Helsinki, 17 August 2020

Addressees
Registrants of JS_t-Dodec-Thiazole listed in the last Appendix of this decision

Date of submission for the jointly submitted dossier subject of this decision
20/06/2018

Registered substance subject to this decision, hereafter 'the Substance'
Substance name: 1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol
EC number: 939-692-2
CAS number: NS

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

DECISION ON A COMPLIANCE CHECK

Based on Article 41 of Regulation (EC) No 1907/2006 (REACH), ECHA requests that you submit the information listed below by the deadlines provided.

A. Requirements applicable to all the Registrants subject to Annex VII of REACH

1. Water solubility (Annex VII, Section 7.7.; test method: OECD TG 105) of the Substance;

2. Partition coefficient n-octanol/water (Annex VII, Section 7.8.; using an appropriate test method) of the Substance;

3. In vitro gene mutation study in bacteria (Annex VII, Section 8.4.1.; test method EU B.13/14. / OECD TG 471) using one of the following strains: *E. coli* WP2 uvrA, or *E. coli* WP2 uvrA (pKM101), or *S. typhimurium* TA102' with the Substance;

4. Long-term toxicity testing on aquatic invertebrates (triggered by Annex VII, Section 9.1.1., column 2) with the Substance also requested at C.3. below;

5. Growth inhibition study aquatic plants (Annex VII, Section 9.1.2.; test method EU C.3./OECD TG 201) with the Substance.

B. Requirements applicable to all the Registrants subject to Annex VIII of REACH

1. 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) with the Substance;

2. Only if a negative result in Annex VIII, Section 8.4.2. is obtained, In vitro gene mutation study in mammalian cells (Annex VIII, Section 8.4.3.; test method OECD TG

476 or TG 490);

3. Justification for an adaptation of a Short-term repeated dose toxicity (28 day), (Annex VIII, Section 8.6.1.) based on the study requested under Section C.1;

4. Screening for reproductive/developmental toxicity (Annex VIII, Section 8.7.1.; test method OECD 421/422) in rats, oral route with the Substance;

5. Long-term toxicity testing on fish (triggered by Annex VIII, Section 9.1.3., column 2) with the Substance also requested at C.4. below;

6. Simulation testing on ultimate degradation in surface water (triggered by Annex VIII, Section 9.2., column 2) with the Substance also requested at C.5. below;

7. Soil simulation testing (triggered by Annex VIII, Section 9.2., column 2) with the Substance also requested at C.6. below;

8. Sediment simulation testing (triggered by Annex VIII, Section 9.2., column 2) with the Substance also requested at C.7. below;

9. Identification of degradation products (triggered by Annex VIII, Section 9.2., column 2) also requested at C.8. below;

10. Bioaccumulation in aquatic species (triggered by Annex I, sections 0.6.1. and 4. in conjunction with Annex XIII, Section 2.1.) with the Substance also requested at C.9. below.

C. Requirements applicable to all the Registrants subject to Annex IX of REACH

1. Sub-chronic toxicity study (90-day), oral route (Annex IX, Section 8.6.2.; test method OECD TG 408) in rats modified to include urinalysis and immune-histochemical investigation of renal pathology

2. Pre-natal developmental toxicity study (Annex IX, Section 8.7.2.; test method OECD TG 414) in a first species (rat or rabbit), oral route with the Substance;

3. Long-term toxicity testing on aquatic invertebrates (Annex IX Section 9.1.5; test method EU C.20./OECD TG 211) with the Substance;

4. Long-term toxicity testing on fish (Annex IX Section 9.1.6; test method: Fish, early-life stage (FELS) toxicity test, OECD TG 210) with the Substance;

5. Simulation testing on ultimate degradation in surface water (Annex IX, Section 9.2.1.2.; test method EU C.25./OECD TG 309) at a temperature of 12 °C ; including degradation of each relevant constituent present in concentration at or above 0.1% (w/w) with the Substance;

6. Soil simulation testing (Annex IX, Section 9.2.1.3.; test method EU C.23./OECD TG 307) at a temperature of 12 °C ; including degradation of each relevant constituent present in concentration at or above 0.1% (w/w) with the Substance;

7. Sediment simulation testing (Annex IX, Section 9.2.1.4.; test method EU C.24./OECD TG 308) at a temperature of 12 °C ; including each relevant constituent present in

concentration at or above 0.1% (w/w) with the Substance;

8. Identification of degradation products (Annex IX, 9.2.3.) using an appropriate test method among those requested above (5-7) with the Substance;

9. Bioaccumulation in aquatic species (Annex IX, Section 9.3.2.; test method OECD TG 305); including each relevant constituent present in concentration at or above 0.1% (w/w) and relevant degradation products of the Substance.

Conditions to comply with the requests

Each addressee of this decision is bound by the requests for information corresponding to the REACH Annexes applicable to their own registered tonnage of the Substance at the time of evaluation of the jointly submitted dossier.
To identify your legal obligations, please refer to the following:

- you have to comply with the requirements of Annexes VII and VIII of REACH, if you have registered a substance at 10-100 tpa;
- you have to comply with the requirements of Annexes VII, VIII and IX of REACH, if you have registered a substance at 100-1000 tpa;

Registrants are only required to share the costs of information that they must submit to fulfil the information requirements for their registration.

When a study is required under several Annexes of REACH, the reasons are provided in the corresponding appendices of this decision. The registrants concerned must perform only one study and make every effort to reach an agreement as to who is to carry out the study on behalf of the other registrants in accordance with Article 53 of REACH.

The Appendix on general considerations addresses issues relevant for several requests while the other Appendices state the reasons for the requests for information to fulfil the requirements set out in the respective Annexes of REACH.

The Appendix entitled Observations and technical guidance addresses the generic approach for the selection and reporting of the test material used to perform the required studies and provides generic recommendations and references to ECHA guidance and other reference documents.

You must submit the information requested in points A.1-5, B.1-B.4, C.1-4 above in an updated registration dossier by ***22 November 2022***, and the information requested in points B.5-10 and C. 5-9 above by ***22 November 2023***.

You must also update the chemical safety report, where relevant, including any changes to classification and labelling based on the newly generated information. The timeline has been set to allow for sequential testing where relevant.

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.

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 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 on general considerations

(i) Assessment of the Grouping of substances and read-across approach, in light of the requirements of Annex XI, Section 1.5.

You seek to adapt the following standard information requirements by applying (a) read-across approach(es) 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.)
- Short-term repeated dose toxicity (28 day), (Annex VIII, Section 8.6.1.)
- 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.)
- Growth inhibition study aquatic plants (Annex VII, Section 9.1.2.)
- Water solubility (Annex VII, Section 7.7.)
- Partition coefficient n-octanol/water (Annex VII, Section 7.8.)

ECHA has considered the scientific and regulatory validity of your read-across approach(es) in general before assessing the specific standard information requirements in the following appendices.

Grouping of substances and read-across approach

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 (addressed under 'Assessment of prediction(s)').

Additional information on what is necessary when justifying a read-across approach can be found in the ECHA Guidance[2] and related documents[3, 4].

A. Predictions for physico-chemical and (eco)toxicological properties

You have provided a read-across justification in IUCLID Section 13 and with your comments on the draft decision. ECHA has updated the decision by addressing your comments.

[2] Guidance on information requirements and chemical safety assessment Chapter R.6: QSARs and grouping of Chemicals. 2008 (May) ECHA, Helsinki. 134. pp. Available online: https://echa.europa.eu/documents/10162/13632/information_requirements_r6_en.pdf/77f49f81-b76d-40ab-8513-4f3a533b6ac9

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

[4] Read-across assessment framework (RAAF) - considerations on multi-constituent substances and UVCBs. 2017 (March) ECHA, Helsinki. 40 pp. Available online: https://doi.org/10.2823/794394

You read-across between the structurally similar substances,

1. 1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-nonanethiol' (EC No. 293-927-7, CAS No. 91648-65-6);
2. 5-(dodecyldisulfanyl)-1,3,4-thiadiazole-2(3H)-thione / 50530-43-3 / 256-616-7 as source substances and
3. the Substance.

You have provided the following reasoning for the prediction of physico-chemical and (eco)toxicological properties:

"Information available for the target substance [**3.**] *are supported by study results from the closely related short-chain homologue* [**1.**]. *Both substances are UVCB substances (Substances of Unknown or Variable composition, Complex reaction products or Biological materials) that are virtually the same: the only difference between those two UVCB substances are the used raw materials (alkanethiols) that have a diversity in the C-range, i.e. on the one hand a tert. C12-alkanethiol is used in the manufacturing process, on the other hand a tert. C9. Hence, based on the (structural) similarity of both substances (and their reaction products respectively) it is safe to say that the physicochemical, toxicological and ecotoxicological properties are likely to be similar. Finally, some endpoints are also supported by results with the substance* [**2.**]. *This substance is one of the representative structures / components of the UVCB substance* [**3.**] *and hence is very likely to exhibit identical toxicological, ecotoxicological and very similar physico-chemical properties."* and *"the source and the target substance have similar (eco)toxicological and fate properties as a result of structural similarity."*

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.

ECHA notes the following deficiencies with regard to the applied read-across for the physico-chemical and (eco)toxicological properties:

a) Read-across hypothesis

According to Annex XI, Section 1.5., two conditions shall be necessarily fulfilled to apply grouping and read-across. 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 (read-across approach).

A read-across hypothesis needs to be provided, establishing why a prediction for a toxicological or ecotoxicological property is reliable. This hypothesis should be based on recognition of the structural similarities and differences between the substances[5]. It should explain why the differences in the chemical structures should not influence the toxicological/ ecotoxicological/physico-chemical properties or should do so in a regular pattern.

[5] Guidance on information requirements and chemical safety assessment, Chapter R.6: QSARs and grouping of chemicals.

Your read-across hypothesis is that the structural similarity between the source substance and your Substance is a sufficient basis for predicting the properties of your Substance.

While structural similarity is a prerequisite for applying the grouping and read-across approach, it does not necessarily lead to predictable or similar (eco)toxicological and physico-chemical properties. You have not provided a well-founded hypothesis to establish a reliable prediction for the (eco)toxicological and physico-chemical properties, based on recognition of the structural similarities and differences between the source substance and your Substance.

In your comments on the draft decision, you acknowledge the assessment by ECHA. You provided the necessary read-across hypothesis. However, this information needs to be added to your dossier.

b) Characterisation of the Substance and source substance(s)

Annex XI, Section 1.5 of the REACH Regulation provides that *"substances whose physicochemical, toxicological and ecotoxicological properties are likely to be similar or follow a regular pattern as a result of chemical similarity may be considered as group."*

According to the ECHA Guidance, *"the purity and impurity profiles of the substance and the structural analogue need to be assessed"*, and *"the extent to which differences in the purity and impurities are likely to influence the overall toxicity needs to be addressed, and where technically possible, excluded"*. The purity profile and composition can influence the overall toxicity/properties of the Substance and of the source substance(s).[6] Therefore, qualitative and quantitative information on the compositions of the Substance and of the source substance(s) (i.e. test material used in the source studies) should be provided to allow assessment whether the attempted predictions are compromised by the composition and/or impurities.

Furthermore, whenever the Substance and/or the source substance(s) are UVCB (Unknown or Variable composition, Complex reaction products or of Biological materials) substances qualitative compositional information of the individual constituents of the *of the Substance and source substances* needs to be provided; as well as quantitative characterisation in the form of information on the concentration of the individual constituents of these substances; to the extent that this is measurable.[7]

You state that the Substance **3** and source substance 1 are UVCBs manufactured as reaction products of 1,3,4-Thiadiazolidine-2,5-dithione with hydrogen peroxide and tert-nonanethiol **1** or tert-dodecanethiol **3.** There are a large number of structural isomers arising from branching of the alkyl group and a minor amount of other constituents with various carbon chain lengths. Due to the type of reaction used in the manufacturing process, it is expected that dimers could be formed as well (see for example the tail in the second peak in the HPLC report in the analytical section of the technical dossier).

ECHA observes that there is no comparison of the detailed compositional information of the Substance and source substance **1** (i.e. test material used in the source studies) provided in the registration dossier.

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[6] Guidance on information requirements and chemical safety assessment Chapter R.6: QSARs and grouping of Chemicals, Section R.6.2.3.1

[7] Guidance on information requirements and chemical safety assessment Chapter R.6: QSARs and grouping of Chemicals, Section R.6.2.5.5

Therefore, ECHA considers that it is not possible to assess whether the attempted predictions are compromised by the composition of the source substance when compared to the composition of the Substance.

In your comments on the draft decision you state your intention to further characterize the Substance as well as the source substance. However, you have not provided the new information yet. ECHA acknowledges your intention and will evaluate the validity of newly provided information according to Annexes VII-X and according to Annex XI after the deadline set out in this decision has passed.

c) Adequacy and reliability of source studies

According to Annex XI, Section 1.5., if the grouping concept is applied then in all cases the results to be read across should:

- have adequate and reliable coverage of the key parameters addressed in the corresponding test method referred to in Article 13(3);
- cover an exposure duration comparable to or longer than the corresponding test method referred to in Article 13(3) if exposure duration is a relevant parameter.

For the following endpoints, the source study(ies) that you provided do not meet the requirement for adequacy and reliability under Section 1.5, Annex XI to REACH for the reasons provided under in Appendix A, sections 1, 2 and 5 and Appendix C, sections 1 and 2.

In your comments on the draft decision you indicate that the available studies are, and the newly planned studies with the source substance EC 293-927-7 will be, conforming to OECD test guidelines and that the provided information content is or will be adequate. ECHA addressed the reliability issues of the available studies under the endpoints referred to in the previous paragraph. Regarding the newly planned studies, ECHA will evaluate the validity of newly provided information according to Annexes VII-X and according to Annex XI after the deadline set out in this decision has passed.

d) Supporting information

Annex XI, Section 1.5 of the REACH Regulation states that "*physicochemical properties, human health effects and environmental effects or environmental fate may be predicted from data for reference substance(s)*". For this purpose "*it is important to provide supporting information to strengthen the rationale for the read-across*"[8]. The set of supporting information should allow to verify the crucial aspects of the read-across hypothesis and establish that the properties of the Substance can be predicted from the data on the source substance(s).

Supporting information must include bridging studies to compare properties of the Substance and source substances.

As indicated above, your read-across hypothesis is based on the assumption that the structurally similar substances cause the same type of effect(s). In this context, relevant, reliable and adequate information allowing to compare the properties of the Substance and of the source substance(s) is necessary to confirm that both substance cause the same type of effects. Such information can be obtained, for example, from bridging studies of

[8] Guidance on information requirements and chemical safety assessment Chapter R.6: QSARs and grouping of Chemicals, Section R.6.2.2.1.f

comparable design and duration for the Substance and of the source substance(s).

You have provided acute toxicity studies for the substance and a test on gene mutation in bacteria, which is missing the 5th strain. However, there is no data available on repeated dose toxicity and reproductive/developmental toxicity for the Substance.

Also, there is no valid data available on water solubility, and partition coefficient neither on the source nor on the Substance. (See Appendix A, Sections 1 and 2)

Furthermore, as noted in the Appendix A, Section 5, there is no reliable information on aquatic plants toxicity available neither on the source nor on the Substance.

In your comments on the draft decision, you indicate that there are currently no new experimental studies available and that you are planning to provide new studies to support the read-across approach. ECHA will evaluate the validity of newly provided information according to Annexes VII-X and according to Annex XI after the deadline set out in this decision has passed.

The data set reported in the technical dossier and in your comments on the draft decision does not include relevant, reliable and adequate information for both, the Substance and of the source substance(s), to compare type and strength of effects in order to support your read-across hypothesis for the physico-chemical and (eco)toxicological properties.

In the absence of such information, you have not established that the Substance and of the source substance(s) are likely to have similar properties. Therefore you have not provided sufficient supporting information to strengthen the rationale for the read-across.

B. Conclusions on the read-across approach

As explained above, you have not established that relevant properties of the Substance can be predicted from data on the analogue substance. Therefore, your adaptation does not comply with the general rules of adaptation as set out in Annex XI, Section 1.5. and your grouping and read-across approach is rejected.

(ii) Assessment of further adaptations under Annex XI

Weight of evidence adaptation

You seek to adapt the following standard information requirements according to Annex XI, Section 1.2. weight of evidence:

- Sub-chronic repeated dose toxicity (90-day) study (Annex IX, Section 8.6.2)
- Pre-natal developmental toxicity study in a second species (Annex IX, Section 8.7.2)

Annex XI, Section 1.2 states that there may be sufficient weight of evidence (WoE) from several independent sources of information leading to assumption/conclusion that a substance has or has not a particular dangerous (hazardous) property, while information from a single source alone is insufficient to support this notion.

According to ECHA Guidance R.4.4, a weight of evidence adaptation involves an assessment of the relative values/weights of the different sources of information submitted based on the reliability of the data, consistency of results/data, nature and severity of effects, and relevance of the information for the given regulatory endpoint. Subsequently, relevance, reliability, consistency and results of these lines of evidence must be balanced in order to decide whether they provide sufficient weight to conclude that the Substance has or has not the dangerous property investigated by the required study.

Sub-chronic repeated dose toxicity (90-day)

You have provided the following information to support your adaptation for the information requirement of Annex IX Section 8.6.2:

a) Subacute (28-day study OECD TG 407 ([redacted] 1989) with source substance **1**.
b) Reproductive/developmental toxicity screening study OECD TG 421 ([redacted] 2013) with source substance **1**.

Pre-natal developmental toxicity (PNDT)

You have provided the following information to support your adaptation for the information requirement of Annex IX Section 8.7.2:

a) Reproductive/developmental toxicity screening study OECD TG 421 ([redacted] 2013) with source substance **1**.

In your justification for the weight of evidence for the two endpoints (PNDT and 90 day studies) the following independent sources of information (lines of evidence) are presented:

i. The toxicological data available (OECD TG 421 and OECD TG 407 conducted with source substance **1**, *"did not result in any toxicologically significant effects in the treated animals."*
ii. *"Kidney effects seen in both studies (OECD TG 421 and OECD TG 407) are almost certainly due to hyaline droplets accumulation in the proximal tubules"* and are *"male rat specific and they are likely not relevant for humans."*
iii. Based upon the toxicological data available (OECD TG 421, OECD TG 407 and a 14-day dose range finding study conducted with the source substance **1**), there is no evidence that this substance is expected to have any developmental toxicity effect.
iv. The source substance **1** is not genotoxic.
v. QSAR performed with OECD Toolbox does not show evidence of toxic effects, and structurally related compounds are also relatively non-toxic and not classified for reproductive or developmental toxicity.

ECHA has assessed to what extent the sources of information submitted enables a conclusion on the dangerous properties of the endpoints listed above and identified the following deficiencies:

A. QSAR information

Annex XI, Section 1.3. states that results obtained from valid QSAR models may be used instead of testing when the following cumulative conditions are met, in particular:
- the substance falls within the applicability domain of the QSAR model;
- adequate and reliable documentation of the applied method is provided.

According to ECHA's Practical guide "How to use and report (Q)SARs", section 3.4, a QSAR Model Reporting Format (QMRF) and a QSAR Prediction Reporting Format (QPRF) are required
- to establish the scientific validity of the model;
- to verify that the Substance falls within the applicability domain of the model; and
- to assess the adequacy of the prediction for the purposes of classification and labelling.

You have not included QMRFs and a QPRFs in your dossier for this endpoint.

Therefore ECHA cannot verify whether the cumulative conditions of Annex XI, Section 1.3 listed above are met.

B. Experimental studies with analogue substances

ECHA notes that none of the studies referred to in the justification of the weight of evidence are conducted with the Substance. As explained in the Appendix on general considerations, the proposed read across has been rejected because it does not fulfil the requirements of Annex XI, Section 1.5. Furthermore, none of the studies cover the key parameters for the relevant endpoints as further explained in Appendix C, section 1 and 2.

Conclusion

Based on the assessment above, your weight of evidence adaptation does not include any reliable sources of information to conclude on the relevant property/ies. Therefore you adaptation is rejected and information requirement is not fulfilled.

ECHA
EUROPEAN CHEMICALS AGENCY

Appendix A: Reasons for the requests to comply with Annex VII of REACH

Under Articles 10(a) and 12(1) of REACH, a technical dossier registered at 1 to 10 tonnes or more per year must contain, as a minimum, the information specified in Annex VII to REACH.

1. Water solubility (Annex VII, Section 7.7.)

Water solubility is a standard information requirement in Annex VII to REACH.
You have submited information and you have adapted this information requirement by using

- data derived from a water solubility study (2012) with an analogue substance 1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-nonanethiol (EC no. 293-927-7) (key study, 2010).
- data derived from Qualitative or quantitative structure-activity relationship (QSAR) (with EPIWIN/KOWWIN, 2013) in accordance with Annex XI, Section 1.3 for the Substance with the substance (2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole (EC No: 261-844-5) CAS no: 596-56-20-1) which is a constituent of the Substance, with a typical concentration of 75%) (supporting study).
- An OECD TG 105 study (2013) with the Substance (supporting study).

We have assessed this information and identified the following issue(s):

A - 1: Key study with read-across

You have adapted this information requirement by using a Grouping of substances and read-across approach under Annex XI, Section 1.5.

As explained in the Appendix on general considerations i) your adaptation is rejected.

Moreover, EU test method OECD TG 105 require that the following condition is met:

- The concentration in at least the last two vessels do not differ by more than 15%

However, in the study summary of your key study ([redacted], 2012), there is no indication whether the results for the last two flasks (Sample 2 (A and B) and 3 (A and B)) differ by more than 15%.

Due to this the water solubility value for the Substance cannot be estalished as being valid.

Therefore, the information requirement is not fulfilled.

B: Supporting study with QSAR

Annex XI, Section 1.3. states that results obtained from valid QSAR models may be used instead of testing when the following cumulative conditions are met, in particular:

- the substance falls within the applicability domain of the QSAR model;
- adequate and reliable documentation of the applied method is provided.

According to ECHA's Practical guide "How to use and report (Q)SARs", section 3.4, a QSAR Model Reporting Format (QMRF) and a QSAR Prediction Reporting Format (QPRF) are required

- to establish the scientific validity of the model;
- to verify that the Substance falls within the applicability domain of the model; and
- to assess the adequacy of the prediction for the purposes of classification and labelling.

You have not included QMRFs and a QPRFs in your dossier for this endpoint.

Therefore ECHA cannot verify whether the cumulative conditions of Annex XI, Section 1.3 listed above are met.

In addition, you reported prediction for one structure that you state represents the Substance.

This structure for the substance, 2,5-bis(tert-dodecyldithio)-1,3,4-thiadiazole (EC No: 261-844-5) (CAS no: 596-56-20-1), is indicated as a constituent of the Substance in section 1.2 of IUCLID. However, you have not justified why this structure covers all the constituents of this UVCB substance. For that reason, the adequacy of the prediction cannot be assessed.

Your adaptation do not comply with the general rules of adaptation as set out in Annex XI, Section 1.3. Therefore, your adaptation is rejected.

C: Non-validity of the experimental supporting study with the Substance

EU test method A.6 and OECD TG 105 require(s) that the following condition is met:

- The loading of the support material may cause problems, leading to erroneous results, e.g. when the test substance is deposited as an oil.

You have registered the Subtance as a viscous liquid (Section 4.1 of IUCLID dossier).

The Substance is thus an oil and, according to the rules mentioned above, this means that the column elution method is not a suitable method for the substance you have registered, and the data you have submitted may be erroneous.

Therefore, the analytical method you have used is not sensitive enough for the registered substance and your Water Solubility study is rejected.

Therefore, the information requirement is not fulfilled.

In your comments to the draft decision, you indicated that you recognise that the water solubility testing is essential for the design of possible further studies, and to substantiate the proposed read-across justification, you agree to perform this study as one of the first steps in a tiered testing strategy.

2. Partition coefficient n-octanol/water (Annex VII, Section 7.8)

A *partition coefficient n-octanol water* study is a standard information requirement in Annex VII to REACH.

You have adapted this information requirement by using a Grouping of substances and read-across approach under Annex XI, Section 1.5. The requirements for such an adaptation are described in Appendix on general considerations above.

As explained in the Appendix on general considerations i) your adaptation is rejected.

Therefore, the information requirement is not fulfilled.

In your comments to the draft decision, you indicated that you recognise that the LogKow testing is essential for the design of possible further studies, and to substantiate the proposed read-across justification, you agree to perform this study as one of the first steps in a tiered testing strategy.

3. 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 in Annex VII to REACH.

You have provided a key study and supporting studies in your dossier:

i. In vitro gene mutation study in bacteria (1996, [redacted]) with the Substance with the strains S. typhimurium TA 1535, TA 1537, TA 98 and TA 100 which all gave negative results.
ii. In vitro gene mutation study in bacteria (1984, [redacted]) with the analogue substance [**2.**] with the strains: TA 1535, TA 1537, TA 98 and TA 100, TA 1538, E. coli WP2 uvr A which all gave negative results.
iii. In vitro gene mutation study in bacteria (1989, [redacted]) with the analogue substance [**1.**] with the strains S. typhimurium TA 1535, TA 1537, TA 98 and TA 100, TA 1538, E. coli WP2 uvr A which all gave negative results.

We have assessed this information and identified the following issue(s):

To fulfil the information requirement, the study has to meet the requirements of OECD TG 471 (1997). The key parameter(s) of this test guideline include:

a) The test must be 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)

The reported data for the key study you have provided did not include:

a) The appropriate 5 strains, as the information provided does not include results the required fifth strain, S. typhimurium TA102 or E. coli WP2 uvrA or E. coli WP2 uvrA (pKM101).

The information provided does not cover key parameter(s) required by OECD TG 471. Therefore, the information requirement is not fulfilled.

You have also adapted this information requirement by using a Grouping of substances and read-across approach under Annex XI, Section 1.5.

As explained in the Appendix on general considerations i) your adaptation is rejected.

Therefore, the information requirement is not fulfilled.

In your comments on the draft decision you agree to this request.

To fulfil the information requirement for the Substance, the *in vitro* gene mutation study in bacteria (OECD TG 471) should be performed using one of the following strains: *E. coli* WP2 uvrA, or *E. coli* WP2 uvrA (pKM101), or *S. typhimurium* TA102.

4. Long-term toxicity testing on aquatic invertebrates also requested at C.3. below (triggered by Annex VII, Section 9.1.1., column 2)

Short-term toxicity testing on aquatic invertebrates is a standard information requirement in Annex VII to REACH. However, according to Annex VII, section 9.1.1, column 2, for poorly water soluble substances (e.g. water solubility below 1 mg/L) long-term toxicity study on aquatic invertebrates (Annex IX, Section 9.1.5) must be considered instead of an acute test.

For the long-term toxicity testing on aquatic invertebrates you have provided an adaptation based on the CSA.

We have assessed this information and identified the following issue(s):

In case the substance or any of its consituents prove to be poorly water soluble (i.e. water solubility is below 1 mg/L) then long-term toxicity study on aquatic invertebrates instead of short-term test is required (Annex VII, section 9.1.1., column 2). Poorly water soluble substances or constituents require longer time to reach steady-state conditions. Hence, the short-term tests may not give a true measure of toxicity for substances with poorly water soluble constituents.

The precise water solubility value for the Substance is not available (see Appendix A, Section 1).

Based, however, on information available in the registration dossier (structure of constituents) and EPISuite QSAR models predictions for water solubility(-ies), the Substance is regarded as poorly soluble in water (i.e. water solubility of some of its constituents below 1 mg/L).

Therefore, long-term toxicity testing is required to accurately define the hazard of the Substance.

In your comments on the draft decision you agree to perform requested test and to consider physico-chemical properties of the Substance for the test design.

The examination of the information provided by you on the long-term toxicity testing on aquatic invertebrates and the requested test are addressed in Appendix C, section 3.

5. Growth inhibition study aquatic plants (Annex VII, Section 9.1.2.)

Growth inhibition study aquatic plants is a standard information requirement in Annex VII to REACH.

You have provided results of three experimental studies, key study performed according to OECD TG 201 with source substance (1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-nonanethiol). You also have provided two other studies "*disregarded due to major methodological deficiencies*" by you.

Adaptation according to Annex XI, Section 1.5

You have adapted this information requirement by using a read-across approach under Annex XI, Section 1.5.

As explained in the Appendix on general considerations i) your adaptation is rejected.

Therefore, the information requirement by the provided key study is not fulfilled.

Experimental test reliability
Tests on substances must be conducted in accordance with the OECD test guidelines or other internationally recognised test method (Article 13(3) of REACH).

OECD TG 201 which is the standard test guidelines for aquatic plants toxicity requires that the following conditions are met:

- analytical monitoring of exposure concentrations is performed;
- if the deviation from the nominal or measured initial concentration is not within the range of ± 20 %, analysis of the results should be based on geometric mean concentration during exposure or on models describing the decline of the concentration of the test substance.

Even if valid precise water solubility value for the Substance is not available, the Substance is regarded as poorly soluble in water (see above).

Furthermore, the precise log Kow (partitioning ocanol-water coefficient) value for the Substance is not available (see Appendix A, Section 2). Based, however, on information available in the registration dossier (structure of constituents) and EPISuite QSAR model predictions of log Kow(-ies), the Substance is regarded as having high potential for adsorption (i.e. log Kow of some of it's constituents would be above 4.0).

Therefore, it is expected that considerable losses, as compared to the nominal concentrations, will occur during the exposure period.

For both disregarded experimental studies you noted in the registration dossier that no analytical monitoring of exposure concentrations was performed. The aforementioned conditions of the standard OECD test guideline are not met for neither of the disregarded experimental studies.

For the key study you reported effect concentrations based on nominal concentrations. However, there is no information available in the dossier on the measured exposure concentrations of the test item for this study. Thus, for the key study you did not demonstrate that the test substance concentration during the test was maintained within the required 20% of the measured initial concentrations. The second aforementioned condition of the standard OECD test guideline is not met for the provided key study.

Therefore, the information requirement is not fulfilled by the provided experimental studies.

In your comments on the draft decision you agree to perform requested test and to consider physico-chemical properties of the Substance for the test design.

It should be noted that according to the OECD TG 201 for adsorbing substances tested at low concentrations *"disappearance of the test substance from solution by adsorption to the increasing algal biomass does not mean that it is lost from the test system. When the result of the test is analysed, it should be checked whether a decrease in concentration of the test substance in the course of the test is accompanied by a decrease in growth inhibition. If this is the case, application of a suitable model describing the decline of the concentration of the test substance* [...] *may be considered. If not, it may be appropriate to base the analysis of the results on the initial (nominal or measured) concentrations."*

Appendix B: Reasons for the requests to comply with Annex VIII of REACH

Under Articles 10(a) and 12(1) of REACH, a technical dossier registered at 10 to 100 tonnes or more per year must contain, as a minimum, the information specified in Annexes VII and VIII to REACH.

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

In vitro cytogenicity study in mammalian cells is a standard information requirement in Annex VIII to REACH.

You have adapted this information requirement by using a Grouping of substances and read-across approach under Annex XI, Section 1.5 with an *in vitro* chromosomal aberration study according to OECD TG 473 ([redacted] 1989) with source substance **1**.

As explained in the Appendix on general considerations i) your adaptation is rejected.

In your comments on the draft decision you indicate your intention to adapt this information request. You have not provided new information in support of your adaptation. ECHA will evaluate the validity of newly provided information after the deadline set out in this decision has passed.

Therefore, the information requirement is not fulfilled.

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

In vitro gene mutation study in mammalian cells is a standard information requirement in Annex VIII to REACH.

You have adapted this information requirement by using a Grouping of substances and read-across approach under Annex XI, Section 1.5 with an *in vitro* gene mutation study in mammalian cells according to OECD TG 476 ([redacted] 2013) with source substance **1**.

As explained in the Appendix on general considerations i) your adaptation is rejected.

In your comments on the draft decision you indicate your intention to adapt this information request. You have not provided new information in support of your adaptation. ECHA will evaluate the validity of newly provided information after the deadline set out in this decision has passed.

Therefore, the information requirement is not fulfilled.

3. **Justification for an adaptation of the Short-term repeated dose toxicity (28 day), (Annex VIII, Section 8.6.1.)**

A Short-term repeated dose toxicity study (28 days) is a standard information requirement in Annex VIII to REACH. This information may take the form of a study record or a valid adaptation in accordance with either a specific adaptation rule under Column 2 of Annex VIII or a general adaptation rule under Annex XI.

You have adapted this information requirement according to Annex XI, Sections 1.2 and 1.5

with the following studies:

- Subacute (28-day study OECD TG 407 ([redacted] 1989)) with source substance **1**;
- Reproductive/developmental toxicity screening study (OECD TG 421 ([redacted] 2013)) with source substance **1**.

As explained in the Appendix on general considerations i) and ii) your adaptations are rejected.

Therefore, the information requirement is not fulfilled.

Based on the above, the information you provided do not fulfil the information requirement.

In your comments on the draft decision you agree to providing the requested information.

Column 2 of Annex VIII, Section 8.6.1. provides that an experimental study for this endpoint is not needed if a reliable sub-chronic (90 days) or chronic toxicity study is available.

The present decision requests the registrants concerned to generate and submit a reliable sub-chronic toxicity study (90 days) (see Section C.1). According to Column 2 of Annex VIII, Section 8.6.1., and to prevent unnecessary animal testing, a short term toxicity study (28 days) does not therefore need to be conducted.

Because you still must comply with the information requirement in Annex VIII, Section 8.6.1., you are requested to submit a justification for the adaptation provided in Column 2 of that provision.

4. Screening for reproductive/developmental toxicity (Annex VIII, Section 8.7.1.)

Screening for reproductive/developmental toxicity is a standard information requirement in Annex VIII to REACH.

You have adapted this information requirement according to Annex XI, 1.5 with a reproductive/developmental toxicity screening study OECD TG 421 ([redacted] 2013) with source substance **1**.

As explained in the Appendix on general considerations i) your adaptation is rejected.

In your comments on the draft decision you indicate your intention to adapt this information request. You have not provided new information in support of your adaptation. ECHA will evaluate the validity of newly provided information after the deadline set out in this decision has passed.

Therefore, the information requirement is not fulfilled.

A study according to the test method OECD TG 421 or OECD TG 422 must be performed in rats with oral[9] administration of the Substance.

5. Long-term toxicity testing on fish also requested at C.4. below (triggered by Annex VIII, Section 9.1.3., column 2)

[9] ECHA Guidance R.7a, Section R.7.6.2.3.2.

Short-term toxicity testing on fish is a standard information requirement in Annex VIII to REACH. However, pursuant to Annex VIII, section 9.1.3, column 2, for poorly water soluble substances (e.g. water solubility below 1 mg/L) long-term toxicity study on fish (Annex IX, Section 9.1.6) must be considered instead of an acute test.

For the long-term toxicity testing on fish you have provided an adaptation based on the CSA.

We have assessed this information and identified the following issue(s):

In case the substance or any of its consituents prove to be poorly water soluble (i.e. water solubility is below 1 mg/L) then long-term toxicity study on aquatic invertebrates instead of short-term test is required (Annex VII, section 9.1.1., column 2). Poorly water soluble substances or constituents require longer time to reach steady-state conditions. Hence, the short-term tests may not give a true measure of toxicity for substances with poorly water soluble constituents.

Even if valid precise water solubility value for the Substance is not available (see Appendix A, Section 1), the Substance is regarded as poorly soluble in water.

Therefore, long-term toxicity testing is required to accurately define the hazard of the Substance.

In your comments on the draft decision you acknowledge "*that due to the low water solubility and nevertheless observed effects in short-term studies, long-term toxicity testing according to Annex VIII of REACH may be triggered.*" Furthermore, you propose to follow tiered testing strategy for aquatic toxicity with "*Testing on aquatic algae and daphnids is intended to be performed ahead*" of the long-term fish toxicity testing.

As already noted above, the short-term aquatic toxicity tests may not give a true measure of toxicity for substances with poorly water soluble constituents. Thus, there is no relevant information on aquatic toxicity for the substance to decide on sensitivity of aquatic species and for the purpose of the hazard assessment, the available toxicity information should at least cover species of three trophic levels: algae/aquatic plants, invertebrates (Daphnia preferred) and fish. Thus, long-term toxicity testing with fish is needed for the chemical safety assessment (hazard assessment) regardless of toxicity testing results with aquatic invertebrates and algae.

The examination of the information provided by you on the long-term toxicity testing on fish and of the requested test is addressed in Appendix C, Section 4.

6-9. Simulation testing on ultimate degradation in surface water also requested at C.5. below, soil simulation testing also requested at C.6. below, sediment simulation testing also requested at C.7. below and identification of degradation products also requested at C.8. below (triggered by Annex VIII, Section 9.2., column 2)

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).

You have adapted this information requirement claiming that there is no relevant environmental exposure and that due to the low water solubility of the Substance water and

sediment simulation tests cannot be performed.

We have assessed this information and identified the following issue(s):

Annex I, Section 4 requires that the CSA includes the PBT (persistent, bioaccumulative and toxic) and vPvB (very persistent and very bioaccumulative) assessments. In accordance with Annex XIII, Section 2.1., if the result of the screening tests or other information indicate that the substance may have PBT or vPvB properties, further testing on degradation as set out in Section 3.2 is required.

As described in Appendix C, Sections 5-8, you have not provided an asessment of analytical methods available for the Substance, have not demonstrated that the Substance is highly insoluble in water and have not provided any information on the identity of degradation products. Furthermore, as explained in Appendix C, Sections 5-7, exposure of the aquatic, sediment and soil compartments cannot be ruled out.

Furthermore, as described in Appendix C, Section 5 below, screening information for the PBT/vPvB assessment provided in your dossier indicates that the Substance may have PBT/vPvB properties. The available screening information is not sufficient to conclude on the P/vP properties of the Substance, and therefore further testing on degradation is required.

The trigger, the examination of the information provided by you on the degradation simulation and identity of the degradation products, and the requested tests are addressed in Appendix C, Sections 5-8.

Your comments on the draft decision are addressed under Appendix C, Sections 5-8.

10. Bioaccumulation in aquatic species also requested at C.9. below (Annex I, Sections 0.6.1 and 4 in conjunction with Annex XIII, Section 2.1)

Bioaccumulation in aquatic species is required for the purpose of PBT/vPvB assessment (Annex I, Sections 0.6.1 and 4 to REACH).

You have adapted this information requirement claiming that the Substance has low bioaccumulation potential due to the very high log Kow.

We have assessed this information and identified the following issue(s):

Annex I, Section 4 requires that the CSA includes the PBT (persistent, bioaccumulative and toxic) and vPvB (very persistent and very bioaccumulative) assessments.

In accordance with Annex XIII, Section 2.1., if the result of the screening tests or other information indicate that the substance may have PBT or vPvB properties, further testing on bioaccumulation as set out in Section 3.2 is required.

As described in Appendix C, Section 9, the available information is insufficient to demonstrate that the Substance has a low potential for bioaccumulation.

Furthermore, as described in Appendix C, Section 5 below, screening information provided in your dossier indicates that the Substance may have PBT/vPvB properties. The available screening information is not sufficient to conclude on the B/vB properties of the Substance, and therefore further testing is required.

The trigger, the examination of the information provided by you on the bioaccumulation in aquatic species and the requested test are addressed in Appendix C, Section 9.

Your comments on the draft decision are addressed under Appendix C, Section 9.

Appendix C: Reasons for the requests to comply with Annex IX of REACH

Under Articles 10(a) and 12(1) of REACH, a technical dossier registered at 100 to 1000 tonnes or more per year must contain, as a minimum, the information specified in Annexes VII to IX to REACH.

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

Sub-chronic toxicity study (90-day) is a standard information requirement in Annex IX to REACH.

You have provided a sub-acute (28-day) toxicity study OECD TG 407 ([redacted] 1989) and a reproductive/developmental toxicity screening study OECD TG 421 ([redacted] 2013) with source substances.

You have also adapted this information requirement according to Annex XI, Sections 1.2 and 1.5.

We have assessed this information and identified the following issue(s):

To be considered compliant and enable concluding whether the Substance has dangerous properties and supports the determination of the No-Observed Adverse Effect Level (NOAEL), a study has to meet the requirements of OECD TG 408. The following key parameter(s) of this test guideline include, among others:
1. At least 10 female and 10 male animals should be used at each dose level (including control group).
2. Dosing of the Substance daily for a period of 90 days until the scheduled termination of the study.

The studies you have provided do not have the required exposure duration of 90 days as required in OECD TG 408, because you indicated an exposure duration of 28 and approximately 63 days, respectively. Furthermore, the studies were conducted with less than 10 animals per sex per test dose group. The statistical power of the information provided is not sufficient because it does not fulfil the criterion of 20 animals (10 males + 10 females) for each test group set in OECD TG 408.

Therefore, the studies do not fulfil the information requirement. As explained in the Appendix on general considerations i) and ii) your adaptations according to Annex XI, Sections 1.2 and 1.5. are rejected.

Therefore, the information requirement is not fulfilled.

In your comments on the draft decision you indicate your intention to adapt this information request. You have not provided new information in support of your adaptation. ECHA will evaluate the validity of newly provided information after the deadline set out in this decision has passed.

Information on the design of the study to be performed (route/ species/ strain)

Referring to the criteria provided in Annex IX, Section 8.6.2, Column 2, the oral route is the most appropriate route of administration to investigate repeated dose toxicity, because the Substance is a liquid of very low vapour pressure. Uses with industial spray application are

reported in the chemical safety report. However, the reported concentrations are low [redacted]

Therefore the sub-chronic toxicity study must be performed according to the OECD TG 408, in rats and with oral administration of the Substance.

Additional parameters

The studies on the source substance **1** indicate that adverse effects such as increased absolute and relative kidney weights in male rats in all dose groups and mottled kidneys in all dose groups in male rats (1, 7, 10 animals of 10 with increasing doses were observed in male rats but not in male control rats). This indicates that the kidney is a target organ of the Substance which may induce alpha-2u-globulin-mediated nephropathy. Since this mode of action is considered not relevant to humans, the involvement of alpha-2u-globulin in the kidney effects is a key parameter for establishing the relevance of the kidney effects for risk assessment.

You have not provided sufficient information that the read-across to source substance **1** meets the requirements of Section 1.5, Annex XI to REACH. However, substance **1** is structurally similar to the Substance and, on that basis, it cannot be excluded that the Substance shows similar effects.

Therefore, although optional (as per paragraph 37 of OECD TG 408, a urinalysis is required to investigate further the kidney function after administration of the Substance. Additionally, a full histopathological examination (paragraphs 45 and 47 of OECD TG 408), including immune-histochemical investigation of renal pathology is required, to determine if the pathology is mediated by alpha-2u globulin.

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

A Pre-natal developmental toxicity (PNDT) study (OECD TG 414) in one species is a standard information requirement under Annex IX to REACH.

You have provided a reproductive/developmental toxicity screening study OECD TG 421 ([redacted] 2013) with a source substance.

You have also adapted the information requirement by using what ECHA understands to be based on:

- Annex XI, Sections 1.2 (weight of evidence) and 1.5 (grouping and read-across), and
- Low toxicity (Annex XI, Section 8.7., column 2, third indent).

We have assessed this information and identified the following issue(s):

A. Evaluation of the provided study

In order to be considered compliant and enable assessing if the Substance is a developmental toxicant, information provided has to meet the requirements of OECD TG 414 in one species.

You have not provided information following OECD TG 414. Instead, you have provided a "reproduction/ developmental toxicity screening test" (OECD TG 421). In this study, structural malformations and variations are not investigated as required in the PNDT study (OECD TG 414).

Therefore, this study does not fulfil the information requirement.

B. Adaptations according to Annex XI

You have adapted this information requirement according to Annex XI, Sections 1.2 and 1.5.

As explained in the Appendix on general considerations i) and ii) your adaptations are rejected.

Therefore, the information requirement is not fulfilled.

C. Low toxicity

You argue that: *"According to REACH, Annex IX, Section 8.7, a developmental study can be omitted if the substance is of low toxicological activity, no systemic absorption is expected via relevant routes, and there is no significant human exposure."*

According to Annex IX, Section 8.7., Column 2, third indent, the study does not need to be conducted if the substance is of low toxicological activity. This needs to be demonstrated with three concomitant criteria:

- that there is no evidence of toxicity seen in any of the tests available; and
- that it can be proven from toxicokinetic data that no systemic absorption occurs via relevant routes of exposure; and
- that there is no or no significant human exposure.

ECHA has assed to what extent the information submitted enables a conclusion on each of these criterta and identified the following deficiencies:

Firstly, as explained in the Appendix on general considerations, the proposed read across has been rejected because it does not fulfil the requirements of Annex XI, Section 1.5. Consequently, there is no relevant information available to demonstrate no evidence of toxicity.

Secondly, there is no toxicokinetic data available. Therefore, there systemic absorption can not be excluded.

Finally, ECHA notes that the substance has professional and consumer uses in open systems. You have not provided any evidence to support your claim of no significant exposure.

ECHA concludes that none of the criteria of Annex IX, Section 8.7., Column 2, third indent have been met. Therefore, your adaptation is rejected.

In your comments on the draft decision you indicate your intention to adapt this information request. You have not provided new information in support of your adaptation. ECHA will evaluate the validity of newly provided information after the deadline set out in this decision has passed.

Based on the above, the information you provided do not fulfil the information requirement.

Therefore, a PNDT study according to the test method OECD TG 414 must be performed in rat or rabbit as preferred species with oral[10] administration of the Substance.

3. 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 in Annex IX to the REACH Regulation.

You have provided adaptation for long-term toxicity testing on aquatic invertebrates based on Annex IX, Section 9.1., Column 2. In the justification of the adaptation you note that "*A long-term toxicity study on Daphnia magna has not to be conducted based upon the chemical safety assessment of the test substance and therefore, this endpoint can be waived in accordance to REACH, Annex IX; Section 9.1.5, column 2.*".

We have assessed this information and identified the following issue(s):

To adapt the information requirement for long-term toxicity to aquatic invertebrates based on Annex IX, Section 9.1, Column 2, the Chemical Safety Assessment (CSA) needs to demonstrate that risks towards the aquatic compartment arising from the use of the Substance are controlled (as per Annex I, section 0.1). The CSA needs to assess and document that risks arising from the Substance are controlled and demonstrate that there is no need to conduct further testing (Annex I, Section 0.1; Annex IX, Section 9.1, Column 2).

In particular, you need to take into account of the following elements in your justification:
- all relevant hazard information from your registration dossier,
- the outcome of the exposure assessment in relation to the uses of the Substance,
- the outcome of the PBT/vPvB assessment including information on relevant degradation products and constituents present in concentration at or above 0.1% (w/w).

For the purpose of the hazard assessment, the available toxicity information should at least cover species of three trophic levels: algae/aquatic plants, invertebrates (*Daphnia* preferred) and fish. For poorly water soluble substances (e.g. water solubility below 1 mg/L) long-term toxicity study on aquatic invertebrates must be considered instead of an acute test (REACH Annex VII, Section 9.1.1, Column2).

Even if valid precise water solubility value for the Substance is not available (see Appendix A, Section 1), the Substance is regarded as poorly soluble in water.

In your dossier, you have provided a studies for short-term toxicity only. However, poorly water soluble substances or constituents require longer time to reach steady-state conditions. Hence, the short-term tests may not give a true measure of toxicity for substances with poorly water soluble constituents and the long-term test is required.

Consequently, there is a data gap that needs to be filled in.

In your comments on the draft decision you agree to perform the requested test and to consider physico-chemical properties of the Substance for the test design.

[10] ECHA Guidance R.7a, Section R.7.6.2.3.2.

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

Long-term toxicity testing on fish is a standard information requirement in Annex IX to the REACH Regulation.

You have provided adaptation for long-term toxicity testing on fish based on Annex IX, Section 9.1., Column 2. In the justification of the adaptation you note that "*The hazard assessment of '1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol' reveals neither a need to classify the substance as dangerous to the environment, nor is it a PBT or vPvB substance, nor are there any further indications that the substance may be hazardous to the environment. In conclusion, and due to animal welfare considerations, the endpoint can be waived in accordance to REACH, Annex IX, Section 9.1.6, column 2.*".

We have assessed this information and identified the following issue(s):

Your adaptation is rejected for the same reasons as those provided under Appendix C, Section 3 above.

Consequently, there is a data gap that needs to be filled in.

Your comments on the draft decision are addressed under Appendix B, Section 5.

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

Simulation testing on ultimate degradation in surface water is a standard information requirement at Annex IX to REACH.

You have provided adaptation for simulation testing on ultimate degradation in surface water based on Annex IX, Section 9.2.1.2., Column 2.

You justified the adaptation by stating that "*The low water solubility of the substance (< 0.1 mg/L at 20 °C) makes it impossible to perform an experiment due to analytical limitations of the test method. Furthermore, no exposure to water and sediment is intended during the life cycle of the test substance. Indirect exposure to the environment is unlikely, which is also indicated by the manufacturing process. Adequate controls on the production and use of the substance to ensure that it would not be released to the aquatic environment during production or use. In conclusion, simulation tests concerning biodegradation in water and sediment can therefore be waived in accordance to REACH, Annex IX, Section 9.2.1.2, column 2 and in accordance to REACH, Annex IX, Section 9.2.1.4, column 2, respectively.*"

We have assessed this information and identified the following issue(s):

a)
Simulation testing on ultimate degradation in surface water does not need to be conducted if the substance is highly insoluble in water or is readily biodegradable (Annex IX, Section 9.2.1.2, column 2). Testing for a specific endpoint may be omitted, if it is technically not possible to conduct the study as consequence of the properties of the substance (Annex XI, Section 2).

Screening information provided in your dossier indicates the following: 0% degradation after 28 days in EU Method C.4-D.

You also have provided water solubility information. You have not provided an asessment of analytical methods.

On this basis, the Substance is not readily biodegradable and, since the water solubility information provided is not reliable (see Appendix A, Section 1 above), you have not demonstrated that the Substance is highly insoluble in water.

Moreover, according to OECD TG 309 test concentrations of a substance less than 1 μg/L are preferred for testing while, in your justification of the adaptation you have not explained which analytical methods were investigated and why sufficiently sensitive analytical method cannot be established for the Substance. Therefore, you have not demonstrated that testing is impossible.

Therefore, the adaptation is rejected.

b)
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).

Annex I, Section 4 requires that the CSA includes the PBT (persistent, bioaccumulative and toxic) and vPvB (very persistent and very bioaccumulative) assessments. In accordance with Annex XIII, Section 2.1., if the result of the screening tests or other information indicate that the substance may have PBT or vPvB properties, further testing on degradation as set out in Section 3.2 is required.

Screening information demonstrating potential PBT or vPvB properties include the following (ECHA Guidance R.11, Sections R.11.4 and Annex XIII):

- the substance is not readily biodegradable and thus potentially persistent; and
- the substance has high potential for bioaccumulation (i.e. log Kow above 4.5).

You justified the adaptation alleging the absence of direct and indirect exposure to water.

Screening information provided in your dossier indicates, however, that the Substance may have PBT/vPvB properties:

- the Substance is potentially P/vP since it is not readily biodegradable (0% degradation after 28 days in EU Method C.4-D); and
- the Substance is potentially B/vB since the Log Kow is regarded to be above the threshold of 4.5 (even though valid precise log Kow value for the Substance is not available, based on information available in the registration dossier (structure of constituents) and EPISuite QSAR model predictions of log Kow(-ies), log Kow of some of the Substance's constituents would be above 4.5).

The available screening information is not sufficient to conclude on the P/vP properties of the Substance, and therefore further testing on degradation is required.

The uses of the Substance include use of the Substance in lubricants and greases in open systems by professional users and consumers. The Chemical Safety Report (CSR) provided by you indicates releases to aquatic environment as well as predicted environmental

concentrations in surface water that are not equal to zero for a number of exposure scenarios. On this basis, exposure of the aquatic compartment (direct and indirect via STP) cannot be ruled out.

Therefore, your adaptation does not fulfil the information requirement.

In your comments on the draft decision you agreed to perform requested test "*provided that the results of water solubility testing reveals that it is feasible*". Furthermore, you noted that "*if no relevant degradation in this test will be found, testing can be stopped and concluded that also in soil or sediment the substance will not be degraded to a relevant extent*".

As noted in the Appendix E below you are "*advised to consult ECHA Guidance R.7b, Section R.7.9., R.7c, Section R.7.10 and R.11. on PBT assessment to determine the sequence of the tests and the necessity to conduct all of them*". ECHA Guidance R.11 clarifies that "*if a conclusion "P" or "vP" is reached for one compartment, no further testing or assessment of persistence of other environmental compartments is normally necessary*".

Study design
OECD TG 309 is an appropriate method for studying the degradation in surface water. When performing the OECD TG 309 test, 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) must be followed (ECHA Guidance R.11).

Annex XIII indicates that information used for PBT/vPvB assessment must be obtained under relevant conditions. Therefore, simulation tests should be performed at the temperature of 12 °C, the average environmental temperature for the EU (ECHA Guidance R.16, Table R.16-8). Performing the test at this temperature is in line with the applicable test conditions of the OECD TG 309.

Quantification of non-extractable residues (NER) needs to be carried out in all simulation studies. The reporting of results must include a scientific justification of the used extraction procedures and solvents. 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) (ECHA Guidance Chapter R.11).

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 must be assessed. This can be done simultaneously during the same study. Alternatively, you must provide a justification for why you consider these as not relevant for the PBT/vBvB assessment. If you should encounter technical difficulties to perform the requested OECD TG 309 test, such difficulties and attempted solutions should be clearly demonstrated and documented.

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

Soil simulation testing is a standard information requirement at Annex IX of REACH for substances with a high potential for adsorption to soil. Even valid precise log Kow value for the Substance is not available, the Substance is regarded as having high potential for adsorption (i.e. log Kow above 4.0).

You have provided adaptation for soil simulation testing based on Annex IX, Section 9.2.1.3., Column 2.

You justified the adaptation by stating that "*In accordance with REACH Annex IX, Section 9.2.1.3., column 2, an experiment concerning biodegradation in soil does not need to be conducted if direct and indirect exposure of soil is unlikely. The substance is not directly applied to soil and based on its intended use and handling will not enter the terrestrial environment. The indirect exposure of soil to this substance via sewage sludge is also of no concern based on the treatment of the sludge. ECHA Chapter R.7B and R.7C guidance states that if the PEC/PNEC ratio is below 1, then no risk for the compartment is indicated, that the information available may be sufficient to conclude the assessment, and there is no need to perform further tests. Additionally, ECHA Chapter R.7B guidance states that if the substance is not considered a PBT or vPvB candidate, then it is considered not necessary to conduct further testing on the compartment. Therefore, on the basis of a lack of potential exposure and low risk demonstrated by the RCRs of less than 1 based on CHESARv2.1 modelling, waiving is justified. The following information is taken into account for any hazard / risk / persistency assessment: The substance is not directly applied to soil and based on its intended use and handling will not enter the terrestrial environment, and lack of potential exposure and low risk has been demonstrated; therefore, there is no need to perform further tests.*"

We have assessed this information and identified the following issue(s):

Soil simulation testing does not need to be conducted if direct and indirect exposure of soil is unlikely (Annex IX, Section 9.2.1.3, Column 2).

The uses of the Substance include use of the Substance in lubricants and greases in open systems by professional users and consumers.

The Chemical Safety Report (CSR) provided by you indicates releases to soil compartment as well as predicted environmental concentrations in soil that are not equal to zero for a number of exposure scenarios.

On this basis, exposure of the soil (direct and indirect via STP) cannot be ruled out.

Furthermore, as described in Appendix C, Section 5 above, screening information provided in your dossier indicates that the Substance may have PBT/vPvB properties. The available screening information is not sufficient to conclude on the P/vP properties of the Substance, and therefore further testing on degradation is required.

Therefore, your adaptation does not fulfil the information requirement.

In your comments on the draft decision you agreed to perform requested test "*provided that simulation testing on ultimate degradation in surface water is not feasible*" and noted that "*if both the OECD 301 and 309 study reveal that no degradation is observed, they need to be taken account for PBT assessment, and further testing is obsolete*".

According to ECHA Guidance R.11 "*Appropriate data need to be available to conclude the P/vP-assessment with a conclusion "not P/vP" on all three compartments (or five, with marine compartments): water (marine water), sediment (marine sediment) and soil*", but "*if a conclusion "P" or "vP" is reached for one compartment, no further testing or assessment of persistence of other environmental compartments is normally necessary*". It should be noted that given deadline to submit requested information accommodates integrated sequential

testing strategy for the needs of PBT/vPvB assessment.

Study design
The requested simulation test must be performed under relevant conditions (12 °C) and non-extractable resdues (NER) must be quantified for the reasons explained above in request C-4. Performing the test at this temperature is in line with the applicable test conditions of the OECD TG 307.The biodegradation of each constituent present in concentrations at orabove 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable, must be assessed. This can be done simultaneously during the same study. Alternatively, you must provide a justification for why you consider these as not relevant for the PBT/vBvB assessment.

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

Sediment simulation testing is a standard information requirement at Annex IX of REACH for substances with a high potential for adsorption to sediment. Even valid precise log Kow value for the Substance is not available, the Substance is regarded as having high potential for adsorption (i.e. log Kow above 4.0).

You have provided adaptation for sediment simulation testing based on Annex IX, Section 9.2.1.4., Column 2.

You justified the adaptation by stating that "*The low water solubility of the substance (< 0.1 mg/L at 20 °C) makes it impossible to perform an experiment due to analytical limitations of the test method. Furthermore, no exposure to water and sediment is intended during the life cycle of the test substance. Indirect exposure to the environment is unlikely, which is also indicated by the manufacturing process. Adequate controls on the production and use of the substance to ensure that it would not be released to the aquatic environment during production or use. In conclusion, simulation tests concerning biodegradation in water and sediment can therefore be waived in accordance to REACH, Annex IX, Section 9.2.1.2, column 2 and in accordance to REACH, Annex IX, Section 9.2.1.4, column 2, respectively.*"

We have assessed this information and identified the following issue(s):

a)
Sediment simulation testing does not need to be conducted if direct and indirect exposure of sediment is unlikely (Annex IX, Section 9.2.1.4., Column 2).

The uses of the Substance include use of the Substance in lubricants and greases in open systems by professional users and consumers.

The Chemical Safety Report (CSR) provided by you indicates releases to aquatic compartment as well as predicted environmental concentrations in sediments that are not equal to zero for a number of exposure scenarios.

On this basis, exposure of the sediments (direct and indirect via STP) cannot be ruled out.

Therefore, the adaptation is rejected.

b)

Testing for a specific endpoint may be omitted, if it is technically not possible to conduct the study as consequence of the properties of the substance (Annex XI, Section 2).

You have provided water solubility information. You have not provided an asessment of analytical methods.

On this basis, since the water solubility information provided is not reliable (see Appendix A, Section 1 above), you have not demonstrated that the Substance is highly insoluble in water.

Moreover, according to OECD TG 308 test is applicable to the poorly soluble in water substances while, in your justification of the adaptation you have not explained which analytical methods were investigated and why sufficiently sensitive analytical method cannot be established for the Substance. Therefore, you have not demonstrated that testing is impossible.

Therefore, the adaptation is rejected.

c)
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).

Annex I, Section 4 requires that the CSA includes the PBT (persistent, bioaccumulative and toxic) and vPvB (very persistent and very bioaccumulative) assessments. In accordance with Annex XIII, Section 2.1., if the result of the screening tests or other information indicate that the substance may have PBT or vPvB properties, further testing on degradation as set out in Section 3.2 is required.

As described in Appendix C, Section 5 above, screening information provided in your dossier indicates that the Substance may have PBT/vPvB properties. The available screening information is not sufficient to conclude on the P/vP properties of the Substance, and therefore further testing on degradation is required.

Therefore, your adaptation does not fulfil the information requirement.

In your comments on the draft decision you requested to postpone the request "*as it is intended to perform in a tiered strategy the above-mentioned biodegradation studies ahead*". Moreover you noted that "*If both the OECD 301 and 309/7 studies reveal that no degradation is observed, they need to be taken account for PBT assessment, and further testing is obsolete*".

As noted in Appendix C, section 6 above according to the ECHA Guidance R.11 "*Appropriate data need to be available to conclude the P/vP-assessment with a conclusion "not P/vP" on all three compartments (or five, with marine compartments): water (marine water), sediment (marine sediment) and soil*", but "*if a conclusion "P" or "vP" is reached for one compartment, no further testing or assessment of persistence of other environmental compartments is normally necessary*".

Study design
The requested simulation test must be performed under relevant conditions (12 °C) and non-extractable resdues (NER) must be quantified for the reasons explained above in request C-4. Performing the test at this temperature is in line with the applicable test conditions of the

OECD TG 308. The biodegradation of each constituent present in concentrations at or above 0.1% (w/w) or, if not teachnicallyu feasible, in concentrations as low as technically detectable, must be assessed. This can be done simultaneously during the same study, Alternatively, you must provide a justification for why you consider these as not relevant for the PBT/vBvB assessment.

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

Identification of the degradation products is a standard information requirement at Annex IX of REACH.

You have provided no information for this standard information requirement.

We have assessed this and identified the following issue(s):

Identity and relevance and of degradation products must be included in the risk assessment and PBT assessment.

Identification of degradation products does not need to be conducted if the substance is readily biodegradable (Annex IX, Section 9.2.3, column).

The Substance is not readily biodegradable (see Appendix C, Section 5) and you have not provided any justification in your chemical safety assessment (CSA) or in the dossier for why there is no need to provide information on the degradation products further information is needed.

Information is needed for the PBT/vPvB assessment /and risk assessment.

Therefore, the information provided does not fulfil the information requirement.

In your comments on the draft decision you requested to postpone the request "*as it is intended to perform in a tiered strategy the above-mentioned degradation studies ahead*".

As noted in this section below, information on the degradation products must be obtained from the simulation studies also requested in this decision.

Study design

You must obtain this information from the simulation studies also requested in this decision (Appendix C, sections 5-7 above). If any other method is used for identification of the transformation/degradation products, you must provide a scientifically valid justification for the chosen method.

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 Kow and potential toxicity of the transformation/degradation may be investigated.

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

Bioaccumulation in aquatic species, preferably fish is a standard information requirement at Annex IX of REACH.

ECHA understands that you have sought to adapt this information requirement based on Annex IX, Section 9.3.2., Column 2 as well as based on QSARs.

We have assessed this information and identified the following issue(s):

Column 2 adaptation

To comply with Column 2 specific rule for adaptation, the following must be demonstrated:
- the Substance has low potential for bioaccumulation (e.g. a log Kow ≤3) and/or it has low potential to cross biological membranes.
- Log Kow is a valid descriptor of the bioaccumulation of the Substance and acceptable/reliable information is provided for log Kow.

In the endpoint summary you have provided following statement: "*1,3,4-Thiadiazolidine-2,5-ditione, reaction products with hydrogen peroxide and tert-dodecanethiol' (no CAS#, no EC#) possesses a partition coefficient (logPow) of > 8, thus strong bioaccumulation in aquatic biota is not expected. Only limited bioaccumulation is assumed for compounds with a logPow < 4.5 or > 6 (based on ECHA REACH Guidance R.11 PBT Assessment). Concerning logPow exceeding 6, a gradual decrease of the Bioconcentration Factor (BCF) is observed practically. Examples are discussed in a literature study of the German Federal Environment Agency (Umweltbundesamt (Ed.): Comparative analysis of estimated and measured BCF data (OECD 305). Report No. (UBA-FB) 001435/E, ISSN: 1862-404, Dessau, March 2011).*
Furthermore, it has been hypothesised by different authors in publications that a high logPow is more an effect of solubility than lipophilicity of the substance. In conclusion, according to REACH, Annex IX, Section 9.3.2 (column 2), this endpoint can be waived."

As indicated in the ECHA Guidance R.11 hindered uptake of substances might be indicated by the Log Kow > 10 in combination with experimental indicators for hindrance of uptake:
- No chronic toxicity for mammals and birds
- No uptake in mammalian toxicokinetic study
- Very low uptake after chronic exposure

Thus, sole value of the Log Kow is not conclusive in respect to bioaccumulation.

There is no sufficient information from experimental studies on hindrance of uptake is available. Furthermore, no information is provided on bioaccumulation potential of the second constituent of the Substance. So the information is insufficient to demonstrate that the Substance has a low potential for bioaccumulation.

Therefore, your adaptation does not fulfil the information requirement.

Adaptation according to Annex XI, Section 1.3.

Annex XI, Section 1.3. states that results obtained from valid QSAR models may be used instead of testing when the following cumulative conditions are met, in particular:

1. adequate and reliable documentation of the applied method is provided; and
2. the results are adequate for classification and labelling and/or risk assessment.

According to ECHA's Practical guide "How to use and report (Q)SARs", section 3.4, a QSAR Model Reporting Format (QMRF) and a QSAR Prediction Reporting Format (QPRF) are required

to establish the scientific validity of the model, to verify that the Substance falls within the applicability domain of the model, and to assess the adequacy of the prediction for the purposes of classification and labelling.

You have provided a QSAR prediction for this endpoint: "*The bioconcentration factor (BCF) of 1,3,4-Thiadiazole, 2,5-bis(tert-dodecyldithio)- (CAS 50530-43-3) [= one of the main constituents of the UVCB substance '1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol' (no CAS#, no EC#)] was determined by the computer program BCFBAF v3.01*".

We have assessed this information and identified the following issue(s):

- You have not provided sufficient documentation for the QSAR prediction. In particular, you have not included a QMRF and a QPRF in your technical dossier. In the absence of QMRF and QPRF, ECHA cannot establish whether the model is scientifically valid, whether the Substance falls within the applicability domain of the model, and whether the results are adequate for classification and labelling and/or risk assessment.
- You have not provided information on bioaccumulation of the second constituent of the Substance.

The adaptation you provided does not fulfil the criteria specified in Annex XI, Section 1.3. and it is therefore rejected.

Study design
Bioaccumulation in fish: aqueous and dietary exposure (test method EU C.13. / OECD TG 305) is the preferred test to investigate bioaccumulation (ECHA *Guidance, Chapter R.7c, R.7.10.3.1*). Whenever technically feasible, the aqueous route of exposure (OECD TG 305-I) must be used as the results obtained can be used directly for comparison with the B and vB criteria of Annex XIII of REACH. If testing through aquatic exposure is technically not possible, you must provide scientifically valid justification for the infeasibility. In case you conduct the study using the dietary exposure route (OECD 305-III), you must also attempt to 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. In any case you must report all data derived from the dietary test as listed in the OECD TG 305-III.

You must provide information on the bioaccumulation of all relevant constituents present in concentration of ≥ 0.1% (w/w) and relevant degradation producst or, if not technically feasible, in concentrations as low as technically detectable must be assessed. Alternatively, you must provide a justification for why you consider certain constituents present in concentration of ≥ 0.1% (w/w) as not relevant for the PBT/vPvB assessment.

This can be done simultaneously during the same study.

In your comments on the draft decision you requested to postpone the request noting that as "*one of the first steps in a tiered testing strategy, a study will be performed to determine the experimental log Pow of the target substance*" and "*Dependent on the exact log Pow the necessity of the performance of a bioaccumulation study should be re-evaluated.*" Furthermore, you noted that the molecular weight of the substance is considered to have an additional effect on its potential for bioconcentration.

As noted above, sole value of the Log Kow is not conclusive in respect to bioaccumulation. The same should be considered for the molecular size/weight which can indicate hindered uptake of a substance, but such information needs to be combined with experimental indicators for hindrance of uptake.

Appendix D: Procedural history

For the purpose of the decision-making, this decision does not take into account any updates of registration dossiers after the date on which you were notified the draft decision according to Article 50(1) of REACH.

The compliance check was initiated on 22 February 2019.

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

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

Deadline to submit the requested information in this decision

The timeline indicated in the draft decision to provide the information requested is 24 months from the date of the decision for the information requested in points A.1-5, B.1-B.4, C.1-4.

In your comments on the draft decision, you requested ECHA to postpone the requests B.1, B.2, B.4, C.1 and C.2 stating that this is needed *"to gather sufficient data to prove the suitability of the read-across substance EC 293-927-7 to address the endpoint in question (please refer to Annex 1 for further information), as indicated in the general remarks by ECHA. It is intended to eliminate the deficiencies identified by ECHA first in a tiered strategy."*

ECHA considers that the provided timeline is adequate to generate the requested studies, because the tests under B.1, B.2, B.4, C.1 and C.2 may be conducted in parallel. ECHA did not change the deadline.

If you opt to submit a read-across adaptation, it is in your responsibility that it fulfils the general rules of Annex XI Section 1.5. ECHA will evaluate the validity of newly provided information according to Annexes VII-X and according to Annex XI after the deadline set out in this decision has passed.

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.

Appendix E: Observations and technical guidance

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

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

3. Test guidelines, GLP requirements and reporting

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

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

   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: 'How to report robust study summaries'[11].

4. Test material

   Selection of the test material(s) for UVCB substances
   The registrants of the Substance are responsible for agreeing on the composition of the test material to be selected for carrying out the tests required by the present decision. The test material selected must be relevant for all the registrants of the Substance, i.e. it takes into account the variation in compositions reported by all members of the joint submission.

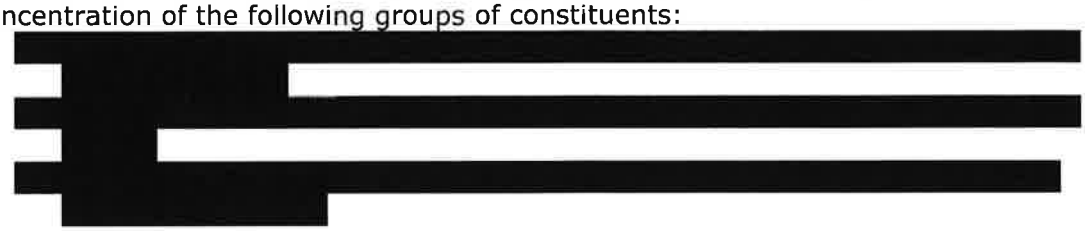
   While selecting the test material you must take into account the impact of each constituent/impurity on the test results for the endpoint to be assessed. For example, if a constituent/impurity of the Substance is known to have an impact on (eco)toxicity, the selected test material must contain that constituent/impurity.

   The OECD Series on Principles of Good Laboratory Practice and Compliance Monitoring, Number 11 [ENV/MC/CHEM(98)16] requires a careful identification of the test material and description of its characteristics. In addition, the Test Methods Regulation (EU) 440/2008, as amended by Regulation (EU) 2016/266, requires that "*if the test method is used for the testing of a* [...] *UVCB* [...] *sufficient information on its composition should be made available, as far as possible, e.g. by the chemical identity of its constituents, their quantitative occurrence, and relevant properties of the constituents*".

   In order to meet this requirement, all the constituents/groups of constituents of the test material used for each test must be identified as far as possible. Considering the specific characteristics of the registered substance, the composition should be reported considering the following details:

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

- The distribution of carbon chain lengths in the alkyl substituent
- Any information known on the specific degree and type of branching
- Concentration of the following groups of constituents:



and any other constituent or group of constituents relevant for the determination of the properties of the Substance. The composition of the test material(s) must be representative of all specific compositions considered covered by the joint submission and reported in section 1.2 of the registration dossiers. The registrants shall make sure it is possible to compare the substance composition reported to the composition of the test material by consistent reporting.

Technical Reporting of the test material for UVCB substances

The composition of the selected test material must be reported in the respective endpoint study record, under the Test material section. The composition must include all constituents of the test material and their concentration values. Without such detailed reporting, ECHA may not be able to confirm that the test material is relevant for the Substance and to all the registrants of the Substance.

Technical instructions are available in the manual "How to prepare registration and PPORD dossiers" on the ECHA website[12].

5. Strategy for for the PBT/vPvB assessment

You are advised to consult ECHA Guidance R.7b, Section R.7.9., R.7c, Section R.7.10 and R.11. on PBT assessment to determine the sequence of the tests and the necessity to conduct all of them. 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.

You are advised to first conclude whether the Substance may fulfil the Annex XIII criteria of being P or vP, and then continue with the assessment for bioaccumulation. The sequence of the simulation tests also needs to consider the intrinsic properties of the Substance, its identified use and release patterns as these could significantly influence the environmental fate of the Substance. You shall revise the PBT assessment when the new information is available.

6. List of references of the ECHA Guidance and other guidance/ reference documents[13]

Evaluation of available information
Guidance on information requirements and chemical safety assessment, Chapter R.4 (version 1.1., December 2011), referred to as ECHA Guidance R.4 in this decision.

QSARs, read-across and grouping

[12] https://echa.europa.eu/manuals
[13] https://echa.europa.eu/guidance-documents/guidance-on-information-requirements-and-chemical-safety-assessment

Guidance on information requirements and chemical safety assessment, Chapter R.6 (version 1.0, May 2008), referred to as ECHA Guidance R.6 in this decision.

ECHA Read-across assessment framework (RAAF, March 2017)[14]

Physical-chemical properties
Guidance on information requirements and chemical safety assessment, Chapter R.7a (version 6.0, July 2017), referred to as ECHA Guidance R.7a in this decision.

Toxicology
Guidance on information requirements and chemical safety assessment, Chapter R.7a (version 6.0, July 2017), referred to as ECHA Guidance R.7a in this decision.

Guidance on information requirements and chemical safety assessment, Chapter R.7c (version 3.0, June 2017), referred to as ECHA Guidance R.7c in this decision.

Environmental toxicology and fate
Guidance on information requirements and chemical safety assessment, Chapter R.7a (version 6.0, July 2017), referred to as ECHA Guidance R.7a in this decision.

Guidance on information requirements and chemical safety assessment, Chapter R.7b (version 4.0, June 2017), referred to as ECHA Guidance R.7b in this decision.

Guidance on information requirements and chemical safety assessment, Chapter R.7c (version 3.0, June 2017), referred to as ECHA Guidance R.7c in this decision.

PBT assessment
Guidance on information requirements and chemical safety assessment, Chapter R.11 (version 3.0, June 2017), referred to as ECHA Guidance R.11 in this decision.

Guidance on information requirements and chemical safety assessment, Chapter R.16 (version 3.0, February 2016), referred to as ECHA Guidance R.16 in this decision.

OECD Guidance documents[15]
Guidance Document on aqueous-phase aquatic toxicity testing of difficult test chemicals – No 23, referred to as OECD GD23.
Guidance Document on Mammalian Reproductive Toxicity Testing and Assessment – No 43, referred to as OECD GD43.

[14] https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across
[15] http://www.oecd.org/chemicalsafety/testing/series-testing-assessment-publications-number.htm

Appendix F: List of the registrants to which the decision is addressed and the corresponding information requirements applicable to them

Registrant Name	Registration number	(Highest) Data requirements to be fufilled
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Note: where applicable, the name of a third party representative (TPR) may be displayed in the list of recipients whereas the decision is sent to the actual registrant.