~~Confidential~~

Helsinki, 03 November 2023

Addressee
Registrant of JS_86089-17-0_Tridecylamine as listed in Appendix 3 of this decision

Date of submission of the dossier subject to this decision
09/06/2021

Registered substance subject to this decision ("the Substance")
Substance name: Amines, C11-C13 (linear and branched) alkyl
EC/List number: 701-381-2

Decision number: Please refer to the REACH-IT message which delivered this communication (in format CCH-D-XXXXXXXXXX-XX-XX/F)

DECISION ON A COMPLIANCE CHECK

Under Article 41 of Regulation (EC) No 1907/2006 (REACH), you must submit the information listed below, by the deadline of ***10 February 2028***.

Requested information must be generated using the Substance unless otherwise specified.

Information required from all the Registrants subject to Annex VII of REACH

1. In vitro gene mutation study in bacteria (Annex VII, Section 8.4.1.; test method: OECD TG 471, 2020)

Information required from all the Registrants subject to Annex VIII of REACH

2. In vitro cytogenicity study in mammalian cells (Annex VIII, Section 8.4.2.; test method: OECD TG 473) or In vitro micronucleus study (Annex VIII, Section 8.4.2.; test method: OECD TG 487)

3. Simulation testing on ultimate degradation in surface water (triggered by Annex VIII, Section 9.2.; test method: EU C.25./OECD TG 309) at a temperature of 12°C.

4. Soil simulation testing (triggered by Annex VIII, Section 9.2.; test method: EU C.23./OECD TG 307) at a temperature of 12°C. Non-extractable residues (NER) must be quantified and a scientific justification of the selected extraction procedures and solvents must be provided.

5. Sediment simulation testing (triggered by Annex VIII, Section 9.2.; test method: EU C.24./OECD TG 308) at a temperature of 12°C. Non-extractable residues (NER) must be quantified and a scientific justification of the selected extraction procedures and solvents must be provided.

6. Identification of degradation products (triggered by Annex VIII, Section 9.2; test method: EU C.25./OECD TG 309 or C.24./OECD TG 308 or C.23./OECD TG 307)

7. Bioaccumulation in aquatic species (triggered by Annex VIII, sections 9.3; test method: EU C.13./OECD TG 305, aqueous exposure)

The reasons for the decision are explained in Appendix 1.

Information required depends on your tonnage band

You must provide the information listed above for all REACH Annexes applicable to you in accordance with Articles 10(a) and 12(1) of REACH

How to comply with your information requirements

To comply with your information requirements, you must submit the information requested by this decision in an updated registration dossier by the deadline indicated above. You must also **update the chemical safety report, where** relevant, including any changes to classification and labelling, based on the newly generated information.

You must follow the general requirements for testing and reporting new tests under REACH, see Appendix 4. In addition, the studies relating to biodegradation and bioaccumulation are necessary for the PBT assessment. However, to determine the testing needed to reach the conclusion on the persistency and bioaccumulation of the Substance you should consider the sequence in which these tests are performed and other conditions described in this Appendix.

Appeal

This decision, when adopted under Article 51 of REACH, may be appealed to the Board of Appeal of ECHA within three months of its notification to you. Please refer to http://echa.europa.eu/regulations/appeals for further information.

Failure to comply

If you do not comply with the information required by this decision by the deadline indicated above, ECHA will notify the enforcement authorities of your Member State.

Authorised[1] under the authority of Mike Rasenberg, Director of Hazard Assessment

Appendix 1: Reasons for the decision
Appendix 2: Procedure
Appendix 3: Addressees of the decision and their individual information requirements
Appendix 4: Conducting and reporting new tests under REACH

[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 for the decision

Contents

Reasons related to the information under Annex VII of REACH

1. In vitro gene mutation study in bacteria

1 An in vitro gene mutation study in bacteria is an information requirement under Annex VII, Section 8.4.1.

1.1. *Information provided*

You have provided:

(i) In vitro gene mutation study in bacteria, not GLP, OECD TG 471 (2018);
(ii) In vitro gene mutation study in bacteria with deviations (E. coli WP2 or S. typhimurium TA102 strain is missing), not GLP, equivalent TG OECD 471 (1989).

1.2. *Assessment of the information provided*

1.2.1. *The provided studies do not meet the specifications of the test guidance*

2 To fulfil the information requirement, a study must comply with OECD TG 471 (Article 13(3) of REACH). Therefore, the following specifications must be met:

a) the test is performed with 5 strains: four strains of *S. typhimurium* (TA98; TA100; TA1535; TA1537 or TA97a or TA97) and one strain which is either *S. typhimurium* TA102 or *E. coli* WP2 uvrA or *E. coli* WP2 uvrA (pKM101);
b) at least 5 doses are evaluated, in each test condition;
c) triplicate plating is used at each dose level;
d) the mean number of revertant colonies per plate is reported for the treated doses and the controls;
e) the number of revertant colonies per plate for the concurrent negative control is inside the historical control range of the laboratory.
f) the positive control substance produces a statistically significant increase in the number of revertant colonies per plate compared with the concurrent negative control

3 The study (i) is described as an in vitro gene mutation study on bacteria.

4 However, the following specifications are not according to the requirements of the OECD TG 471:

b) the doses evaluated in absence and in presence of metabolic activation are not specified;
c) you did not mention if triplicate plating were used at each dose level;
d) the mean number of revertant colonies per plate for the treated doses and the controls is not reported;
e) no evidence is provided to support that the number of revertant colonies per plate for the concurrent negative is inside the historical control range of the laboratory;
f) no evidence is provided to support that the positive control substance produces a statistically significant increase in the number of revertant colonies per plate compared with the concurrent negative control

5 In the absence of the above information, ECHA cannot conduct an independent assessment of the study. In particular, it is not possible to verify:

- that the test specifications were consistent with the requirement of the OECD TG 471 (e.g., dose setting, adequate number of replicates),
- that the positive control substance did produce a statistically significant increase in the number of revertant colonies per plate compared with the concurrent negative control, and
- that the concurrent negative control was inside the historical control range of the laboratory.

6 In your comments to the draft decision, you submitted additional information on study (i), supported by screenshots of your study report. While this information could address the incompliances identified in this decision for this information requirement, it is currently not available in your registration dossier. Therefore, the data gap remains and you must submit this information in an updated registration dossier by the deadline set out in the decision.

7 The study (ii) is described as an in vitro gene mutation study on bacteria

8 However, the following specifications are not according to the requirements of the OECD TG 471:

a) the test was performed with the strains *S. typhimurium* TA 1535, TA 1537, TA 98 and TA 100 (i.e., the strains *S. typhimurium* TA102 or *E. coli* WP2 uvrA or *E. coli* WP2 uvrA (pKM101)is missing);
e) no evidence is provided to support that the number of revertant colonies per plate for the concurrent negative is inside the historical control range of the laboratory;
f) no evidence is provided to support that the positive control substance produces a statistically significant increase in the number of revertant colonies per plate compared with the concurrent negative control.

9 Based on the above, the information provided does not cover the key parameters required by the OECD TG 471. Furthermore, the information provided does not allow conducting an independent assessment of the studies.

10 Therefore, the information requirement is not fulfilled.

1.3. *Specification of the study design*

11 To fulfil the information requirement for the Substance, the *in vitro* gene mutation study in bacteria (OECD TG 471, 2020) is considered suitable.

Reasons related to the information under Annex VIII of REACH

2. In vitro gene mutation study in mammalian cells

12 An in vitro cytogenicity study in mammalian cells or an in vitro micronucleus study is an information requirement under Annex VIII, Section 8.4.2.Information provided

13 You have adapted this information requirement by using Annex VIII, Section 8.4.2., Column 2. To support the adaptation, you have provided the following information:

(i) Mammalian Erythrocyte Micronucleus Test, GLP, OECD TG 474 (2002)

2.1. *Assessment of the information provided*

2.1.1. *The provided adaptation does not meet the criteria of Annex VIII, Section 8.4.2., Column 2*

14 Under Annex VIII, Section 8.4.2., Column 2, the study usually does not need to be conducted "if adequate data from an in vivo cytogenicity test are available". The Guidance on IRs and CSA, Section R.7.7.6.3 and Table R.7.7–3 clarifies that the in vivo somatic cell cytogenicity test must be either a micronucleus test or a chromosomal aberration test, performed according to the OECD TG 474 or 475, respectively.

15 For the data from an in vivo somatic cell cytogenicity test to be considered adequate, the in vivo study you submitted must meet the requirements of the OECD TG 474. Therefore, the following specifications must be met:

a) the mean number of micronucleated immature erythrocytes are reported for each group of animals;
b) the negative control data is ideally within the 95% control limits of the distribution of the laboratory's historical negative control database;
c) the positive controls or scoring controls induce responses compatible with those generated in the historical positive control database;
d) the positive controls or scoring controls produce statistically significant increase compared with the negative control.

16 The study (i) is described as a Mammalian Erythrocyte Micronucleus Test.

17 However, the following specifications are not according to the requirements of the OECD TG 474:

a) the mean number of micronucleated immature erythrocytes are not reported for each group of animals;
b) no evidence is provided to support that the negative control is inside the historical control range of the laboratory.
c) no evidence is provided to support that the positive controls induce responses compatible with those generated in the historical positive control database
d) no evidence is provided to support that the positive controls produce statistically significant increase compared with the negative control.

18 In the absence of the above information, ECHA cannot conduct an independent assessment of the study.

19 In your comments to the draft decision, you submitted additional information on the study (i), supported by screenshot of your study report. While this information addresses the

incompliances identified in this decision for this information requirement, it is currently not available in your registration dossier. Therefore, the data gap remains and you must submit this information in an updated registration dossier by the deadline set out in the decision.

20 Based on the information currently available in your dossier, your adaptation is rejected and the information requirement is not fulfilled.

2.2. *Specification of the study design*

21 To fulfil the information requirement for the Substance, either in vitro cytogenicity study in mammalian cells (Annex VIII, Section 8.4.2., test method OECD TG 473) or in vitro micronucleus study (Annex VIII, Section 8.4.2., test method OECD TG 487) are considered suitable.

3. Simulation testing on ultimate degradation in surface water

22 Further degradation testing must be considered if the chemical safety assessment (CSA) according to Annex I indicates the need to investigate further the degradation of the substance (Annex VIII, Section 9.2., Column 2).

3.1. *Triggering of the information requirement*

23 This information requirement is triggered in case the chemical safety assessment (CSA) indicates the need for further degradation investigation (Annex I, Section 4; Annex XIII, Section 2.1), such as if the substance is a potential PBT/vPvB substance (Guidance on IRs and CSA, Section R.11.4.). This is the case if the Substance itself or any of its constituent or impurity present in concentration ≥ 0.1% (w/w) or relevant transformation/degradation product meets the following criteria:

- it is potentially persistent or very persistent (P/vP) as it is not readily biodegradable (*i.e.* <60% degradation in an OECD 301 B), and
- it is potentially bioaccumulative or very bioaccumulative (B/vB) as, for some groups of substances (e.g. organometals, ionisable substances, surfactants), other partitioning mechanisms may drive bioaccumulation (e.g. binding to protein/cell membranes) and high potential for bioaccumulation cannot be excluded solely based on its potential to partition to lipid, and
- it meets the T criteria set in Annex XIII: EC_{10} < 0.01 mg/L.

24 Your registration dossier provides the following:

- the Substance is not readily biodegradable (< 9% degradation after 28 days in OECD TG 301 B);
- the Substance is ionisable substances and therefore high potential for bioaccumulation cannot be excluded based on available information;
- the Substance meets the T criteria as the substance is very toxic to aquatic algae (E_rC_{10}=0.0032 mg/l).

25 Furthermore, the information in your dossier is currently incompliant and therefore:

- it is not possible to conclude on the bioaccumulation potential of the Substance (see Request 7. of this decision)

26 Under section 2.3 of your IUCLID dossier and section 8 of your CSR ('PBT assessment'), you conclude that the Substance is not PBT/vPvB because you consider it is not B/vB. In support of your conclusion, you provide the following additional information:

- On the P/vP criteria: "*based on the available data on abiotic and biotic degradation, the substance should be considered persistent (potentially "P") and potentially very persistent (potentially "vP"), in absence of any other data as the screening-criteria for persistence are fulfilled*";

- On the B/vB criteria: "*Based on weight-of-evidence, it can be concluded that* [the Substance] *does not fulfil the "B"-criterion*". In support of your weight-of-evidence, you refer to the following information:

  a. An OECD TG 305 study on n-hexadecylamine (CAS 143-27-1) with a BCF determined in the region of 500 L/kg. You consider that this information is "*indicating a possible bioaccumulation in organism*";

  b. You refer to the following QSAR predictions on the analogue substance 1-tridecanamine (CAS 2869-34-3):

     - "*CATALOGIC v.5.12.1 BCF base-line model v02.09: BCF = 1023 to 1047.Taking into account mitigating factors, the BCF is reduced from 7852 to 1023/1047, mainly due to molecular size*";

     - "*BCFBAFv3.01: A BCF of 57.5 was estimated using the Meylan et al. (1997/1999) method; using the Arnot-Gobas BCF method including biotransformation estimates, the BCF was 1280; the substance is within the AD. However, as the substance appreciably ionizes under environmentally relevant conditions, the estimate may be less accurate*".

     - "*VEGA tool v1.1.3: CAESAR v2.1.14: BCF = 721 (not within AD); Meylan v1.0.3: BCF = 58 (not within AD); KNN/Read-Across v1.1.0: BCF = 27 (not within AD)*"

     - "US EPA T.E.S.T. v4.2.1: The predicted BCF values from five submodels range from 31 to 276. The Consensus (average) method resulted in a BCF of 83; due to high mean absolute errors the confidence in these predictions is low"

  c. You refer to a toxicokinetic study with mice (Fowler *et al.*, 1976; IUCLID Ch. 7.1.1) and state that "[a]*fter injection of radiolabeled TDA into mice, its fate in mice was followed. The mice tended to concentrate the substance in lung tissue. TDA was metabolised (excretion of CO2). TDA, like other monoalkylamines, undergoes oxidative deamination by monoamine oxidase and is further metabolised to CO2*".

- On the T criteria: You state that the Substance "*fulfils the toxicity criterion (T), since the long-term EC10 value for freshwater organisms is less than 0.01 mg/L*".

3.2. *Assessment of the information provided in your dossier in relation to the triggering*

27 As already explained above, ECHA agrees that the information available on the Substance indicates that it may be P/vP and that the Substance fulfils the T criteria.

28 On your conclusion regarding B/vB, ECHA notes that you have not provided a robust study summary for the OECD TG 305 study on n-hexadecylamine nor a read-across justification document to support the prediction. In the absence of this information, ECHA cannot conduct an independent assessment of this information. On the reported QSAR predictions, the BCF base-line model from CATALOGIC v.5.12.1 and the BCFBAF v3.01 does not provide reliable information to conclude on the bioaccumulation potential of the Substance as

explained further below under Request 7. With regard VEGA tool v1.1.3 and US EPA T.E.S.T. v4.2.1, ECHA agrees with your assessment that these models are not reliable. Finally, the toxicokinetic study referred to under c) above does not inform on the key elements normally investigated in an OECD TG 305 study and therefore cannot on its own contribute to the conclusion for this information requirement.

29 Based on the above, the available information on the Substance indicates that it is a potential PBT/vPvB substance. In addition, your justification above does not provide a reliable basis to exclude that the Substance may be B/vB.

3.3. *Assessment of the information provided in your comments to the draft decision in relation to the triggering*

30 In your comments on the draft decision, you provide the following additonal information which you consider sufficient to conlude that the Substance itself or its transformation/degradation products can be concluded as not PBT/vPvB.

31 You state that "*the Substance is assessed to be persistent (P/vP)*" based on screening level information (OECD 301 B) already available in your dossier. You explain that "*the Substance is a UVCB" and that "the detection and identification of the degradation products for the PBT assessment is expected to be improbable*".

32 To further support your PBT assessment, you selected 8 linear and branched isomers with C-chain length ranging from C13 to C16. You have not provided any information nor conclusion on the persistency potential of these structures. Therefore, ECHA assumes that you conclude these strcutures to be potentially P/vP. You used the selected structures to predict potential transformation/degradation products using CATALOGIC 301C v12.17 (OASIS Catalogic v5.15.2.14). You identified "*372 metabolites for the eight selected compounds*". You further state that out *of these* 372 metabolites*, 29 relevant metabolites should be considered for the PBT assessment for TDA*". You selected these 29 transformation/degradation products based on these being predicted to be formed at above 0.001 mole/mole of the parent compounds. You then state that "*Fifteen of the 29 relevant predicted metabolites are concluded to be not readily biodegradable*" based on BOD preditions from CATALOGIC v5.15.2.14 301C model v12.17.

33 On bioaccumulation, you predicted the log Kow of the 8 selected structures and their 15 putative transformation/degradation products that were predicted to be non readily biodegradable. Only one potential transformation/degradation product (P2M7) had a log Kow > 4.5. You then used predicted Log D value of that transformation/degradation to predict a BCF using base-line BCF base-line DP model v2.07. You specify that you used the highest Log D value within the environmentally relevant pH range for the prediction and considered this a worst case. Based on this approach the predicted BCF was found to be 1663.4 (no confidence interval provided). ECHA also notes that, for six out of the eight selected structures, the predicted values are well above the B/vB criteria.

34 ECHA assessed this information and identified the following issues:

3.3.1. *The provided (Q)SAR adaptation is rejected*

35 Under Annex XI, Section 1.3., the following conditions must be fulfilled whenever a (Q)SAR approach is used:

(i) the prediction needs to be derived from a scientifically valid model,
(ii) the substance must fall within the applicability domain of the model,
(iii) results need to be adequate for the purpose of risk assessment or classification and labelling, and
(iv) adequate and reliable documentation of the method must be provided.

36 With regard to these conditions, we have identified the following issues:

3.3.1.1. *Inadequate justification of representative structures*

37 Under Guidance on IRs and CSA R.6.1.7.3. a prediction is adequate for the purpose of classification and labelling and/or risk assessment if the following conditions are met:

(i) the composition of the substance is clearly defined, and
(ii) representative structure(s) for the assessment are selected.

38 In your comments on the draft decision you selected the following eight linear and branched potential constituents:

39 [redacted] You have provided no justification as to why the selected structures are sufficient to adequately cover the Substance as a whole taking into account the reported variation in carbon chain length and in the degree of alkyl chain branching of potential isomers.

40 Therefore, you have not demonstrated that information on those consistuents are sufficient to conclude on the PBT/vPvB properties of the Substance.

3.3.1.2. *(Q)SAR results are not sufficient to conclude on P/vP properties*

41 Under Section 1.3., first paragraph, third indent of Annex XI to REACH, a study may be omitted if QSAR results are adequate for the purpose of classification and labelling and/or risk assessment, including PBT assessment. Results obtained from biodegradation (Q)SAR models are only regarded as screening information on P/vP properties (Annex XIII, Section 3.1.). As further explained in Guidance on IRs and CSA, Section R.11.4.1.1.4., such information is not considered sufficient on its own to conclude on non-persistence and must be supported by additional information (e.g. test data information, read-across).

42 Based on the BOD (28 days) predictions, you concluded that "*Fifteen of the 29 relevant predicted metabolites are concluded to be not readily biodegradable*". You have not provided additional information to support this conclusion.

43 As explained above, the provided QSAR result alone does not provide a robust approach to conclude that the Substance or it's trasformation/degradation product(s) do not meet the P/vP criteria and thus are not adequate for PBT assessment. Therefore, your adaptation is rejected.

3.3.1.3. *The provided BCF predictions do not allow excluding a B/vB potential for the Substance.*

44 In your comments on the draft decision, you provided BCF predictions for some selected strcutures that are well above the criteria for B/vB. Also, you report a predicted BCF close to the cut-off for B for one of the predicted tranformation/degradation product. ECHA notes that for none of the predictions you provided the confidence interval of the reported value.

45 Despite the uncertainties already explained above, ECHA notes that this information does not support a lack of bioaccumulation potential for the Substance.

3.3.2. *Log Kow is not a valid indicator to assess the B/vB potential of ionisable compounds*

46 Under Section 9.3.2., Column 2, first indent of Annex IX to REACH, the study may be omitted if the substance has a low potential for bioaccumulation and/or a low potential to cross biological membranes. A low log Kow (i.e., log Kow < 3) may only be used to support low potential for bioaccumulation if the partitioning to lipids is the sole mechanism driving the bioaccumulation potential of a substance. For some groups of substances (e.g., organometals, ionisable substances, surfactants) other partitioning mechanisms may drive bioaccumulation (e.g., binding to protein/cell membranes).

47 In your comments on the draft decision, you explain that for the 8 selected structures and the 15 potential transformation/degradation products predicted to be non readily biodegradable, you only selected those with a Log Kow > 4.5 for further bioaccumulation assessment.

48 ECHA also notes that 6 of the selected structures and all of the potential metabolites show chemical groups expected to be ionised under environmentally relevant pH. Therefore, you have not demonstrated that the proposed approach is scientifically valid. Similarly, QSAR predictions solely based on indicator values linked to partitioning to lipid storage (i.e. Log Kow and/or LogD) do not take into account other bioaccumulation mechanisms and therefore may result in underestimating the BCF values of the predicted structures.

49 Therefore, despite, the additonnal information provided in your comments to the draft decision, ECHA maintains that the chemical safety assessment (CSA) indicates the need for further degradation investigation which triggers the obligation to submit further degradation testing.

3.4. *Information provided to fulfil the information requirement in your dossier*

50 You have not submitted any information for this requirement.

51 Therefore, the information requirement is not fulfilled.

3.5. *Study design and test specifications*

52 Simulation degradation studies must include two types of investigations (Guidance on IRs and CSA, Section R.7.9.4.1.):

1) a degradation pathway study where transformation/degradation products are quantified and, if relevant, are identified, and
2) a kinetic study where the degradation rate constants (and degradation half-lives) of the parent substance and of relevant transformation/degradation products are experimentally determined.

53 You must perform the test, by following the pelagic test option with natural surface water containing approximately 15 mg dw/L of suspended solids (acceptable concentration between 10 and 20 mg dw/L) (Guidance on IRs and CSA, Section R.11.4.1.1.3.).

54 The required test temperature is 12°C, which corresponds to the average environmental temperature for the EU (Guidance on IRs and CSA, Table R.16-8) and is in line with the applicable test conditions of the OECD TG 309.

55 As specified in Guidance on IRs and CSA, Section R.7.9.4.1., the organic carbon (OC) concentration in surface water simulation tests is typically 2 to 3 orders of magnitude higher than the test material concentration and the formation of non-extractable residues (NERs) may be significant in surface water tests. Paragraph 52 of the OECD TG 309 provides that the "*total recovery (mass balance) at the end of the experiment should be between 90% and 110% for radiolabelled substances, whereas the initial recovery at the beginning of the experiment should be between 70% and 110% for non-labelled substances*". NERs contribute towards the total recovery. Therefore, the quantity of the (total) NERs must be accounted for the total recovery (mass balance), when relevant, to achieve the objectives

of the OECD TG 309 to derive degradation rate and half-life. The reporting of results must include a scientific justification of the used extraction procedures and solvents.

56 For the persistence assessment by default, total NERs is regarded as non-degraded Substance. However, if reasonably justified and analytically demonstrated a certain part of NERs may be differentiated and quantified as irreversibly bound or as degraded to biogenic NERs, such fractions could be regarded as removed when calculating the degradation half-life(s) (Guidance on IRs and CSA, Section R.11.4.1.1.3.). Further recommendations may be found in the background note on options to address non-extractable residues in regulatory persistence assessment available on the ECHA website (NER - summary 2019 (europa.eu)).

57 Relevant transformation/degradation products are at least those detected at ≥ 10% of the applied dose at any sampling time or those that are continuously increasing during the study even if their concentrations do not exceed 10% of the applied dose, as this may indicate persistence (OECD TG 309; Guidance on IRs and CSA, Section R.11.4.1.).

4. Soil simulation testing

58 Further degradation testing must be considered if the chemical safety assessment (CSA) according to Annex I indicates the need to investigate further the degradation of the substance (Annex VIII, Section 9.2., Column 2).

59 This information requirement is triggered in case the chemical safety assessment (CSA) indicates the need for further degradation investigation (Annex I, Section 4; Annex XIII, Section 2.1), such as if the substance is a potential PBT/vPvB substance (Guidance on IRs and CSA, Section R.11.4.).

60 As already explained in Request 3, the Substance is a potential PBT/vPvB substance.

61 Further, the Substance has low water solubility (23-32 mg/L), high partition coefficient (log K_{ow} =4.6), high adsorption coefficient (log $K_{oc,soil}$ of 4.1) and is ionisable, indicating high potential to adsorb to soil.

62 Therefore, the chemical safety assessment (CSA) indicates the need for further degradation investigation. Based on the adsorptive properties of the Substance, soil represents a relevant environmental compartment.

63 You have not submitted any information for this requirement.

4.1. *Study design and test specifications*

64 Simulation degradation studies must include two types of investigations (Guidance on IRs and CSA, Section R.7.9.4.1.):

1) a degradation pathway study where transformation/degradation products are quantified and, if relevant, are identified, and
2) a kinetic study where the degradation rate constants (and degradation half-lives) of the parent substance and of relevant transformation/degradation products are experimentally determined.

65 In accordance with the specifications of OECD TG 307, you must perform the test using at least four soils representing a range of relevant soils (i.e. varying in their organic content, pH, clay content and microbial biomass).

66 The required test temperature is 12°C, which corresponds to the average environmental temperature for the EU (Guidance on IRs and CSA, Table R.16-8) and is in line with the applicable test conditions of the OECD TG 307.

67 In accordance with the specifications of OECD TG 307, non-extractable residues (NER) must be quantified. The reporting of results must include a scientific justification of the used extraction procedures and solvents (Guidance on IRs and CSA, Section R.7.9.4.1.). By default, total NER is regarded as non-degraded Substance. However, if reasonably justified and analytically demonstrated a certain part of NER may be differentiated and quantified as irreversibly bound or as degraded to biogenic NER, such fractions could be regarded as removed when calculating the degradation half-life(s) (Guidance on IRs and CSA, Section R.11.4.1.1.3.). Further recommendations may be found in the background note on options to address non-extractable residues in regulatory persistence assessment available on the ECHA website.

68 Relevant transformation/degradation products are at least those detected at ≥ 10% of the applied dose at any sampling time or those that are continuously increasing during the study even if their concentrations do not exceed 10% of the applied dose, as this may indicate persistence (OECD TG 307; Guidance on IRs and CSA, Section R.11.4.1.).

5. Sediment simulation testing

69 Further degradation testing must be considered if the chemical safety assessment (CSA) according to Annex I indicates the need to investigate further the degradation of the substance (Annex VIII, Section 9.2., Column 2).

5.1. *Triggering of the information requirement*

70 This information requirement is triggered in case the chemical safety assessment (CSA) indicates the need for further degradation investigation (Annex I, Section 4; Annex XIII, Section 2.1), such as if the substance is a potential PBT/vPvB substance (Guidance on IRs and CSA, Section R.11.4.).

71 As already explained in Request 3, the Substance is a potential PBT/vPvB substance.

72 Further, the Substance has low water solubility (23-32 mg/L), high partition coefficient (log Kow =4.6) and high adsorption coefficient (log $K_{oc,soil}$ of 4.1) and is ionisable, indicating high potential to adsorb to sediment.

73 Therefore, the chemical safety assessment (CSA) indicates the need for further degradation investigation. Based on the adsorptive properties of the Substance, sediment represents a relevant environmental compartment.

5.2. *Information provided to fulfil the information requirement*

74 You have not submitted any information for this requirement.

75 Therefore, the information requirement is not fulfilled.

5.3. *Study design and test specifications*

76 Simulation degradation studies must include two types of investigations (Guidance on IRs and CSA, Section R.7.9.4.1.):

1) a degradation pathway study where transformation/degradation products are quantified and, if relevant, are identified, and

2) a kinetic study where the degradation rate constants (and degradation half-lives) of the parent substance and of relevant transformation/degradation products are experimentally determined.

77 In accordance with the specifications of OECD TG 308, you must perform the test using two sediments. One sediment should have a high organic carbon content (2.5-7.5%) and a fine texture, the other sediment should have a low organic carbon content (0.5-2.5%) and a coarse texture. If the Substance may also reach marine waters, at least one of the water-sediment systems should be of marine origin.

78 The required test temperature is 12°C, which corresponds to the average environmental temperature for the EU (Guidance on IRs and CSA, Table R.16-8) and is in line with the applicable test conditions of the OECD TG 308.

79 In accordance with the specifications of OECD TG 308, non-extractable residues (NER) must be quantified. The reporting of results must include a scientific justification of the used extraction procedures and solvents (Guidance on IRs and CSA, Section R.7.9.4.1.). By default, total NER is regarded as non-degraded Substance. However, if reasonably justified and analytically demonstrated a certain part of NER may be differentiated and quantified as irreversibly bound or as degraded to biogenic NER, such fractions could be regarded as removed when calculating the degradation half-life(s) (Guidance on IRs and CSA, Section R.11.4.1.1.3.). Further recommendations may be found in the background note on options to address non-extractable residues in regulatory persistence assessment available on the ECHA website.

80 Relevant transformation/degradation products are at least those detected at ≥ 10% of the applied dose at any sampling time or those that are continuously increasing during the study even if their concentrations do not exceed 10% of the applied dose, as this may indicate persistence (OECD TG 308; Guidance on IRs and CSA, Section R.11.4.1.).

6. Identification of degradation products

81 Further degradation testing must be considered if the chemical safety assessment (CSA) according to Annex I indicates the need to investigate further the degradation of the substance (Annex VIII, Section 9.2., Column 2).

6.1. *Triggering of the information requirement*

82 This information requirement is triggered in case the chemical safety assessment (CSA) indicates the need for further degradation investigation (Annex I, Section 4; Annex XIII, Section 2.1), such as if the substance is a potential PBT/vPvB substance (Guidance on IRs and CSA, Section R.11.4.).

83 As already explained in Request 3 the Substance is a potential PBT/vPvB substance.

84 Therefore, the chemical safety assessment (CSA) indicates the need for further degradation investigation.

6.2. *Information provided to fulfil the information requirement in your dossier*

85 You have not submitted any information for this requirement.

6.3. *Information provided to fulfil the information requirement in your comments to the draft decision*

86 In your comments to the draft decision you indicate your intention to adapt this information this information requirement by using Annex XI, Section 1.3. (Qualitative or Quantitative Structure-Activity Relationships, (Q)SARs).

6.3.1. *QSAR adaptation is rejected*

87 As explained under request 3, your QSAR adaptation is rejected due to inadequate justification of representative structures.

88 Therefore, the information requirement is not fulfilled and you remain responsible for complying with this decision by the set deadline.

6.4. *Study design and test specifications*

89 Regarding the selection of appropriate and suitable test method(s), the method(s) will have to be substance-specific. Identity, stability, behaviour, and molar quantity of the degradation/transformation products relative to the Substance must be evaluated and reported, when analytically possible. In addition, degradation half-life, log K_{ow} and potential toxicity of the transformation/degradation may need to be investigated. You may obtain this information from the degradation studies requested in Request 3 to 5.

90 To determine the degradation rate of the Substance, the requested study according to OECD TG 309 (Request 3 must be conducted at 12°C and at a test concentration < 100 µg/L. However, to overcome potential analytical limitations with the identification and quantification of major transformation/degradation products, you may consider running a parallel test at higher temperature (but within the frame provided by the test guideline, e.g. 20°C) and at higher application rate (i.e. > 100 µg/L).

91 To determine the degradation rate of the Substance, the requested studies according to OECD TG 307/308 (Requests 4 and 5) must be conducted at 12°C and at test material application rate reflecting realistic assumptions. However, to overcome potential analytical limitations with the identification and quantification of major transformation/degradation products, you may consider running a parallel test at higher temperature (but within the frame provided by the test guideline) and at higher application rate (e.g. 10 times).

7. Bioaccumulation in aquatic species

92 Under Annex VIII, Section 9.3., Column 2, further information on bioaccumulation or further testing as described in Annex IX must be generated if the chemical safety assessment (CSA) in accordance with Annex I indicates the need to investigate further the bioaccumulation properties of the substance.

7.1. *Triggering of the information requirement*

93 Therefore, this information requirement is triggered in case if for example additional information on bioaccumulation as set out in Annex XIII, point 3.2.2, is required to assess PBT or vPvB properties of the substance in accordance with subsection 2.1 of that Annex.

94 As already explained in Request 3 the Substance is a potential PBT/vPvB substance.

95 Therefore, the chemical safety assessment (CSA) indicates the need for further investigation on bioaccumulation in aquatic species.

7.2. *Information provided*

96 You have adapted this information requirement by applying weight of evidence (WoE) adaptation in accordance with Annex XI, section 1.2. In support of your adaptation, you have provided in your dossier:

(i) a grouping and read-across adaptation in accordance with Annex XI, Section 1.5. In support of your adaptation you provided:

a) QSAR prediction of BCF with BCFBAF v3.01 (2020) for the 1-tridecanamine (CAS RN 2869-34-3) and one potential isomer of Tridecylamine, branched (CAS RN 86089-17-0)

b) QSAR prediction of BCF with Catalogic v.5.14.1.5, BCF base-line model v.04.11 (2020) for the 1-tridecanamine (CAS RN 2869-34-3) and one potential isomer of Tridecylamine, branched (CAS RN 86089-17-0)

(ii) a reference, in the endpoint summary record, to the toxicokinetic study with mice performed by Fowler et al. (1976) and provided in IUCLID Chapter 7.1.1

97 In your comments to the draft decision, you have provided further sources of information in support of your weight of evidence adaptation:

(iii) QSAR predictions of BCF with OASIS Catalogic v5.15.2.14 (BCF base-line model v5.12 and BCF base-line DP model v2.07) on the 8 following constituents with C13 to C16 alklyl chain:

(iv) [redacted] Metabolism half-lives predictions from QSAR Toolbox (v4.5) on the 8 consttiuents mentioned in (iii).

(v) Alerts for protein binding from QSAR Toolbox (v 4.5) on the 8 constituents mentioned in (iii).

(vi) Information on descriptors of bioaccumulation potential:

a. LogDow predictions from SPARC online calculator
b. LogKow predictions from EpiWin (KOWWIN v1.68)

(vii) Information related to the low likelihood to cross biological membranes:

a. Information on the permeability of ionizable substances into cell membranes and fatty tissues
b. Information on the ion trap mechanism for bioaccumulation
c. Information on the electrical attraction mechanism for bioaccumulation
d. Information on the physico-chemial properties of the Substance (Dmax_aver) which you consider indicative of hindered uptake.

(viii) a statement regarding a predicted "*half-life up to 20 days*" for the constituents, as calculated by the OECD QSAR Toolbox v4.5.

ECHA notes the absence of a result for every constituent structure and furthermore there is no description of on what system/conditions this half-life was predicted on.

7.3. *Assessment of the information provided*

7.3.1. *Weight of evidence adaptation is rejected*

98 Annex XI, Section 1.2 states that there may be sufficient weight of evidence from several independent sources of information enabling, through a reasoned justification, a conclusion on the information requirement, while the information from each single source alone is insufficient to fulfil the information requirement.

99 The justification must have regard to the information that would otherwise be obtained from the study that must normally be performed for this information requirement.

100 According to ECHA Guidance R.4, a weight of evidence adaptation involves an assessment of the relative values/weights of the different sources of information submitted. The weight given is based on the reliability of the data, consistency of results/data, nature and severity of effects, and relevance and coverage of the information for the given regulatory information requirement. Subsequently, relevance, reliability, coverage, consistency and results of these sources of information must be balanced in order to decide whether they together provide sufficient weight to conclude on the corresponding information requirement.

101 Annex XI, section 1.2 requires that adequate and reliable documentation is provided to describe your weight of evidence approach. This documentation must include robust study summaries of the studies used as sources of information and a justification explaining why the sources of information together provide a conclusion on the information requirement.

102 You have not included a justification for your weight of evidence adaptation which would include an adequate and reliable (concise) documentation as to why the sources of information provide sufficient weight to conclude on the information requirements under consideration.

103 In your comments to the draft decision you state that "*a justification for the weight-of-evidence approach*" will be submitted in an updated registration dossier. As this information is not yet available, no conclusion on the compliance of the proposed adaptation can be made. Therefore, you must submit this information in an updated registration dossier by the deadline set out in the decision.

104 In spite of this critical deficiency, ECHA has nevertheless assessed the validity of your adaptation. Your weight of evidence approach has deficiencies that are common to all information requirements under consideration and also deficiencies that are specific for these information requirements individually.

105 Relevant information that can be used to support weight of evidence adaptation for the information requirement of Annex IX, Section 9.3.2 includes similar information that is produced by the OECD TG 305. OECD TG 305 requires the study to investigate the following key elements:

1. the uptake rate constant (k1) and loss rate constants including the depuration rate constant (k2), and/or
2. the steady-state bioconcentration factor (BCF_{SS}), and/or
3. the kinetic bioconcentration factor (BCF_K), and/or
4. the biomagnification factor (BMF).

106 The source of information (ii), (iv), (v) and (viii) do not provide relevant information on any of the key elements (1-4) listed above.

107 Similarly, the sources of information (vi) and (vii) do not provide similar information that is produced by the OECD TG 305 and therefore they are considered as not relevant within the

context of the Weight of Evidence approach. However, the sources of information (vi) and (vii) include relevant indicators for assessing low potential for bioaccumulation and low potential to cross biological membranes within the context of Annex IX, Section 9.3.2., column 2. Therefore, ECHA considers this information as relevant under the Annex IX, Section 9.3.2., column 2 as further assessed below.

108 The sources of information (i) and (iii) provide relevant information on the key parameter 2 listed above. However, the reliability of these sources of information is significantly affected by the following deficiencies:

7.3.1.1. *Read-across adaptation is rejected for the sources of information (i) and (iii)*

109 Annex XI, Section 1.5. specifies two conditions which must be fulfilled whenever a read-across approach is used. 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 group or category. Secondly, it is required that the relevant properties of a substance within the group may be predicted from data for reference substance(s) within the group.

110 Additional information on what is necessary when justifying a read-across approach can be found in the Guidance on IRs and CSA, Chapter R.6. and related documents (RAAF, 2017; RAAF UVCB, 2017).

111 You provide the following reasoning for the prediction of this information requirement. However, you state that the target and the source substances "[…] *contain the same functional groups and a similar chemical structure as they consist of alkyl chains with a terminal amine group and differ only due to branching in the alkyl chain length*". ECHA understands that you predict the properties of the Substance using a read-across hypothesis which assumes that different compounds have the same type of effects. The properties of your Substance are predicted to be quantitatively equal to those of the source substance.

112 We have identified the following issue with the prediction of bioaccumulation:

7.3.1.1.1. *Adequacy and reliability of the source information (i) and (iii)*

113 Under Annex XI, Section 1.5., the results to be read across must have an adequate and reliable coverage of the key parameters addressed in the test guideline for the corresponding study that shall normally be performed for a particular information requirement, in this case OECD TG 305.

114 As explained under the section 3.3. above and under the section 7.3.1.2 below, the provided QSAR predictions cannot be considered as providing a reliable coverage of the key parameters for that endpoint.

115 Therefore, this information do not provide a reliable basis for the prediction.

7.3.1.1.2. *Missing supporting information*

116 Annex XI, Section 1.5 requires that whenever read-across is used adequate and reliable documentation of the applied method must be provided. Such documentation must provide supporting information to scientifically justify the read-across explanation for prediction of properties. The set of supporting information should strengthen the rationale for the read-across in allowing to verify the crucial aspects of the read-across hypothesis and establishing that the properties of the Substance can be predicted from the data on the source substance(s) (Guidance on IRs and CSA R.6, Section R.6.2.2.1.f.).

117 As indicated above, the read-across hypothesis currenty in your dossier, is based on predictions from C13 constituents of the substances. Supporting information must include information to demonstrate similar bioaccumulation potential for the C11 and C12 fractions of the Substance and to demonstrate the lack of effect of the degree of branching of the alkyl chain on the bioaccumulation potential.

118 In your comments to the draft decision, your revised your read-across hypothesis and you considered predictions from C13 to C16 constituents of the substances (source of information (iii)). In section 1.2 of your dossier you report that C 11 and C 12 constituents are present in concentrations ranging from 0 to 25%. Supporting information must therefore include information to demonstrate similar bioaccumulation potential for the C11, C12, C 13, C14 and C 16 fractions of the Substance and to demonstrate the lack of effect of the degree of branching of the alkyl chain on the bioaccumulation potential.

119 As explained above, you have not established that relevant properties of the Substance can be predicted from the available data on the source substances. Therefore, your read-across approach under Annex XI, Section 1.5. is rejected and cannot be considered as a reliable basis to conclude on the information requirement in the context of your weight of evidence adaptation.

7.3.1.2. *The provided (Q)SAR adaptation are rejected for all sources of information*

120 Under Annex XI, Section 1.3., the following conditions must be fulfilled whenever a (Q)SAR approach is used:

(i) the prediction needs to be derived from a scientifically valid model,

(ii) the substance must fall within the applicability domain of the model,

(iii) results need to be adequate for the purpose of risk assessment or classification and labelling, and

(iv) adequate and reliable documentation of the method must be provided.

121 With regard to these conditions, we have identified the following issue(s):

7.3.1.2.1. *The selected representative structures are outside the applicability domain of the models used in source of information (i).*

122 Under ECHA Guidance R.6.1.5.3., a prediction is within the applicability domain of the model, when, among others, the substance and the structures selected for the prediction falls within descriptor, structural, mechanistic and metabolic domain.

123 However, the selected structures used as input for the QSAR predictions you have provided are outside the mechanistic domain of the models because both BCFBAF v3.01 and the BCF base-line model v.04.11 from Catalogic v.5.14.1.5 use log Kow as an input parameter. However, as already explained above, the Substance is surface active and ionisable at environmentally relevant pH. Hence logKow is not a suitable descriptor to predict bioaccumulation because it does not take into account other potential mechanisms of bioaccumulation than lipid storage.

7.3.1.2.2. *The predictions are not adequate due to low reliability for the sources of information (i).*

124 Under ECHA Guidance R.6.1.3.4 a prediction is adequate for the purpose of classification and labelling and/or risk assessment when the model is applicable to the chemical of

interest with the necessary level of reliability. ECHA Guidance R.6.1.5.3. specifies that, among others, the following cumulative conditions must be met:

- the model predicts well substances that are similar to the substance of interest, and
- reliable input parameters are used, and
- the prediction is consistent with information available for other related endpoint(s).

125 The predictions for the selected structures used as input are not reliable because other constituents from the Substance, such as the C11 and C12 fractions as well as the various potential isomers within the branched fraction, are not taken into account. Also, in the LE Composition A reported in Section 1.2 of the ICULID dossier, you report that the Substance may include C10, C14 and C15 constituents at concentrations that are relevant for the PBT assessment.

126 Therefore, you have not demonstrated that the prediction for the Substance is adequate for the purpose of classification and labelling and/or risk assessment.

7.3.1.2.3. *Inadequate documentation of the prediction (QPRF) for the source of information (i) and (iii).*

127 ECHA Guidance R.6.1.6.3 states that the information specified in or equivalent to the (Q)SAR Prediction Reporting Format document (QPRF) must be provided to have adequate and reliable documentation of the applied method. For a QPRF this includes, among others:

- the model prediction(s), including the endpoint,
- a precise identification of the substance modelled,
- the relationship between the modelled substance and the defined applicability domain,
- the identities of close analogues, including considerations on how predicted and experimental data for analogues support the prediction.

128 For the QSAR predictions (i) and (iii), you provided the documentation of the prediction (QPRF). The information you provided lacks documentation for close analogues, including considerations on how predicted and experimental data for close analogues support the prediction. Without this documentation, the validity of the predictions cannot be confirmed.

129 In absence of such information, ECHA cannot establish that the prediction can be used to meet this information requirement.

7.3.1.2.4. *Lack of justification of the representativeness of the input structures for source of information (iii)*

130 As explained above under request 3 and specifically under section 3.3.2, in the absence of justification ECHA disagrees that the structures you selected could be considered representatives. Therefore, you have not demonstrated that the prediction is adequate for the purpose of classification and labelling and/or risk assessment.

7.3.1.2.5. *The constituents 2, 4 and 6 for the source of information (iii) are outside the applicability domain of the model*

131 Under Guidance on IRs and CSA R.6.1.5.3., a prediction is within the applicability domain of the model, when, among others, the substance and the structures selected for the predictions fall within the descriptor, structural, mechanistic and metabolic domains.

132 The applicability domain of the model you used is defined on the basis of molecular weight, logKow the presence of atom-centered fragments and the mechanism of bioaccumulation (passive diffusion).

133 The selected structures 2, 4 and 6 used as input for the prediction are outside the applicability domain of the model as these structures are ionisable and hence log Kow is not a suitable descriptor to predict bioaccumulation (Guidance on IRs and CSA, Appendix R.7.10-3).

7.3.1.2.6. *The QSAR predictions from the source of information (iii) contradict your conclusion*

134 You state that "*The target chemicals are not bioaccumulative based on the predicted BCF values (<2000 L/kg) obtained from the CATALOGIC BCF base-line (DP) model*". However, in Table 9 in your comments to the draft decision the BCF (with mitigating factors) was predicted to be > 2000 for the 6 out for the 8 selected structures. Therefore, the predictions indicate a bioaccumulation concern for the input structures.

135 In conclusion, the provided predictions cannot be considered as reliable source of information that could contribute to the conclusion on the key parameter investigated by the required study.

7.3.1.3. *Conclusion on the weight of evidence adaptation*

136 In summary, the sources of information (i) and (iii) provide relevant information on the key elements of this information requirement. However, these sources of information have significant reliability issues as described above and cannot contribute to the conclusion on the information requirement for bioaccumulation in aquatic species.

137 Therefore it is not possible to conclude, based on any source of information alone or considered together, on the information requirement for bioaccumulation in aquatic species.

7.3.2. *Assessment of the source of information (vi) and (vii) under Annex IX, Section 9.3.2., Column 2 provided in your comments the draft decision*

7.3.2.1. *The log Kow and the log Dow are not valid descriptors of the bioaccumulation potential of the Substance (source of information (vi) a and b)*

138 Under Section 9.3.2., Column 2, first indent of Annex IX to REACH, the study may be omitted if the substance has a low potential for bioaccumulation and/or a low potential to cross biological membranes.

139 A low log K_{ow} (*i.e.* log K_{ow} < 3) on its own may be used to show low potential for bioaccumulation only if the potential for bioaccumulation of the substance is solely driven by lipophilicity. This excludes, for example, situations where the substance is:

- surface active or
- present in ionised form(s) at environmentally relevant conditions (pH 4 – 9)

140 In your comments to the draft decision you provided the source of information (vi) which calculated the Log Dow and the LogKow values of the 8 input structures with SPARC online calculator and KOWWIN v1.68 respectively. You report log Dow and log Kow values ranging

from -0.08 to 5.6 and 5.03 to 6.7 respectively. You use this information to conclude that the Substances has low bioaccumulation potential.

141 The Substance is ionisable and it may interact with cell membranes based on chemical structure. Therefore other partitioning mechanisms may drive bioaccumulation (e.g., binding to protein/cell membranes) for such substances. For this reason, log Kow is not considered a valid descriptor of the bioaccumulation potential for such substances (Guidance on IRs and CSA, Appendix R.7.10-3). Similarly, the log Dow would only address the potential for bioaccumulation for substances for which the bioaccumulation is solely driven by lipophilicity.

142 Therefore, you have not demonstrated that the log Dow and/or log Kow are valid descriptors of the bioaccumulation potential of the Substance.

7.3.2.2. *Low likelihood to cross biological membranes is not demonstrated (source of information (vii) a to d)*

143 Under Section 9.3.2., Column 2, first indent, Annex IX to REACH, the study may be omitted if the Substance is unlikely to cross biological membranes. Guidance on IRs and CSA, Section R.7.8.5. explains that there is no scientific basis to define molecular characteristics that would render a substance unlikely to cross biological membranes. In this context, the indicators used for low likelihood of a high bioaccumulation potential (Guidance on IRs and CSA, Section R.11, Figure R.11-4) must be considered, including:

- physico-chemical indicators of hindered uptake due to large molecular size (e.g. Dmax > 17.4 Å and MW > 1100 or MML > 4.3 nm) or high octanol-water partition coefficient (log Kow > 10) or low potential for mass storage (octanol solubility (mg/L) < 0.002 x MW), and
- supporting experimental evidence of hindered uptake (no chronic toxicity for mammals and birds, no chronic ecotoxicity, no uptake in mammalian toxicokinetic studies, very low uptake after chronic exposure).

144 In your comments to the draft decision you provided the source of information (vii) a to d on which you based your conclusion of low likelihood to cross biological membranes. The sources of information (vii) a to c do not include relevant information for assessing hindered uptake of the Substance. However, the source of information (vii) d provides information on the Dmax (physico-chemical indicators of hindered uptake due to large molecular size).

145 ECHA notes that, based on the information in your registration dossier, you consider the Substance as acutely and chronicaly toxic to the aquatic environment. Furthermore, in the source of information (ii), lung uptake and metabolisation was reported. These data are in contradiction with your claim of low permeability of the cell membranes but rather indicate a potential for systemic exposure to the Substance.

146 Therefore, you have not demonstrated that the Substance has low likelihood to cross biological membranes.

147 On this basis, the information requirement is not fulfilled and you remain responsible for complying with this decision by the set deadline.

7.4. *Study design and test specification*

148 Bioaccumulation in fish: aqueous and dietary exposure (Method EU C.13 / OECD TG 305) is the preferred test to investigate bioaccumulation (Guidance on IRs and CSA, Section R.7.10.3.1.). Exposure via the aqueous route (OECD TG 305-I) must be conducted unless it can be demonstrated that:

- a stable and fully dissolved concentration of the test material in water cannot be maintained within ± 20% of the mean measured value, and/or
- the highest achievable concentration is less than an order of magnitude above the limit of quantification (LoQ) of a sensitive analytical method.

149 This test set-up is preferred as it allows for a direct comparison with the B and vB criteria of Annex XIII of REACH.

150 You may only conduct the study using the dietary exposure route (OECD 305-III) if you justify and document that testing through aquatic exposure is not technically possible as indicated above. You must then estimate the corresponding BCF value from the dietary test data according to Annex 8 of the OECD 305 TG and OECD Guidance Document on Aspects of OECD TG 305 on Fish Bioaccumulation (ENV/JM/MONO(2017)16).

References

The following documents may have been cited in the decision.

Guidance on information requirements and chemical safety assessment (Guidance on IRs & CSA)

Chapter R.4 Evaluation of available information; ECHA (2011).
Chapter R.6 QSARs, read-across and grouping; ECHA (2008).
Appendix to Chapter R.6 for nanoforms; ECHA (2019).
Chapter R.7a Endpoint specific guidance, Sections R.7.1 – R.7.7; ECHA (2017).
Appendix to Chapter R.7a for nanomaterials; ECHA (2017).
Chapter R.7b Endpoint specific guidance, Sections R.7.8 – R.7.9; ECHA (2017).
Appendix to Chapter R.7b for nanomaterials; ECHA (2017).
Chapter R.7c Endpoint specific guidance, Sections R.7.10 – R.7.13; (ECHA 2017).
Appendix to Chapter R.7a for nanomaterials; ECHA (2017).
Appendix R.7.13-2 Environmental risk assessment for metals and metal compounds; ECHA (2008).
Chapter R.11 PBT/vPvB assessment; ECHA (2017).
Chapter R.16 Environmental exposure assessment; ECHA (2016).

Guidance on data-sharing; ECHA (2017).

All Guidance on REACH is available online: https://echa.europa.eu/guidance-documents/guidance-on-reach

Read-across assessment framework (RAAF)

RAAF, 2017 Read-across assessment framework (RAAF), ECHA (2017)
RAAF UVCB, 2017 Read-across assessment framework (RAAF) – considerations on multi- constituent substances and UVCBs), ECHA (2017).

The RAAF and related documents are available online:
https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across

***OECD Guidance documents* (OECD GDs)**

OECD GD 23 Guidance document on aquatic toxicity testing of difficult substances and mixtures; No. 23 in the OECD series on testing and assessment, OECD (2019).
OECD GD 29 Guidance document on transformation/dissolution of metals and metal compounds in aqueous media; No. 29 in the OECD series on testing and assessment, OECD (2002).
OECD GD 150 Revised guidance document 150 on standardised test guidelines for evaluating chemicals for endocrine disruption; No. 150 in the OECD series on testing and assessment, OECD (2018).
OECD GD 151 Guidance document supporting OECD test guideline 443 on the extended one-generation reproductive toxicity test; No. 151 in the OECD series on testing and assessment, OECD (2013).

Appendix 2: Procedure

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

ECHA followed the procedure detailed in Articles 50 and 51 of REACH.

The compliance check was initiated on 06 July 2021.

ECHA notified you of the draft decision and invited you to provide comments.

ECHA took into account your comments and did not amend the requests.

The deadline of the decision is set based on standard practice for carrying out OECD TG tests. In your comments on the draft decision, you requested an extension of the deadline to provide information without any specification of the timeframe requested. You did not provide any supporting information to explain the reasons for the extension of the deadline as specified in the webform. Nevertheless, the deadline has been exceptionally extended by 12 months from the standard deadline granted by ECHA to take into account currently longer lead times in contract research organisations.

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.

Following the Board of Appeal's decision in case A-001-2022 ECHA revised the study design specifications for meeting the information requirement for simulation testing on ultimate degradation in surface water (Annex VIII, column 2, section 9.2).

Appendix 3: Addressees of this decision and their corresponding information requirements

In accordance with Articles 10(a) and 12(1) of REACH, the information requirements for individual registrations are defined as follows:

- the information specified in Annex VII to REACH, for registration at 1-10 tonnes per year (tpa), or as a transported isolated intermediate in quantity above 1000 tpa;
- the information specified in Annexes VII and VIII to REACH, for registration at 10-100 tpa;

Registrant Name	Registration number	Highest REACH Annex applicable to you
[redacted]	[redacted]	[redacted]

Where applicable, the name of a third party representative (TPR) may be displayed in the list of recipients whereas ECHA will send the decision to the actual registrant.

Appendix 4: Conducting and reporting new tests for REACH purposes

1. Requirements when conducting and reporting new tests for REACH purposes

1.1. Test methods, GLP requirements and reporting

(1) Under Article 13(3) of REACH, all new data generated as a result of this decision must be conducted according to the test methods laid down in a European Commission Regulation or to international test methods recognised by the Commission or ECHA as being appropriate.

(2) Under Article 13(4) of REACH, ecotoxicological and toxicological tests and analyses must be carried out according to the GLP principles (Directive 2004/10/EC) or other international standards recognised by the Commission or ECHA.

(3) Under Article 10(a)(vi) and (vii) of REACH, all new data generated as a result of this decision must be reported as study summaries, or as robust study summaries, if required under Annex I of REACH. See ECHA Practical Guide on How to report robust study summaries[2].

(4) Under the introductory part of Annexes VII/VIII/IX/X to REACH, where a test method offers flexibility in the study design, for example in relation to the choice of dose levels or concentrations, the chosen study design must ensure that the data generated are adequate for hazard identification and risk assessment.

1.2. Test material

1. Selection of the Test material(s)

The Test Material used to generate the new data must be selected taking into account the following:

a) the impact of each constituent/ impurity on the test results for the endpoint to be assessed. For example, if a constituent/ impurity of the Substance is known to have an impact on (eco)toxicity, the selected Test Material must contain that constituent/ impurity.

2. Information on the Test Material needed in the updated dossier

a) You must report the composition of the Test Material selected for each study, under the "Test material information" section, for each respective endpoint study record in IUCLID.

b) The reported composition must include the careful identification and description of the characteristics of the Tests Materials in accordance with OECD GLP (ENV/MC/CHEM(98)16) and EU Test Methods Regulation (EU) 440/2008 (Note, Annex), namely all the constituents must be identified as far as possible as well as their concentration. Also any constituents that have harmonised classification and labelling according to the CLP Regulation must be identified and quantified using the appropriate analytical methods,

[2] https://echa.europa.eu/practical-guides

With that detailed information, ECHA can confirm whether the Test Material is relevant for the Substance.

Technical instructions on how to report the above is available in the manual on How to prepare registration and PPORD dossiers[3].

2. General recommendations for conducting and reporting new tests

2.1. Strategy for the PBT/vPvB assessment

Under Annex XIII, the information must be based on data obtained under conditions relevant for the PBT/vPvB assessment. You must assess the PBT properties of each relevant constituent of the Substance present in concentrations at or above 0.1% (w/w) and of all relevant transformation/degradation products. Alternatively, you would have to justify why you consider these not relevant for the PBT/vPvB assessment.

You are advised to consult Guidance on IRs & CSA, Sections R.7.9, R.7.10 and R.11 on PBT assessment to determine the sequence of the tests needed to reach the conclusion on PBT/vPvB. The guidance provides advice on 1) integrated testing strategies (ITS) for the P, B and T assessments and 2) the interpretation of results in concluding whether the Substance fulfils the PBT/vPvB criteria of Annex XIII.

In particular, you are advised to first conclude whether the Substance fulfils the Annex XIII criteria for P and vP, and then continue with the assessment for bioaccumulation. When determining the sequence of simulation degradation testing you are advised to consider the intrinsic properties of the Substance, its identified uses and release patterns as these could significantly influence the environmental fate of the Substance. You must revise your PBT assessment when the new information is available.

2.2. Environmental testing for substances containing multiple constituents

Your Substance contains multiple constituents and, as indicated in Guidance on IRs & CSA, Section R.11.4.2.2, you are advised to consider the following approaches for persistency, bioaccumulation and aquatic toxicity testing:

- the "known constituents approach" (by assessing specific constituents), or
- the "fraction/block approach, (performed on the basis of fractions/blocks of constituents), or
- the "whole substance approach", or
- various combinations of the approaches described above

Selection of the appropriate approach must take into account the possibility to characterise the Substance (i.e. knowledge of its constituents and/or fractions and any differences in their properties) and the possibility to isolate or synthesize its relevant constituents and/or fractions.

References to Guidance on REACH and other supporting documents can be found in Appendix 1.

[3] https://echa.europa.eu/manuals