, as discussed in point 7 above. As a result, the exposure assessment based on the conclusion that the substance is ready biodegradable and consequently the risk characterisation are not reliable. Therefore, the Chemical Safety Assessment (CSA) including the exposure assessment and the risk characterisation sections cannot, with the available information, be used to adapt this information requirement. Moreover, You refer to the outcome of the risk assessment without explaining how the different conditions of Annex XI section 3 are met.

ECHA additionally notes that your adaptation is solely based on risk considerations. However, column 2 of Annex IX, Section 9.1. requires to generate data from long-term aquatic toxicity studies if a need is indicated by the chemical safety assessment (CSA) according to Annex I, including PBT assessment. ECHA notes that in the technical dossier there is no long-term aquatic toxicity data available on the registered substance.

Furthermore, ECHA notes that the information on degradation simulation and bioaccumulation is requested for the substance. Thus, there is uncertainty on persistency (P) and bioaccumulation potential (B) of the substance. According to *Guidance on information requirements and chemical safety assessment, Chapter R.7b* (version 4.0, June 2017) aquatic toxicity data, including long-term aquatic invertebrates toxicity testing, "*are generated for environmental hazard assessment of substances (i.e. classification, derivation of PNEC) and (PB)T assessment*". Therefore, ECHA concludes that the PBT assessment is currently not complete and long-term toxicity testing on fish is currently needed to address toxicity (T) of the substance in the PBT assessment.

As explained above, the information provided 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 ECHA *Guidance on information requirements and chemical safety assessment, Chapter R.7b* (version 4.0, June 2017) fish early-life stage (FELS) toxicity test (test method OECD TG 210), fish short-term toxicity test on embryo and sac-fry stages (test method EU C.15. / OECD TG 212) and fish juvenile growth test (test method EU C.14. / OECD TG 215) can be performed to cover the standard information requirement of Annex IX, Section 9.1.6.

However, the FELS toxicity test according to OECD TG 210 is more sensitive than the fish, short-term toxicity test on embryo and sac-fry stages (test method EU C.15 / OECD TG 212), or the fish, juvenile growth test (test method EU C.14. / OECD TG 215), as it covers several life stages of the fish from the newly fertilized egg, through hatch to early stages of growth (see ECHA *Guidance on information requirements and chemical safety assessment* (version 4.0, June 2017), *Chapter R7b, Section R.7.8.4.1.*

Moreover, the FELS toxicity test is preferable for examining the potential toxic effects of substances which are expected to cause effects over a longer exposure period, or which require a longer exposure period of time to reach steady state (ECHA *Guidance Chapter R7b,* version 4.0, June 2017).

In your comments to the draft decision, it was indicated that the need for the chronic studies on the borders of the category (OECD 210 and 211) will be decided if the CSA (including PBT/vPvB assessment) indicates the need to investigate further aquatic toxicity. These chronic tests can be started at anytime. ECHA-S notes the agreement to perform chronic testing if testing should be needed based on the outcome of the CSA (including PBT assessment). ECHA awaits for further information to be submitted in the registration dossier by the deadline indicated in the decision for chronic testing which is 54 months.

A prolongation of the decision deadline in line with the testing plan has been requested. ECHA has assessed and responded to the request to prolong the decision deadline below.
Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision: Fish, early-life stage (FELS) toxicity test (test method: OECD TG 210).

However, if the substance and/or none of its constituents and/or degradation products identified above 0.1% (w/w) would meet P and B criteria, no further aquatic toxicity testing is necessary. Also, no further testing is necessary, if the substance and/or any of its constituents and/or degradation products identified above 0.1% (w/w) would meet vPvB criteria.

Notes for your consideration

Before conducting any of the tests mentioned above in point s 8-9 you shall consult the ECHA *Guidance on information requirements and chemical safety assessment (*version 4.0, June 2017*)*, Chapter R7b, Section R.7.8.5 to determine the sequence in which the aquatic long-term toxicity tests are to be conducted and the necessity to conduct long-term toxicity testing on fish.

According to ECHA *Guidance on information requirements and chemical safety assessment* (version 3.0, June 2017), Chapter R.11 PBT/vPvB Assessment, including Figure R.11-5) chronic aquatic toxicity testing should be firstly carried out on non-vertebrate species, unless there are indications that fish is the most sensitive group.

Once results of the test on long-term toxicity to fish are available, you shall revise the chemical safety assessment as necessary according to Annex I of the REACH Regulation.

Due to the possible presence of the substance in the dissociated form and surface activity of the substance you should consult OECD Guidance Document on Aquatic Toxicity Testing of Difficult Substances and Mixtures, ENV/JM/MONO (2000)6/REV1 (6 July 2018) and ECHA *Guidance on information requirements and chemical safety assessment* (version 4.0, June 2017), Chapter R7b, Table R.7.8-3 summarising aquatic toxicity testing of difficult substances for choosing the design of the requested ecotoxicity test(s) and for calculation and expression of the result of the test(s).

In addition, regarding the use of the Water Accommodated Fraction (WAF) approach, please note that the WAF approach is problematic when used with a test substance containing several constituents, as in the case of the registered substance. In such cases the toxicity cannot be allocated to specific constituents directly and interpretation of the results in the risk assessment requires careful consideration taking into account differences in fate of the constituents in the environment. When constituents of varying solubility are present there can be partitioning effects which limit dissolution in the water. These effects should be minimised and appropriate loadings selected accordingly to allow an appropriate determination of the toxicity of the different constituents. In that respect, it is critical that a robust chemical analysis is carried out to identify those constituents present in the water to which the test organisms are exposed. Additionally, chemical analysis to demonstrate attainment of equilibrium in WAF preparation and stability during the conduct of the test is required. Methods capable of identifying gross changes in the composition of WAFs with time are required such as ultra-violet spectroscopy or total peak area have been used successfully for this purpose. The method used to prepare the WAF should be fully described in the test report and evidence of its compositional stability over time should be provided.

10. Simulation testing on ultimate degradation in surface water (Annex IX, Section 9.2.1.2.)

"Simulation testing on ultimate degradation in water" is a standard information requirement as laid down in Annex IX, section 9.2.1.2. 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.

You have sought to adapt this information requirement according to Annex IX, Section 9.2.1.2., column 2. You provided the following justification for the adaptation: *"Since the substance is readily biodegradable, further hazard assessment for the environmental compartment water/sediment is obsolete, according to the requirements of EC regulation 1907/2006 (REACH)."*

However, ECHA notes that your adaptation does not meet the specific rules for adaptation of Column 2 of Annex IX, Sections 9.2 and 9.2.1.2. As explained under section 7 above, the information provided on the ready biodegradability for the registered substance in the technical dossier does not meet the information requirement of Annex VII, Section 9.2.1.1. Consequently there is no reliable information available on the ready biodegradability of the substance. Therefore, ready biodegrability cannot currently be used to adapt the standard information requirement.

ECHA notes further that column 2 of Annex IX, Section 9.2. requires that the simulation study shall be conducted if indicated by the CSA according to Annex I, including PBT assessment. ECHA considers that, since the technical dossier does not contain any reliable screening level information on biodegradation, there is currently no sufficient evidence that the registered substance would not be P or vP. In addition, information on bioaccumulation and aquatic toxicity is missing and has been requested in this decision. ECHA hence considers that the current information in the chemical safety report (CSR) including the PBT/vPvB assessment is not complete. Furthermore, ECHA notes that you have not provided any other justification in the technical dossier for why there is no need to investigate further the degradation of the substance and its degradation products. On this basis, ECHA considers that you have not demonstrated that there is no need to investigate further the degradation of the substance and its degradation products.

In conclusion, as explained above, ECHA considers that the information is needed for the PBT/vPvB assessment and for the identification of the degradation products in relation to the PBT/vPvB assessment.

Therefore, your adaptation of the information requirement cannot be accepted.

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

According to ECHA *Guidance on information requirements and chemical safety assessment, Chapter R.7b* (version 4.0, June 2017) Aerobic mineralisation in surface water – simulation biodegradation (test method EU C.25. / OECD TG 309) is the preferred test to cover the standard information requirement of Annex IX, Section 9.2.1.2.

One of the purposes of the simulation test is to provide the information that must be considered for assessing the P/vP properties of the registered substance in accordance with Annex XIII of the REACH Regulation to decide whether it is persistent in the environment. Annex XIII also indicates that "*the information used for the purposes of assessment of the*

PBT/vPvB properties shall be based on data obtained under relevant conditions". The Guidance on information requirements and chemical safety assessment R.7b (version 4.0, June 2017) specifies that simulation tests "attempt to simulate degradation in a specific environment by use of indigenous biomass, media, relevant solids [...], and a typical temperature that represents the particular environment". The Guidance on information requirements and chemical safety assessment Chapter R.16 on Environmental Exposure Estimation, Table R.16-8 (version 3.0 February 2016) indicates 12°C (285K) as the average environmental temperature for the EU to be used in the chemical safety assessment. Performing the test at the temperature of 12°C is within the applicable test conditions of the Test Guideline OECD TG 309. Therefore, the test should be performed at the temperature of 12°C.

In the OECD TG 309 Guideline two test options, the "pelagic test" and the "suspended sediment test", are described. ECHA considers that the pelagic test option should be followed as that is the recommended option for P assessment. The amount of suspended solids in the pelagic test should be representative of the level of suspended solids in EU surface water. The concentration of suspended solids in the surface water sample used should therefore be approximately 15 mg dw/L. Testing natural surface water containing between 10 and 20 mg SPM dw/L is considered acceptable. Furthermore, when reporting the non-extractable residues (NER) in your test results you should explain and scientifically justify the extraction procedure and solvent used obtaining a quantitative measure of NER.

In regard of the tests requested under sections 10-14 in your comments on the draft decision you have noted that the above testing is only necessary, if the substance is not readily biodegradable, and that hence the request is formal, in the absence of valid ready biodegradation data. Consequently, and based on the results of ready biodegradation testing, the necessity of further biodegradation and/or simulation testing will be assessed and decided upon. E.g., if the substance is readily biodegradable, no further testing will be conducted.

In response to the submitted comments ECHA notes that simulation degradation testing in various compartments are standard information requirements of Annex IX, sections 9.2.1.2-4 and 9.2.3. and reminds that all standard information requirements, as necessary per registration tonnage band, need to be fulfilled. ECHA notes that if the substance is shown to be readily biodegradable, standard information requirements for further degradation simulation testing (including identification of degradation products) can be adapted following specific rules for adaptation given in column 2 of respective sections of Annex IX of REACH Regulation.

Furthermore, the simulation testing (in more than one compartment) might be relevant and necessary depending on the various needs of CSA (including classification and labelling, risk assessment and PBT/vPvB assessment). This must be considered when standard information required in REACH Annexes is generated.

A prolongation of the decision deadline in line with the testing plan has been requested. ECHA has assessed and responded to the request to prolong the decision deadline below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision: Aerobic mineralisation in surface water – simulation biodegradation test (test method: EU C.25./OECD TG 309). The biodegradation of each relevant constituent present in concentration at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable shall be assessed. This can be done simultaneously during the same study.

However, if the substance is identified meeting the readily biodegradability criteria, and/or none of its constituents and/or degradation products identified above 0.1% (w/w) would meet P and B criteria, no further degradation testing is necessary.

11. Soil simulation testing (Annex IX, Section 9.2.1.3.)

"Soil simulation testing" is a standard information requirement as laid down in Annex IX, section 9.2.1.3. of the REACH Regulation for substances with a high potential for adsorption to soil. The registered substance at environmentally relevant pHs up to the water solubility limit will be present in the ionised form, indicating high adsorptive properties. Therefore, adequate information on this endpoint needs to be present in the technical dossier for the registered substance to meet this information requirement.

You have sought to adapt this information requirement according to Annex IX, Section 9.2.1.3., column 2. You provided the following justification for the adaptation: "*Since the substance is readily biodegradable, further hazard assessments for the environmental compartment soil is obsolete, according to the requirements of EC regulation 1907/2006 (REACH)..*"

According to Annex IX, Section 9.2.1.3, column 2 of the REACH Regulation, simulation testing on soil does not need to be conducted if the substance is readily biodegradable or if direct or indirect exposure of soil is unlikely.

ECHA notes that your adaptation is rejected for the same reasons as for the request 10. above.

Therefore, your adaptation of the information requirement cannot be accepted.

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

According to ECHA *Guidance on information requirements and chemical safety assessment, Chapter R.7b* (version 4.0, June 2017) Aerobic and anaerobic transformation in soil (test method EU C.23. / OECD TG 307) is the preferred test to cover the standard information requirement of Annex IX, Section 9.2.1.3.

As explained under section 10 above, 12°C (285K) is the average environmental temperature for the EU to be used in the chemical safety assessment. Performing the test at the temperature of 12°C is within the applicable test conditions of the Test Guideline OECD TG 307. Therefore, the test should be performed at the temperature of 12°C.

Simulation tests performed in sediment or in soil possibly imply the formation of NER. These residues (of the parent substance and/or transformation products) are bound to the soil or to the sediment particles. NERs may potentially be re-mobilised as parent substance or transformation product unless they are irreversibly bound by covalent bonds or incorporated into the biomass. When reporting the NER in your test results you should explain and scientifically justify the extraction procedure and solvent used obtaining a quantitative measure of NER.

ECHA notes that you have not provided adequate justification in your CSR, including the PBT assessment, nor in the technical dossier for why there is no need to investigate further the degradation of the substance and its degradation products, as fully discussed in section 10 above.

A prolongation of the decision deadline in line with the testing plan has been requested. ECHA has assessed and responded to the request to prolong the decision deadline below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision: Aerobic and anaerobic transformation in soil (test method: EU C.23./OECD TG 307). The biodegradation of each relevant constituent present in concentration at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable shall be assessed. This can be done simultaneously during the same study.

However, if the substance is identified meeting the readily biodegradability criteria, and/or none of its constituents and/or degradation products identified above 0.1% (w/w) would meet P and B criteria, no further degradation testing is necessary.

12. Sediment simulation testing (Annex IX, Section 9.2.1.4.)

"Sediment simulation testing" is a standard information requirement as laid down in Annex IX, section 9.2.1.4. of the REACH Regulation for substances with a high potential for adsorption to sediment. The registered substance at environmentally relevant pHs up to the water solubility limit will be present in the ionised form, indicating high adsorptive properties. Therefore, adequate information on this endpoint needs to be present in the technical dossier for the registered substance to meet this information requirement.

You have sought to adapt this information requirement according to Annex IX, Section 9.2.1.4., column 2. You provided the following justification for the adaptation: "*Since the substance is readily biodegradable, further hazard assessment for the environmental compartment water/sediment is obsolete, according to the requirements of EC regulation 1907/2006 (REACH).*"

According to Annex IX, Section 9.2.1.4, column 2 of the REACH Regulation, simulation testing on soil does not need to be conducted if the substance is readily biodegradable or if direct or indirect exposure of sediment is unlikely.

ECHA notes that your adaptation adaptation is rejected for the same reasons as for the request 10. above.

Therefore, your adaptation of the information requirement cannot be accepted.

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

According to ECHA *Guidance on information requirements and chemical safety assessment, Chapter R.7b* (version 4.0, June 2017) Aerobic and anaerobic transformation in aquatic sediment systems (test method EU C.24. / OECD TG 308) is the preferred test to cover the standard information requirement of Annex IX, Section 9.2.1.4.

As explained under section 10 above, 12°C (285K) is the average environmental temperature for the EU to be used in the chemical safety assessment. Performing the test at the temperature of 12°C is within the applicable test conditions of the Test Guideline OECD TG 308. Therefore, the test should be performed at the temperature of 12°C.

Simulation tests performed in sediment or in soil possibly imply the formation of NERs. These residues (of the parent substance and/or transformation products) are bound to the soil or to the sediment particles. NERs may potentially be re-mobilised as parent substance or transformation product unless they are irreversibly bound by covalent bonds or incorporated into the biomass. When reporting the NER in your test results you should explain and scientifically justify the extraction procedure and solvent used obtaining a quantitative measure of NERs.

ECHA notes that you have not provided adequate justification in your CSR, including the PBT assessment, nor in the technical dossier for why there is no need to investigate further the degradation of the substance and its degradation products, as fully discussed in section 10 above.

A prolongation of the decision deadline in line with the testing plan has been requested. ECHA has assessed and responded to the request to prolong the decision deadline below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision: Aerobic and anaerobic transformation in aquatic sediment systems (test method: EU C.24./OECD TG 308). The biodegradation of each relevant constituent present in concentration at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable shall be assessed. This can be done simultaneously during the same study.

However, if the substance is identified meeting the readily biodegradability criteria, and/or none of its constituents and/or degradation products identified above 0.1% (w/w) would meet P and B criteria, no further degradation testing is necessary.

Notes for your consideration

Concerning the order of degradation studies to be conducted, you may first fulfil the information request made for ready biodegradability studies under section 7 above and subsequently update the CSA according to Annex I of the REACH Regulation. If the substance is readily biodegradable, this may allow you to conclude the PBT assessment of the substance, as described in ECHA Guidance on information requirements and chemical safety assessment, Chapter R.11, Section R.11.4.1.1 (version 3.0, June 2017).

Furthermore, before conducting the requested in sections 13-15 degradation simulation tests you are advised to consult the ECHA Guidance on information requirements and chemical safety assessment, Chapter R7b, Sections R.7.9.4 and R.7.9.6 (version 4.0, June 2017) and Chapter R.11, Section R.11.4.1.1 (version 3.0, June 2017) on PBT assessment to determine the sequence in which the simulation tests are to be conducted and the necessity to conduct all of them. The order in which the simulation degradation tests are performed needs to take into account the intrinsic properties of the registered substance and the identified use and release patterns which could significantly influence the environmental fate of the registered substance.

In accordance with Annex I, Section 4, of the REACH Regulation you should revise the PBT assessment when results of the tests detailed above are available. You are also advised to consult the ECHA Guidance on information requirements and chemical safety assessment (version 3.0, November 2017), Chapter R.11, Section R.11.4.1.1. and Figure R. 11-3 on PBT assessment for the integrated testing strategy for persistency assessment in particular taking into account the degradation products of the registered substance.

13. Identification of degradation products (Annex IX, 9.2.3.)

The identification of the degradation products is a standard information requirement according to column 1, Section 9.2.3. of Annex IX 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 (bio)degradation section in the technical dossier does not contain any information in relation to the identification of degradation products, nor an adaptation in accordance with column 2 of Annex IX, Sections 9.2 or 9.2.3. or with the general rules of Annex XI for this standard information requirement.

According to Annex IX, Section 9.2.3., column 2 of the REACH Regulation, identification of degradation products is not needed if the substance is readily biodegradable. As explained under section 7 above, the information provided on the ready biodegradability for the registered substance in the technical dossier does not meet the information requirement of Annex VII, Section 9.2.1.1. Consequently there is no reliable information available on the ready biodegradability of the substance. Therefore, ready biodegrability cannot currently be used to adapt the standard information requirement.

Furthermore, ECHA notes that you have not provided any justification in your CSA or in the technical dossier for why there is no need to provide information on the degradation products. ECHA considers that this information is needed in relation to the PBT/vPvB assessment.

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

According to Annex XIII of REACH, the identification of PBT/vPvB substances shall take account of the PBT/vPvB-properties of relevant constituents of the substance. Indeed, Section R.11.4.1 (page 36) of REACH Guidance document R.11 on PBT/vPvB assessment (version 3.0, June 2017) indicates that "*constituents, impurities and additives should normally be considered relevant for the PBT/vPvB assessment when they are present in concentration of ≥ 0.1% (w/w). This limit of 0.1% (w/w) is set based on a well-established practice rooted in a principle recognised in European Union legislation*". Therefore degradation products should be identified for each constituent present in the registered substance in concentrations at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable.

Regarding appropriate and suitable test method, the methods will have to be substance-specific. When analytically possible, identification, stability, behaviour, molar quantity of metabolites relative to the parent compound should be evaluated. In addition, degradation half-life, log Kow and potential toxicity of the metabolite may be investigated. You may obtain this information from the simulation studies also requested in this decision, or by some other measure. You will need to provide a scientifically valid justification for the chosen method.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision:

Identification of the degradation products (Annex IX, Section 9.2.3.) by using an appropriate and suitable test method, as explained above in this section including each constituents present in concentrations at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable following the conditions listed above.

However, if the substance is identified meeting the readily biodegradability criteria, and/or none of its constituents and/or degradation products identified above 0.1% (w/w) would meet P and B criteria, no further degradation testing is necessary.

ECHA notes that you have not provided adequate justification in your CSR, including the PBT assessment, nor in the technical dossier for why there is no need to investigate further the degradation of the substance and its degradation products, as fully discussed in section 10 above.

A prolongation of the decision deadline in line with the testing plan has been requested. ECHA has assessed and responded to the request to prolong the decision deadline below.

Notes for your consideration

Before providing the above information you are advised to consult the ECHA *Guidance on information requirements and chemical safety assessment* (version 4.0, June 2017), Chapter R.7b., Sections R.7.9.2.3 and R.7.9.4. These guidance documents explain that the data on degradation products is only required if information on the degradation products following primary degradation is required in order to complete the chemical safety assessment. Section R.7.9.4. further states that when substance is not fully degraded or mineralised, degradation products may be determined by chemical analysis.

14. Bioaccumulation in aquatic species (Annex IX, Section 9.3.2.)

"Bioaccumulation in aquatic species, preferably fish" is a standard information requirement as laid down in Annex IX, Section 9.3.2.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.

You have sought to adapt this information requirement according to Annex IX, Section 9.3.2., column 2. You provided the following justification for the adaptation: "*In accordance with EC 1907/2006, Annex IX, point 9.3.2, column 2, bioaccumulation in aquatic species (water and sediment) is not required due to the fact that the substance has a log Kow of < 3 (-0.8573).*"

However, ECHA notes that your adaptation does not meet the specific rules for adaptation of Annex IX, Section 9.3.2., column 2 because the substance qualifies as surfactant (the surface tension of the substance is 41.3 mN/m) and at environmentally relevant pHs up to the water solubility limit will be present in the ionised form. Under REACH, the study does not need to be conducted if "*the substance has a low potential for bioaccumulation (for instance a log Kow <= 3)*". According to the ECHA *Guidance on information requirements and chemical safety assessment*, Chapter R.7c. (version 3.0, June 2017) "*for certain types of substances (e.g. surface-active agents and those which ionise in water), the log Kow might not be suitable for calculation of a BCF value. [...] the classification of the bioconcentration potential based on hydrophobicity measures (such as log Kow) should be used with caution. [...] Measured BCF values are preferred.*" and according to *Guidance on information requirements and chemical safety assessment*, Chapter R.11. (version 3.0, June 2017) "*for some groups of substances, such as organometals, ionisable substances and surface active substances, log Kow is not a valid descriptor for assessing the bioaccumulation potential. Information on bioaccumulation of such substances should therefore take account of other descriptors or mechanisms than hydrophobicity.*"

Therefore, in this case, the log Kow is not an indicator of potential for bioaccumulation, you have not demonstrated that the substance has a low potential for bioaccumulation and your adaptation of the information requirement cannot be accepted.

As explained above, the information provided 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 ECHA *Guidance on information requirements and chemical safety assessment, Chapter R.7c* (version 3.0, November 2017) bioaccumulation in fish: aqueous and dietary exposure (test method EU C.13. / OECD TG 305) is the preferred test to cover the standard information requirement of Annex IX, Section 9.3.2. ECHA Guidance defines further that results obtained from a test with aqueous exposure can be used directly for comparison with the B and vB criteria of Annex XIII of REACH Regulation and can be used for hazard classification and risk assessment. Comparing the results of a dietary study with the REACH Annex XIII B and vB criteria is more complex and has higher uncertainty. Therefore, the aqueous route of exposure is the preferred route and shall be used whenever technically feasible. If you decided to conduct the study using the dietary exposure route, you shall provide scientifically valid justification for your decision. You shall also attempt to estimate the corresponding BCF value from the dietary test data by using the approaches given in Annex 8 of the OECD 305 TG. In any case you shall report all data derived from the dietary test as listed in the OECD 305 TG.

ECHA notes that you have not provided adequate justification in your CSR, including the PBT assessment, nor in the technical dossier for why there is no need to investigate further the degradation of the substance and its degradation products, as fully discussed in section 10 above.

A prolongation of the decision deadline in line with the testing plan has been requested. ECHA has assessed and responded to the request to prolong the decision deadline below.

Therefore, pursuant to Article 41(1) and (3) of the REACH Regulation, you are requested to submit the following information derived with the registered substance subject to the present decision
Bioaccumulation in fish: aqueous exposure bioconcentration fish test (test method: OECD TG 305-I)

However, if the substance and/or none of its constituents and/or degradation products identified above 0.1% (w/w) would meet P and B criteria, no further bioaccumulation testing is necessary.

Notes for your consideration

Before conducting the above requesdted test you are advised to consult the ECHA *Guidance on information requirements and chemical safety assessment* (version 3.0, June 2017), Chapter R.11.4. and Figure R.11-4 on the PBT assessment for further information on the integrated testing strategy for the bioaccumulation assessment of the registered substance. In particular, you are advised to first conclude on whether the registered substance is not persistent and not very persistent or whether it may fulfil Annex XIII of the REACH Regulation criteria of being persistent or very persistent, and to consult the PBT assessment for Weight-of-Evidence determination and the integrated testing strategy for bioaccumulation assessment. You should revise the PBT assessment when information on bioaccumulation is available.

Deadline to submit the requested information in this decision

The timeline indicated in the draft decision to provide the information requested is 33 and 54 months from the date of adoption of the decision for the information requested.

In your comments on the draft decision, you requested an extension of the timeline to 48 months for the category based on your testing plan. You justified your request stating that for practical and animal protection reasons, you would strongly advice to perform the tests in 3 phases (12-18 months for phase 1, 12 - 18 months for phase 2 and 12-18 months for phase 3), so that best use can be made from the already performed studies. Therefore, you noted that the total time of at least 48 months seems most realistic and necessary to conduct qualitative studies.

ECHA notes that the genotoxicty studies do not involve any of the core parameters and endpoints, which are included in OECD TG 408 and OECD TG 414, and therefore the phases 1 and 2 genotoxicity studies cannot inform of the need or of the design of the higher tier studies at phase 3. More notably, read-across is endpoint specific and therefore studies supporting the read-across need to inform of the relevant endpoints/effects.Therefore, ECHA did not extend the deadline in the draft decision.

EUROPEAN CHEMICALS AGENCY

Appendix 2: Procedural history

For the purpose of the decision-making, this decision does not take into account any updates of your registration after the date when the draft decision was notified to you under Article 50(1) of the REACH Regulation.

The compliance check was initiated on 20 August 2018.

The decision making followed the procedure of Articles 50 and 51 of REACH, as described below:

ECHA notified you of the draft decision and invited you to provide comments within 30 days of the notification.

ECHA took into account your comments and did not amend the request(s).

ECHA notified the draft decision to the competent authorities of the Member States for proposals for amendment.

As no amendments were proposed, ECHA adopted the decision under Article 51(3) of REACH.

EUROPEAN CHEMICALS AGENCY

Appendix 3: Further information, observations and technical guidance

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

2. Failure to comply with the requests in this decision will result in a notification to the enforcement authorities of your Member State.

3. In relation to the information required by the present decision, the sample of the substance used for the new tests must be suitable for use by all the joint registrants. Hence, the sample should have a composition that is suitable to fulfil the information requirement for the range of substance compositions manufactured or imported by the joint registrants.

   It is the responsibility of all joint registrants who manufacture or import the same substance to agree on the appropriate composition of the test material and to document the necessary information on their substance composition. In addition, it is important to ensure that the particular sample of the substance tested in the new tests 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 or imported by each registrant.

   If the registration of the substance by any registrant covers different grades, the sample used for the new tests must be suitable to assess these grades. Finally there must be adequate information on substance identity for the sample tested and the grades registered to enable the relevance of the tests to be assessed.