Helsinki, 17 August 2020

Addressees
Registrants of JS_293-927-7 listed in the last Appendix of this decision

Date of submission for the jointly submitted dossier subject of this decision
16/02/2018

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-nonanethiol
EC number: 293-927-7
CAS number: 91648-65-6

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 with the Substance;

2. 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;

3. 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. 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;

2. 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;

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

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

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

6. 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 with the Substance; 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 with the Substance; including degradation of each relevant constituent present in concentration at or above 0.1% (w/w);

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 with the Substance; including degradation of each relevant constituent present in concentration at or above 0.1% (w/w);

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 with the Substance; including each relevant constituent present in concentration at or above 0.1% (w/w);

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) with the Substance; including each relevant constituent present in concentration at or above 0.1% (w/w) and relevant degradation products.

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 Annex VII of REACH, if you have registered a substance at 1-10 tonnes per annum (tpa), or as a transported isolated intermediate in quantity above 1000 tpa;
- 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 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.1-3, B.1, C1-4 above in an updated registration dossier by ***22 November 2022***, and the information requested in points B.2-6 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.

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 provided results of an experimental study performed according to OECD TG 105 study ([redacted] 2012) with the Substance (key study).

We have assessed this information and identified the following issue:

EU test method OECD TG 105 requires that the following condition is met:

- The concentration in at least the two last 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%.

In your comments to the draft decision, you provide an expert statement where you indicate that you recognise that the results for the last two flasks (Sample 2 (A and B) and 3 (A and B)) differ by more than 15%. You justify the validity of these values indicating that the ±15% requirement of the guideline is not applicable in this situation. The sample peak sizes were below the limit of quantification for the analytical method, so one would not apply a quantification check if the results are below reliable quantification.

You indicate you intend to update the dossier with this expert statement as well as providing the additional supporting QSAR modelling data.

There is a deviation from the OECD TG 105. However, the expert statement is not substantiated, so an assessment is not possible by ECHA at this time. Future modelling data cannot be considered at this stage. If QSAR modelling data are provided in the registration dossier, for this decision by the set deadline, to address standard information requirement, it should meet conditions prescribed in Annex XI, section 1.3.

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

2. 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, results of experimental key study) 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.

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

Your comments on the draft decision are addressed under Appendix C, section 3.

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

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

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 (see Appendix A, Section 1), the Substance is regarded as poorly soluble in water and has high potential for adsorption (log Kow of the substance is above 9.4). 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.

In your comments on the draft decision you reported results of the analytical verification of exposure concentrations in the key study and considered that available results of this study are valid, and no new algae toxicity test is needed.

Information on results of the analytical verification of exposure concentrations and considerations provided in your comments addresses the concerns raised by ECHA in the draft decision. ECHA agrees that the submitted information is sufficient to fulfil the information requirement, however it is not in the technical dossier. You are responsible to provide the necessary information to comply with the decision by the set deadline. Therefore, the information requirement is not fulfilled by the experimental studies provided in the registration dossier.

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

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.

Your comments on the draft decision are addressed under Appendix C, section 4.

2.-5. 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) assessment. 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 Section C.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 about the requested tests are addressed respectively in Appendix C, sections 5-8.

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

6. 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 about the requested test is 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.)

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

You have provided an adaptation according to Annex XI, Section 1.2. in your dossier.

In support of your adaptation, you have provided the following sources of information:

(i) an experimental study (28 days repeated dose toxicity study) according to OECD TG 407;
(ii) an experimental study (Reproduction/Developmental Toxicity Screening Test) according to OECD TG 421.

You argue that the available data gives sufficient information to conlude on sub-chronic toxicity because:

a) The OECD TG 407 and the OECD TG 421 studies did not result in any toxicologically significant effects in treated animals. The NOEL was therefore considered to be 1000 mg/kg bw/day.
b) the NOAEL for 90 days can be extrapolated from the 28 days repeated dose toxicity and screening study for reproductive toxicity for the same route of exposure.
c) Kidney effects seen in both studies 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.

Annex XI, Section 1.2 states that there may be sufficient weight of evidence weight of evidence 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. The weight given is 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 sources of information must be balanced in order to decide whether they together provide sufficient weight to conclude that the Substance has or has not the (dangerous) property investigated by the required study.

In order to allow concluding on sub-chronic toxicity (90 days) for the Substance, the sources of information must provide sufficient information on the dangerous properties foreseen to be investigated in OECD TG 408 study. The essential key investigations for the dangerous properties in this test methods include that the exposure duration is 90 days for sub-chronic toxicity (OECD TG 408) and the assessment is performed on 10 animals/sex/dose group.

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

The studies provided (i, ii), alone or together, do not inform on essential properties for sub-chronic repeated dose toxicity because the duration of exposure was shorter than 90 days, and they 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, your claims a) to c) are not contributing to the weight of evidence as they are based on studies which do not provide sufficient information on the dangerous properties foreseen to be investigated in an OECD TG 408 study.

In conclusion, none of the pieces of information, alone or together, and taking into account your justification for the weight of evidence adaptation, allows to conclude whether the Substance has or has not hazardous properties related to sub-chronic toxicity. Therefore, your adaptation according to Annex XI, Section 1.2. is rejected and the information requirement is not fulfilled.

In your comments on the draft decision, you agree to perform the requested study.

Following 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. The sub-chronic toxicity study must be performed according to the OECD TG 408, in rats and with oral administration of the Substance, because although the information indicates that human exposure to the Substance by the inhalation route is likely, potential inhalation-specific effects are already addressed by deriving long-term DNELs for inhalation (workers 4.408 mg/m³ and general population 1.087 mg/m³).

The studies you submitted show 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 were observed in the kidneys of 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.

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 adapted this information requirement by using weight of evidence (WoE) according to Annex XI, Section 1.2. ECHA understands that you have also adapted this information requirement by using an adaptation under Annex IX, Section 8.7.2, column 2.

A. Annex XI, Section 1.2 (weight of evidence)
In support of your adaptation, you have provided the following sources of information:

(i) an experimental study (28 days repeated dose toxicity study) according to OECD TG 407;
(ii) an experimental study (Reproduction/Developmental Toxicity Screening Test) according to OECD TG 421;
(iii) a QSAR prediction Toxtree version 2.5.0., 2013
(iv) a QSAR prediction OECD Toolbox version 3.0.

You argue that the available data gives sufficient information to conlude on prenatal developmental toxicity because:

a) The OECD TG 407 and the OECD TG 421 studies did not result in any toxicologically significant effects in treated animals. The NOEL was therefore considered to be 1000 mg/kg bw/day.
b) The OECD TG 421 showed no effects on development, and the NOEL for reproductive and neonatal toxicity was 1000 mg/kg bw/day.
c) All genotoxicity studies were negative.
d) 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.

Annex XI, Section 1.2 states that there may be sufficient weight of evidence weight of evidence 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. The weight given is 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 sources of information must be balanced in order to decide whether they together provide sufficient weight to conclude that the Substance has or has not the (dangerous) property investigated by the required study.

In order to allow concluding on prenatal development toxicity for the Substance, the sources of information must provide sufficient information on the dangerous properties foreseen to be investigated in an OECD TG 414 study. The essential key investigations for the dangerous properties iin this test method include that the structural gross, visceral and skeletal malformations and variations are investigated.

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

Information not contributing to the weight of evidence adaptation

Regarding (iii) and (iv), a QSAR prediction can be used to adapt the standard information requirement, if the rules set in Annex XI, Section 1.3. Qualitative or quantitative structure-activity relationship (QSAR) are met. The following cumulative conditions need to be met:

(1st) results are derived from a QSAR model whose scientific validity has been established;
(2nd) the substance falls within the applicability domain of the QSAR model;
(3rd) adequate and reliable documentation of the applied method is provided; and
(4th) the results are adequate for classification and labelling and/or risk assessment.

You have provided QSAR predictions performed with TOXTREE and QSAR Toolbox (iii, iv). You have not included a QMRF and a QPRF in your technical dossier. You conclude in your adaptation statement d) that this information does not show evidence of toxic effects, and that structurally related compounds are also relatively non-toxic and not classified for reproductive or developmental toxicity.

ECHA has evaluated your QSAR information and concluded that you have not not looked at the individual constituents of your UVCB substance. We have profiled 10 constituents of the Substance and cross-examined possible toxicological alerts for oral exposure. The results show that most of the constituents are biologically/metabolically active. This contrasts with your statement d) which indicates low toxicity. However, as your documentation is limited ECHA concludes that you did not provide information that would fulfil the rules 1st to 4th above.

In conclusion, 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. Therefore the reported QSAR prediction does not fulfil the criteria in Annex XI, Section 1.3., and it cannot be used as part of the weight of evidence adaptation according to Annex XI, Section 1.2.

Information contributing to the weight of evidence adaptation

The studies provided (i, ii), alone or together, do not inform on the dangerous properties for prenatal developmental toxicity because they do not cover essential key developmental toxicity investigations such as examination of the foetuses for visceral and skeletal malformations and variations. This information is essential because it is one aspect of the developmental toxicity and it cannot be covered by or derived from any of the available sources of information provided. Therefore, the studies (i. ii) are of limited relevance.

Regarding study (i), you have not substantiated your argumentation with data on why and how information on systemic toxicity would predict or inform on (prenatal) developmental toxicity of your Substance. Therefore your claim a) does not contribute to your weight of evidence.

Source study (ii) may provide relevant screening-type information on (prenatal) developmental toxicity, such as reduced litter size and increased pup mortality. However, as stated above this study does not adress all essential key investigations of an OECD TG 414 study, and your claim b) is therefore of limited relevance.

Genotoxic substances (your claim (c)) may indeed have an association to prenatal developmental toxicity. However, there are also many other potential mechanisms. Therefore the relevance of this claim is low.

Conclusion

None of the pieces of information, alone or together, and taking into account your justification for the weight of evidence adaptation, allows to conclude whether the Substance has or has not hazardous properties related to (prenatal) developmental toxicity. Therefore, your adaptation according to Annex XI, Section 1.2. is rejected.

B. Annex IX, Section 8.7.2, column 2 (low toxicity)

We have assessed the column 2 adaptation and identified the following issue:

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.

In your adaptation, you have not substantiated your claim on no toxicity. On the contrary the results from the 28-day repeated dose toxicity study and the reproduction/developmental toxicity screening test indicate kidney effects in a dose-dependent manner in male and female rats. In addition, you have not provided any toxicokinetic data to show that there is no systemic absorption. Furthermore, the uses of the Substance, for example general professional and consumer use of lubricants and greases in vehicles or machinery, indicate that there is human exposure.

Therefore, as none of the conditions for the adaptation are met, your adaptation is rejected, and the information requirement is not fulfilled.

In your comments on the draft decision, you agree to perform the requested study.

Information on study design

A PNDT study according to the test method OECD TG 414 must be performed in rat or rabbit as preferred species with oral[2] 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,

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

- 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, Column 2).

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 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.

In your comments on the draft decision, all registrants agreed to perform the long-term toxicity testing on aquatic invertebrates (OECD 211) with water accommodated fraction (WAF) method and adopt loading rate as the endpoint.

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

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-nonanethiol 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.

In your comments on the draft decision you indicated that based on short-term aquatic toxicity data Daphnia is the most sensitive aquatic species and long-term toxicity testing with fish is not necessary. Instead adaptation based on Annex XI, section 1.2 and QSAR modelling data will be provided in the registration dossier.

As already noted above, the short-term 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 available to decide on sensitivity of aquatic species. 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 regardless of toxicity testing results with aquatic invertebrates and algae. If adaptation according to Annex XI, section 1.2 is provided for this decision by the set deadline, it should fulfil requirements of this Annex XI, section 1.2 and provided information should be sufficient to conclude that substance has or has not a particular dangerous property. Furthermore, if QSAR modelling data are provided in the registration dossier, for this decision by the set deadline, to address standard information requirement, it should meet conditions prescribed in Annex XI, section 1.3.

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

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 (< 1.00E-4 g/L at 20 °C, Fox, 2012) 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: 2% degradation after 28 days in the test performed according to OECD TG 301C.

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 is required if the chemical safety assessment (CSA) according to Annex I indicates the need to investigate further the degradation of the substance (Annex 1. Section 0.1; Annex IX, Section 9.2., column 2; Annex XIII, Section 2.1).

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.

In your comments on the draft decision you noted that "*With all the information, it can be concluded that the substance is stable in the surface water compartment. 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.*" Therefore, the simulation tests concerning biodegradation in water can be waived. Furthermore, you noted that registration dossier will be updated to include the QSAR modeling results of degradation of constituents of the Substance.

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 (2% degradation after 28 days in the test performed according to OECD TG 301C); and
- the Substance is potentially B/vB since the Log Kow is above the threshold of 4.5 (log Kow above 9.4 in the test performed according to OECD TG 117).

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

Furthermore, 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.

The information provided in your comments do not change these conclusions. ECHA Guidance R.11 explains that "*Available data consisting solely of screening information can be employed to derive a conclusion mainly for "not P and not vP" or "may fulfil the P or vP criteria". After the latter conclusion on screening, higher tier information generally needs to be made*

available. 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 [...] The use of QSAR and SAR predictions for identifying substances for persistence (P and vP) might be used at the screening level"*. Thus, higher-tier information (simulation degradation testing) is needed for the P/vP assessment.

Moreover, as noted above, exposure of the aquatic compartment cannot be currently ruled out. If QSAR modelling data are provided in the registration dossier, for this decision by the set deadline, to address standard information requirement, it should meet the conditions prescribed in Annex XI, section 1.3.

Therefore, your adaptation does not fulfil the information requirement.

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. The Substance has high potential for adsorption (log Kow of the Substance above 9.4).

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):

Simulation testing on soil does not need to be conducted if direct or indirect exposure of soil is unlikely (Annex IX, Section 9.2.1.3, column).

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.

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. The Substance has high potential for adsorption (log Kow of the Substance above 9.4).

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 (< 1.00E-4 g/L at 20 °C, Fox, 2012) 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.

In your comments on the draft decision you noted that "*With all the information, it can be concluded that the substance is expected to be stable in sediment compartments. 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.*" Therefore, the simulation tests concerning biodegradation in sediment can be waived. Furthermore, you noted that registration dossier will be updated to include the QSAR modeling results.

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. The information provided in your comments do not change these conclusions. Furthermore, as noted above, exposure of the sediment compartment cannot currently be ruled out. If QSAR modelling data are provided in the registration dossier, for this decision by the set deadline, to address standard information requirement, it should meet the conditions prescribed in Annex XI, section 1.3.

Therefore, your adaptation does not fulfil the information requirement.

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 agreed to generate requested information from the soil simulation study. Furthermore, you noted that registration dossier will be updated to include the QSAR modeling results.

If QSAR modelling data are provided in the registration dossier, for this decision by the set deadline, to address standard information requirement, it should meet the conditions prescribed in Annex XI, section 1.3.

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

a)
To comply with Column 2 specific rules 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 or
- Log Kow is a valid descriptor of the bioaccumulation of the Substance and acceptable/reliable information is provided for log Kow.

The log Kow for the Substance is above 9.4 .

In the endpoint summary you have provided following statement: "*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 hypothesized 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."

In your comments on the draft decision you noted that "*For substances with logKow >9.4, there is no significant bioaccumulative potential as they are too large and too hydrophobic. As an additional line of evidence, QSAR modeling results for BCF using the CATALOGIC BCF baseline model on the main and minor constituents, predict that both constituents are not bioaccumulative.*" Furthermore, you noted that registration dossier will be updated to include the QSAR modeling results.

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.

Based on information available in the registration dossier, the Substance has high partition coefficient (log Kow above 4.5), however no sufficient information from experimental studies on hindrance of uptake is available for the Substance. So the information is insufficient to demonstrate that the Substance has a low potential for bioaccumulation.

Your comments do not change this conclusion. 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.

Future information cannot be taken into account. If QSAR modelling data are provided in the registration dossier, for this decision by the set deadline, to address standard information requirement, it should meet the conditions prescribed in Annex XI, section 1.3.

Therefore, your adaptation does not fulfil the information requirement.

b)
To comply with Column 2 specific rules for adaptation, the following must be demonstrated:

- direct and indirect exposure of the aquatic compartment is unlikely.

You stated that direct/indirect exposure of the aquatic compartment to the substance is unlikely.

As explained in Appendix C, Sections 5 and 7 above, considering identified uses of the Substance, exposure of aquatic compartment (direct and indirect via STP) cannot be ruled out.

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-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-nonanethiol was determined by the computer program BCFBAF v3.01 (EPIWIN software) by US-EPA (* [redacted] *2013)*".

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.
- You have not provided information on which of the many structures (constituents) of the UVCB substance was/were used to produce the prediction.

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.

Furthermore, without information on the identity of the constituents used for the QSAR prediction, it is not possible to assess adequateness of the results for classification and labelling and/or risk assessment.

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.

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 the REACH Regulation, as described below:

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

ECHA took into account your comments and amended the deadline.

Deadline to submit the requested information in this decision

The timeline indicated in the draft decision to provide the information requested is 18 months for the following requests, only: A.1-3, B.1 and C.1-4. from the date of adoption of the decision. In your comments on the draft decision, you requested an extension of this timeline to 24 months. You justified your request for requests C.1 and C.2 based on laboratory capacity. Therefore, ECHA has amended this deadline of the decision and granted the request and set the deadline to 24 months for the following requests, only: A.1-3, B.1 and C.1-4. from the date of adoption of the decision.

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'[3].

4. Test material

   Selection of the test material(s)

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

   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 or 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:

[3] 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:
    - Mono alkyldisulfanyl 1,3,4-thiadiazole-thiol (reported individually, based on the chain length)
    - Di alkyldisulfanyl 1,3,4-thiadiazole (reported individually, based on the chain length)
    - -2-(alkyldisulfanyl)-5-((5-(alkylthio)-1,3,4-thiadiazol-2-yl)disulfanyl)-1,3,4-thiadiazole (dimers)

and any other constituent/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

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/groups of constituent 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"[4].

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[5]

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.

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

QSARs, read-across and grouping
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)[6]

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[7]
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.

[6] https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across
[7] 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]
[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.