EUROPEAN CHEMICALS AGENCY

Helsinki, 13 August 2020

Addressees
Registrant(s) of Turpentine oil pulp process as listed in the last Appendix of this decision

Date of submission of the dossier subject to this decision
13 March 2018

Registered substance subject to this decision ("the Substance")
Substance name: Turpentine, oil
EC number: 232-350-7
CAS number: 8006-64-2

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

Under Article 41 of Regulation (EC) No 1907/2006 (REACH), you must submit the information listed in C.1 below by ***23 May 2022*** and all other information listed below by ***21 May 2025***.

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

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

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

2. Ready biodegradability (Annex VII, Section 9.2.1.1.; test method: OECD TG 301C/D/F) with the Block 6 constituents of the Substance

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

1. Justification for an adaptation of a Short-term repeated dose toxicity (28 days) based on the results of the Sub-chronic toxicity study (90 days) requested below (Annex VIII, Section 8.6.1.)

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

3. Simulation testing on ultimate degradation in surface water also requested below (triggered by Annex VIII, Section 9.2.)

4. Soil simulation testing also requested below (triggered by Annex VIII, Section 9.2.)

5. Sediment simulation testing also requested below (triggered by Annex VIII, Section 9.2.)

6. Identification of degradation products also requested below (triggered by Annex VIII, Section 9.2.)

7. Bioaccumulation in aquatic species also requested below (triggered by Annex I, Sections 0.6.1. and 4; Annex XIII, Section 2.1.)

C. Information required from all the Registrants subject to Annex IX of REACH

1. Sub-chronic toxicity study (90-day) (Annex IX, Section 8.6.2.; test method: OECD TG 408) by oral route, in rats

2. Pre-natal developmental toxicity study (Annex IX, Section 8.7.2.; test method: OECD TG 414) by oral route, in one species (rat or rabbit)

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 or with the Block 6 constituents of the Substance

4. Long-term toxicity testing on fish (Annex IX, Section 9.1.6.; test method: OECD TG 210) with the Substance or with the Block 6 constituents of 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 Block 6 constituents of 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 with the Block 6 constituents of 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 with the Block 6 constituents of the Substance

8. Identification of degradation products (Annex IX, 9.2.3.; using an appropriate test method among the simulation tests requested above X) with the Block 6 constituents of the Substance

9. Bioaccumulation in aquatic species (Annex IX, Section 9.3.2; test method: OECD TG 305, aqueous exposure) with the Block 6 constituents of the Substance including relevant degradation products

D. Information required from all the Registrants subject to Annex X of REACH

1. Pre-natal developmental toxicity study (Annex X, Section 8.7.2.; test method: OECD TG 414) by oral route, in a second species (rabbit or rat)

Reasons for the request(s) are explained in the following appendices:

- Appendix entitled "Reasons common to several requests";
- Appendices entitled "Reasons to request information required under Annexes VII to X of REACH", respectively.

Information required depends on your tonnage band

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

- the information specified in Annexes VII and VIII to REACH, for registration at 10-100

tpa;

- the information specified in Annexes VII, VIII and IX to REACH, for registration at 100-1000 tpa;
- the information specified in Annexes VII to X to REACH, for registration at more than 1000 tpa.

You are only required to share the costs of information that you must submit to fulfil your information requirements.

How to comply with your information requirements

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

You must follow the general testing and reporting requirements provided under the Appendix entitled "Requirements to fulfil when conducting and reporting new tests for REACH purposes". In addition, you should follow the general recommendations provided under the Appendix entitled "General recommendations when conducting and reporting new tests for REACH purposes". For references used in this decision, please consult the Appendix entitled "List of references".

The studies relating to biodegradation and bioaccumulation are necessary for the PBT assessment. However, to determine the testing needed to reach the conclusion on the persistency and bioaccumulation of the Substance you should consider the sequence in which these tests are performed and other conditions described in Appendix entitled "Requirements to fulfil when conducting and reporting new tests for REACH purposes".

Appeal

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

Failure to comply

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

Authorised[1] under the authority of 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.

EUROPEAN CHEMICALS AGENCY

Appendix on Reasons common to several requests

1. Assessment of your weight-of evidence approach under Annex XI, Section 1.2.

You seek to adapt the following standard information requirements by applying (a) weight-of-evidence approach(es) in accordance with Annex XI, Section 1.2:

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

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

Weight of evidence approaches

Annex XI, Section 1.2 states that there may be sufficient 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 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 information requirement. 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.

A. Weight of evidence for toxicological properties

You have provided a justification for your weight-of-evidence approach in your Chemical Safety Report (CSR).

You have provided the following reasoning for the approach in section 5.1 of your CSR: "*for endpoints where measured data for whole substance are not available, a weight of evidence approach has been followed based on constituent data. Constituent data for all endpoints are relevant to support read-across for the weight of evidence approach*".

"*the overall assessment approach is that in addition to the available data for the whole substance for both health and environmental endpoints any available data for the constituents are considered and assessed and where relevant used to support the overall conclusions for each endpoint*".

The typical composition for the Substance presented in your CSR has been used "*as the basis for modelling the toxicity, ecotoxicity and environmental fate properties of the constituents of the Substance*". In this context you have allocated the constituents listed in this typical composition to 9 blocks of constituents based on structural considerations, similarities in

physicochemical and fate properties and behaviour properties. You have reported typical concentrations for the different blocks and specified that "*the range in abundance of the constituents is wide due to variations in the composition of the substance described previously; this is principally due to natural variations in source materials (trees)*". You have also emphasised that "*the range allows for certain constituents to not be present at all in some batches*".

Block number	Block name	Typical percentage in composition (%)	Range of percentage in composition (%)
1			
2			
3			
4			
5			
6			
7			
8			
9			

In your CSR you have provided general considerations on the toxicokinetic properties of the constituents included in each block.

Based on the presented sources of information, you argue that the available data gives sufficient information to conlude on the sub-chronic toxicity of the Substance because "*the most abundant constituents of the Substance are presented by existing, reliable repeated dose toxicity data and information that is available on minor constituents indicates that serious adverse toxicological effects following repeated exposure are not expected for these types of chemical structures".*

On the basis of this information we understand that you have applied a constituent-based weight-of-evidence approach whereby you conclude on the properties of the Substance using the results obtained in independent studies conducted with individual constituents of the Substance or representative substances for blocks of constituents present in the Substance.

We note the following shortcoming(s) with regards to your adaptation.

1. Formation of the blocks – need to consider the properties of all the constituents of the Substance

Hazard information can be obtained from tests conducted with the Substance or from the integration of information on the individual constituents of the Substance as part of a constituent-based approach.

Whenever a constituent-based approach is applied, the assessment should be performed on each relevant constituent, impurity and additive included in the composition of the Substance.

When, due to the complexity of the composition of a substance, it is not feasible to fully identify, assess or isolate single constituents, the composition of the substance can be divided into blocks. In each block the constituents must be structurally similar so that their properties can be predicted to follow a regular predictable pattern.
The impact of exposure to each of the constituents/blocks of constituents needs to be assessed to ensure that a reliable conclusion on the presence or absence of hazardous

properties can be made. In case certain constituents or block of constituents are considered not to be relevant for the hazard assessment, a justification for this must be provided in the CSR.

Table 1.2.2 in your Chemical Safety Report provides detailed information on the identity, structure, typical concentration, concentration range and block allocation for some constituents of the Substance. These include the nine blocks of constituents described above. In addition, Table 1.2.2 refers to a number of additional constituents which can account for [redacted]% of the composition of the Substance, namely "[redacted]" and the "[redacted]" constituents.

The constituents included in your constituent-based approach do not include the "[redacted]" and the "[redacted]" constituents, neither on their own nor as part of the blocks of constituents. Based on the information provided in table 1.2.2 of your CSR these constituents can form up to [redacted] % of the composition of the Substance. You have not provided a justification for excluding these constituents from your assessment. In the absence of information on the properties of these constituents, the coverage of the range of constituents of the Substance considered in your adaptation is incomplete. Therefore, no reliable conclusions on the hazardous properties of the whole Substance can be derived solely on the basis of information obtained from the set of blocks that you have identified.

2. Relevance of the information provided for each block of constituents

a. Missing information for some blocks

Hazard information can be obtained from tests conducted with the Substance itself or from a weight of evidence approach using information on the individual constituents in a constituent-based approach.

In a constituent-based approach, the hazard assessment is performed by integrating relevant and reliable information on each relevant constituent/block of constituents included in the composition of the Substance. This ensures that the contribution of exposure to each constituent/block of constituents to the toxicological properties of the Substance is considered.

Complete coverage of the range of constituents included in the composition of the Substance ensures that a reliable conclusion on the presence or absence of hazardous properties of the Substance can be made.

Where certain constituents or blocks of constituents are considered not to be relevant for the hazard assessment, a justification for this must be provided in the CSR.

In your technical dossier you have reported or made reference to available information on a set of the constituents/blocks of constituents of the Substance.

You have not provided information on the toxicological properties of some constituents/blocks of constituents included in the composition of the Substance.

You have not provided a justification for excluding these constituents/blocks from your assessment. Details on the identity of these blocks are provided in the endpoint specific sections of this document.

In the absence of information on these constituents, their contribution to the toxicological properties of the substance is not considered. This incomplete coverage of the range of constituents included in the composition of the Substance prevents a reliable conclusion on the presence or absence of hazardous properties of the Substance.

b. Access to the information

Under Article 10(a)(vii) of the REACH Regulation, "*except in cases covered under Article 25(3), Article 27(6) or Article 30(3), the registrant shall be in legitimate possession of or have permission to refer to the full study report (...) for the purpose of registration*". Article 25(3) of the REACH Regulation states that information submitted to ECHA in the framework of a registration at least 12 years previously can be used by another manufacturer or importer for registration purposes.

You refer in your chemical safety report to existing information on constituents or on substances identified as representative for blocks of constituents of the Substance, which is included in the respective individual REACH registration dossiers of these substances and disseminated by ECHA on its website. Details of the lines of evidence for which this situation applies are provided in the endpoint specific sections of this document.

This information has been submitted to ECHA in the registration dossier of these individual substances less than 12 years ago. The information is therefore not readily available for registration purposes by other manufacturers or importers.

You have not provided evidence that you are in legitimate possession of this information or that you have a permission to refer to it in your registration dossier. In the absence of this confirmation of access to the information, it cannot be used by you to fulfil the information requirements applicable to the Substance.

c. Reporting of the information in your dossier

Under Article 10(a)(vii) of the REACH Regulation, a technical dossier must include "*robust study summaries of the information derived from the application of Annexes VII to XI, if required under Annex I*". Annex I, Section 1.1.4/3.1.5 of REACH states that robust study summaries are "*required of all key data used in the hazard assessment*".

When properties of a substance are identified using multiple independent sources of information in a weight of evidence approach, each line of information provides key data for the hazard assessment. Therefore a robust study summary providing information allowing to make an independent assessment of data must be provided for each line of information used in weight of evidence approaches.

In your chemical safety report you have identified existing studies conducted with constituents of the Substance or with substances considered as representative of blocks of constituents. You have provided short narratives presenting the design and the results obtained from these studies. Details of the lines of evidence for which this situation applies are provided in the endpoint specific sections of this document.

You have not provided robust study summaries for any of these independent sources of information. In particular you have not provided detailed information on the methods, results and conclusions of these studies allowing for an independent assessment of the studies. In the absence of such information, ECHA cannot assess the adequacy and the reliability of this

information in a weight of evidence aimed at determining whether the Substance has or has not particular hazardous properties.

B. Conclusions on the weight-of-evidence approaches

As explained in the assessment above, it is not possible to conclude, based on any source of information alone or considered together, whether the Substance has or has not the particular dangerous properties foreseen to be investigated in the OECD TG 408/413 and OECD TG 414 studies. ECHA understands from the information provided in your comments on the draft decision that you intend to explore ways of fulfilling the information requirements addressed in the draft decision using read-across approaches. To this end you have identified recent sub-chronic and PNDT studies conducted with an analogue substance Gum Turpentine Oil (GTO; EC No 932-349-8). You consider investigating whether this substance could be a suitable substance for read-across.

ECHA understands that you intend to explore ways to adapt the information requirement. However, you have not provided in your comments any new scientific information justifying such adaptation or addressing the information requirement. Therefore your adaptations are rejected and the information requirements are not fulfilled.

2. Assessment of your (Q)SAR adaptations under Annex XI, Section 1.3

For the following information requirements, you have provided results from (Q)SAR predictions in the endpoint summaries (no robust study summaries were provided).

- Long-term toxicity testing on aquatic invertebrates (Annex VII, Section 9.1.1., column 2, and Annex IX, Section 9.1.5)
- Long-term toxicity testing on fish (Annex VIII, Section 9.1.3, column 2, and Annex IX, Section 9.1.6)
- Ready biodegradability (Annex VII, Section 9.2.1.1.)
- Simulation testing on ultimate degradation in surface water (Annex VIII, Section 9.2. and Annex IX, Section 9.2.1.2.)
- Soil simulation testing (Annex VIII, Section 9.2. and Annex IX, Section 9.2.1.3)
- Sediment simulation testing (Annex VIII, Section 9.2. and Annex IX, Section 9.2.1.4.)
- Bioaccumulation in aquatic species (Annex I, Sections 0.6.1. and 4 in conjunction with Annex XIII, Section 2.1.; and Annex IX, Section 9.3.2.)

While an adaptation was not specifically indicated by you, ECHA has evaluated the provided information under the rules set in Annex XIII section 3.1. in conjunction with Annex XI, Section 1.3. Qualitative or quantitative structure-activity relationship (QSAR).

We have assessed this information and identified the following issues:

Annex XIII, Section 3.1. explains that indication of P and vP properties (Annex XIII, Section 3.1.1(c)) and B and vB properties (Annex XIII, Section 3.1.2(a)) can be estimated by (Q)SAR models in case the predictions are in accordance with Section 1.3 of Annex XI.

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. results are derived from a QSAR model whose scientific validity has been established;

2. the substance falls within the applicability domain of the QSAR model;
3. adequate and reliable documentation of the applied method is provided; and
4. 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 QSAR predictions for the endpoints listed above and you have used the QSAR predictions for the purpose of concluding your PBT assessment. You have not provided documentation for the QSAR predictions for any of the endpoints listed above. In particular, you have not included QMRFs and a QPRFs in your technical dossier.

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

1. ECHA cannot assess if the results provided in the endpoint summaries are based on a QSAR model whose scientific validity has been established; and
2. ECHA cannot assess if the substance falls within the applicability domain of the QSAR model

As explained above, your adaptation does not comply with the general rules of adaptation as set out in Annex XI, Section 1.3. Therefore, use of this information in your PBT assessment is not accepted.

In your comments to the draft decision, you suggest to strengthen the use of predicted ecotoxicity data by inclusion of relevant QM(P)RF documentation in an updated dossier and ECHA notes that you have attached such documents in your comments.

In your comments you further specify that you have not been able to identify a valid and adequate QSAR method for the prediction of the ecotoxicity of the [redacted] and [redacted] constituents of your registered UVCB substance. Since reliable measured data exists for these two constituents, you propose that you may seek to obtain letter of access to key studies of these constituents and report the studies in your dossier update.

ECHA understands that you intend to include the QMRF and QPRF documents attached in your comments in an updated dossier and you also intend to include new measured data for the constituents where valid and adequate QSAR methods are not available. However, since no valid QSARs nor experimental data are available in the dossier for the two constituents specified in your comments, your current adaptation is rejected and the information requirements are not fulfilled.

3. Indication of PBT properties

Reliable information on all relevant constituents or blocks of similar constituents (> 0.1% (w/w)) is required for the purpose of PBT/vPvB assessment (ECHA Guidance R.11, Section R.11.4.2.2).

In your PBT assessment you have provided screening information about the potential persistency (P), bioaccumulation (B) and toxicity (T) for all the constituents (present at >0.1%) of your UVCB substance and you have divided the constituents into nine different

blocks. You have assessed the persistency of the constituents by experimental studies and by using the BIOWIN QSAR predictions, bioaccumulation by using the KOWWIN and BCF QSAR predictions, and toxicity by using ECOSAR QSAR predictions.

More specifically, you report the following screening information for the blocks (typical concentration of the block in brackets):

- Block 1 ([redacted]%): Not P/vP, Not B/vB, Not T
- Block 2 ([redacted]%): Not P/vP, Not B/vB, Not T
- Block 3 ([redacted]%): Not P/vP, B but not vB, Not T
- Block 4 ([redacted]%): Not P/vP, Not B/vB, Not T
- Block 5 ([redacted]%): Not P/vP, Not B/vB, Not T
- Block 6 ([redacted]%): Not P/vP, B and vB, T
- Block 7 ([redacted]%): Not P/vP, Not B/vB, Not T
- Block 8 ([redacted]%): P or vP, Not B/vB, Not T
- Block 9 ([redacted]%): Not P/vP, Not B/vB, T

Based on the available screening information on the identified constituents in each of the nine blocks you conclude in your PBT assessment that none of the constituents or blocks fulfil the criteria of PBT or vPvB and therefore your registered substance is not a PBT/vPvB substance.

As explained in Appendix A. Section 2, information provided on ready biodegradability does not cover the Blocks 4-9. Therefore, based on available information the conclusion on PBT properties of the substance, including its constituents exceeding 0.1% (w/w) concentration, is not possible. This means that it cannot be excluded that the substance is meeting the criteria for PBT/ vPvB.

ECHA further notes that in fact, Block 6 meets the screening criteria for potentially B/vB (log Kow 6.3) and based on the above you consider the block also as T.

Therefore further information on P and B properties must be generated on Block 6 constituents as explained in detail in Appendixes: A.2 and C.6-10.

Further advice on the strategy for the PBT/vPvB assessment is given in the Appendix E.

In your comments to the draft decision, you agree that, in principle, further testing on the persistence and bioaccumulation of the constituents of Block 6 may be appropriate and you agree that the main need for this further testing specifically on Block 6 constituents is in relation to the PBT and vPvB assessment. You specify that a tiered testing approach will be used. Firstly investigate the persistence and only if it is confirmed that the constituents meet the P or vP criteria, the bioaccumulation test would be needed. The need for any further ecotoxicity testing would then only need to be considered if the B-criterion is met. This strategy follows the standard approach in Chapter R.11.4.1 of ECHA Guidance R.11.

ECHA agrees that your proposed tiered testing approach for investigating persistence and bioaccumulation is in-line with Chapter R.11.4.1 of ECHA Guidance R.11. The deadline set in the decision allows you to apply such tiered approach.

4. Request that the Draft Decision be changed to allow registrants to make use of read across of very recent data

ECHA understands that in your comments on the draft decision you indicated that you could not provide a conclusion on your revised adaptation due to the time-limit to submit comments. You requested that "*the Draft Decision be changed to allow registrants to make use of read across of very recent data to fill in the data gap and develop a more robust dossier which it permits*".

Given that registered substances are allowed to circulate freely on the internal market, companies must ensure that the information contained in their registration dossiers is correct at the time of registration. This stems from the principle of REACH that the registrants must ensure the substances used and placed on the market do not adversely affect human health or the environment.

The REACH evaluation provisions give ECHA the responsibility to check whether registrations are in compliance with the requirements of this Regulation. The objective of a decision issued in the context of a compliance check is to ensure that the dossier is brought in compliance with the applicable requirements of the REACH Regulation. This is achieved in an ECHA compliance check decision by requesting the concerned registrant(s) to generate the missing standard information on the registered substance.

Such decision does not prevent you from submitting a valid adaptation instead of the requested studies. Such adaptation would be assessed by ECHA in accordance with the follow-up procedure under Article 42 (see judgment of 8 May 2018, ESSO Raffinage v ECHA, T-283/15, EU:T:2018:263, currently under appeal before the Court of Justice, paragraphs 62 and 63). It should however be noted that if, following such examination, ECHA considers such adaptation to be invalid, ECHA will request the relevant national enforcement authorities to enforce the requests set out in the original compliance check decision.

5. Deadline to comply with information requests

The timeline indicated in the draft decision to provide the information from the request C.1 for a sub-chronic toxicity study was 12 months from the date of adoption of the decision.
In your comments on the draft decision, you requested an extension of the timeline to 24 months. You justified your request stating that you anticipate that there may be delays in starting studies due to CRO capacity, to the necessary arrangements and technical work required prior to starting the study. You also indicate that the preparation of the dossier update taking into account the new information generated also prevents from submitting the information within 12 months.

You have not provided evidence to substantiate the need for a 12-month extension of the time-line to 24 months other than assumptions that delays in commissioning and starting the study may occur. These arguments are speculative in nature and as these risks are identified, mitigating measures can be implemented to alleviate them. However ECHA acknowledges that necessary preliminary work may need to be done to prepare for the study and has taken this aspect into account in its calculation of the deadline. Therefore, in order to accommodate for the necessary preliminary work, which should be started without delay, and for the preparation of the revised dossier, ECHA has only partially granted the request and set the deadline for providing the information from the request C.1 to 18 months from the date of adoption of the decision.

The timeline indicated in the draft decision to provide the information from all the other requests except the request C.1 was 39 months from the date of adoption of the decision. In

your comments on the draft decision you propose that the following additional time is granted in order to prepare representative Block 6 material for testing:

- 12 months for the comprehensive analysis of your registered substance and identification of main Block 6 constituents;
- 12 months for assessment of synthesis and/or isolation of main Block 6 constituents;
- 6 months for preparation of sufficient amounts of Block 6 constituents as needed for testing.

You justify this request for an additional 30 months by claiming that the Block 6 constituents in commercial samples of the registered UVCB substance vary significantly and isolating this block of constituents in sufficient quantities for testing is not considered to be technically possible. The option to synthesise these constituents would also be technically challenging and it would not lead to a block of constituents that is representative of the block present in the registered substance. Furthermore, you claim that only limited analytical information is currently available regarding the identity of individual chemical structures present in commercial products and considerable time would be needed to characterise representative Block 6 constituents present in the commercial sample of the substance.

ECHA acknowledges the potential difficulties arising from the identification and preparation of the representative Block 6 samples for the testing as described in your comments to this decision. You have however not supported your request to extend the draft decision deadline by a laboratory certificate or any other source of documentary proof. Based on the information provided ECHA considers it appropriate to extend the deadline to provide the requested information by a further 15 months: 6 months for the analysis of your registered substance and identification of main Block 6 constituents, 6 months for assessment of synthesis and/or isolation of main Block 6 constituents and 3 months for preparation of sufficient amounts of Block 6 constituents as needed for testing.

Therefore, the deadline is set to 54 months from the date of adoption of the decision.

Appendix A: Reasons to request information required under Annex VII of REACH

1. Long-term toxicity testing on aquatic invertebrates

Short-term toxicity testing on aquatic invertebrates is a standard information requirement in Section 9.1.1 of Annex VII to REACH. However, Column 2 of Annex VII, Section 9.1.1. requires that Long-term toxicity testing on aquatic invertebrates (Annex IX, section 9.1.5) must be considered under Annex VII if the substance is poorly water soluble.

Poorly water soluble substances (e.g. water solubility below 1 mg/L) require longer time to reach steady-state conditions (ECHA Guidance 7.b, Section R.7.8.5). Hence, the short-term tests may not give a true measure of toxicity for poorly soluble substances and long-term toxicity study on aquatic invertebrates must be conducted instead of the acute test (Annex VII, section 9.1.1., column 2 in conjunction with Annex IX, Section 9.1.5.).

Some of the constituents of the Substance are poorly water soluble and the information provided for long-term aquatic toxicity studies are not compliant (see Appendix C, sections 3-4 of this decision).

Therefore, long-term toxicity study on aquatic invertebrates instead of acute test is required.

The examination of the available information or adaptations and the tests design are addressed respectively in Appendix C, Section 3. Your comments to the draft decision are also addressed in Appendix C, Section 3.

2. Ready biodegradability

Ready biodegradability is a standard information requirement at Annex VII of REACH.

You have provided the following studies:

i. Study according to OECD TG 301 F; GLP compliant; [redacted] 2010; outcome 72.1% degradation in 28-d; test material: Turpentine Oil CAS 8006-64-2, EC 232-350-7
ii. Study according to OECD TG 301 F; GLP compliant [redacted] 2010; outcome 71.7% degradation in 28-d; test material: Turpentine Oil CAS 8006-64-2, EC 232-350-7
iii. Study according to OECD TG 301 D; GLP compliant; [redacted] 2010; outcome 76% degradation in 28-d; test material: β-pinene, CAS 127-91-3, EC 204-872-5
iv. Study according to OECD TG 301 D; GLP compliant; [redacted] 2016; outcome 73.8 % degradation in 28 d; test material: Delta-3-carene, EC 236-719-3, CAS 13466-78-9
v. Study according to OECD TG 301 D; GLP compliant [redacted] 2010; outcome 80 % degradation in 28 d; test material: Dipentene multi-constituent, CAS 138-86-3
vi. Study according to OECD TG 301 D; GLP compliant; [redacted] 2010; outcome 76% degradation in 28 d; test material: Myrcene, CAS 123-35-3
vii. Study according to OECD TG 301 D; GLP compliant; [redacted] 2011; outcome 81 % degradation in 28 d; test material: Terpinolene, CAS 586-62-9

Furthermore, in the endpoint summary you have provided results from QSAR predictions for the constituents of the Substance (BIOWIN), and references to publications.

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

Reliable information on all relevant constituents or blocks of similar constituents (> 0.1% (w/w)) is required for the purpose of PBT/vPvB assessment (ECHA Guidance R.11, Section R.11.4.2.2).

Studies i-vii
The ready biodegradability tests, such as OECD TG 301 or 310, are intended for pure substances and are generally not applicable for complex compositions containing different types of constituents, like UVCBs. For an UVCB substance with constituents of variable properties, observed biodegradation may represent the biodegradation potential of only some of the constituents (ECHA Guidance R.11, Section R.11.4.2.2).

Studies (i), (ii), and (v) listed above were conducted with a multi-constituent or UVCB substance. Study (iii) was conducted with [redacted] (Block 1), study (iv) with [redacted] (Block 2), study (vi) with [redacted] (Block 3), and study (vii) with [redacted] (Block 3).

Therefore, studies (i), (ii), and (v) are considered to cover the whole Substance but as the biodegradation may be related only for some constituents the studies do not allow assessment of ready biodegradability of each relevant constituent.

Information provided in endpoint summary
To document that the information on constituents or blocks of constituents is reliable, you must provide robust study summaries including detailed summaries of the objectives, methods, results and conclusions of a full study report. They must provide sufficient information to make an independent assessment of the study (Articles 3(28) and 10(a)(vii) to REACH).

You have provided results from (Q)SAR model and from publications for some of the constituents of the Substance.

Regarding the (Q)SAR results provided under the endpoint summary, as described in the Appendix on Reasons common to several requests (2) above in this decision your adaptation does not comply with the general rules of adaptation as set out in Annex XI, Section 1.3.

Similarly, you have not provided robust study summaries of the studies from publications that are referred in the endpoint summary. Therefore reliability of the studies cannot be assessed, and they cannot be considered to provide reliable information on any of the constituents or block of constituents.

Based on the results of the experimental studies above and taking into account the test material used in the studies, you have only provided reliable information for the constituents of Blocks 1-3. There is no reliable biodegradation screening information to cover Blocks 4-9.

Therefore, the provided studies do not fulfil the information requirement.

Test material

The Block 6 constituents meet the screening criteria for B and vB and T as described in the Appendix on Reasons common to several requests (3). For the PBT assessment further information must be generated with Block 6 as it can be considered to be a worst case among Blocks 4-9 for assessing the biodegradation in relation to PBT assessment.

In your comments to the draft decision, you indicate that any further biodegradation testing should be part of tiered testing strategy that follows the standard approach in Chapter R.11.4.1 of ECHA Guidance R.11 (please, see Appendix on Reasons common to several requests, Section 3). In the strategy outlined in your comments, you propose to start with the analysis and determination of representative constituents or groups of constituents from Block 6 and you propose to continue then by conducting the requested ready biodegradation test with Block 6 as a whole or individual constituents/groups of constituents.

ECHA acknowledges your agreement to conduct the requested test.

Study design

The test guidelines OECD TG 301 C, D, and F apply to poorly soluble, adsorptive and volatile substances.

Appendix B: Reasons to request information required under Annex VIII of REACH

1. Justification for an adaptation of a Short-term repeated dose toxicity (28 days) based on the results of the Sub-chronic toxicity study (90 days)

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 provided an adaptation according to Annex XI, Section 1.2. in your dossier. Your adaptation is described in the Appendix C, Section 1 of this document.

We have assessed this information. For the reasons presented in the Appendix on Reasons common to several requests and in Appendix C, Section 1 of this document, your adaptation is not accepted and the information you provided does not fulfil the information requirement.

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.

2. Long-term toxicity testing on fish

Short-term toxicity testing on fish is a standard information requirement in Section 9.1.3 of Annex VIII to REACH. However, Column 2 of Annex VIII, Section 9.1.3. requires that Long-term toxicity testing on fish (Annex IX, section 9.1.6) must be considered under Annex VIII if the substance is poorly water soluble.

Poorly water soluble substances require longer time to reach steady-state conditions. Hence, the short-term tests may not give a true measure of toxicity for poorly water-soluble substances. Therefore, long-term toxicity study on fish must be conducted instead of the acute test (Annex VIII, Section 9.1.3. in conjunction with Annex IX, Section 9.1.6.).

Some of the constituents of the Substance are poorly water soluble and the provided long-term aquatic toxicity studies are not compliant (see Appendix C, sections 3-4 of this decision).

Therefore, long-term toxicity study on aquatic invertebrates instead of acute test is required.

The examination of the available information or adaptations and the tests design are addressed respectively in in Appendix C, Section 4. Your comments to the draft decision are also addressed in Appendix C, Section 4.

3. **Simulation testing on ultimate degradation in surface water ;**
4. **Soil simulation testing ;**
5. **Sediment simulation testing ;** and
6. **Identification of degradation products**

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

This information requirement is triggered in case the chemical safety assessment indicates the need for further degradation investigations, such as if the substance is a potential PBT or vPvB (Section 4, Annex I and Sections 2.1 and 3.2, Annex XIII to REACH; see also ECHA Guidance R.11, Section R.11.4). This is the case if the substance, a constituent, an impurity or a transformation/degradation product meets the following criteria:

- the Substance is potentially persistent or very persistent (P/vP)
  - potentially P/vP if it is not readily biodegradable (i.e., <60/70% degradation in 28 days);
- the Substance is potentially bioaccumulative or very bioaccumulative (B/vB)
  - log Kow > 4.5;

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

- the Substance is potentially P/vP since the information provided on ready biodegradation does not cover all the relevant constituents including Block 6 as described in detail under Appendix A Section 2. Ready biodegradation and Appendix on Reasons common to several requests.
- In your CSA you indicate the following information on Block 6 constituents considered the most relevant for PBT assessment; inherently biodegradable (QSAR), data on number of [redacted] of which pass level of 60% was reach for some after 60 days (Jenner et al. 2011 a publication for which there is no robust study summary available as described in Appendix A.) and estimated half-lives for Block 6 of 150 days in water, and limit of 300 days in sediment and in soil); and
- the Substance is potentially B/vB since the Log Kow of some constituents are above the threshold of 4.5 (Log Kow > 6.3 for Block 6)

The available screening information in your dossier indicates that the constituents of Block 6 may have PBT/vPvB properties. However, this is not sufficient to conclude on the P/vP properties of the Substance including the relevant constituents, therefore further testing is required.

The examination of the available information or adaptations, as well as the selection of the requested tests and the tests design are addressed respectively in Appendix C, Sections 5-8. Your comments to the draft decision are also addressed in Appendix C, Section 5-8.

7. **Bioaccumulation in aquatic species**

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

Annex XIII Section 2.1 requires that the registrant shall generate relevant additional information as set out in Section 3.2 of Annex XIII if the result from the screening tests required under Annexes VII and VIII, or other information, indicate that the substance may have PBT or vPvB properties (see also ECHA Guidance R.11, Section R.11.4).

As described above in Appendix on Reasons common to several requests (3), 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.

Furthermore, information on biodegradation is currently incomplete and therefore it is not possible to evaluate the persistency of the Substance (see Appendix C, section 5-8 of this decision).

The examination of the available information or adaptations, as well as the selection of the requested tests and the tests design are addressed respectively in Appendix C, Section 9. Your comments to the draft decision are also addressed in Appendix C, Section 9.

Appendix C: Reasons to request information required under Annex IX of REACH

1. Sub-chronic toxicity study (90-day)

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

You have adapted the standard information requirement according to Annex XI, Section 1.2 of REACH (weight of evidence).

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

Block 1 – [redacted] block:

- Study i. – 90-day repeated dose toxicity (OECD TG 413) conducted in rats and mice via the inhalation route with [redacted])

Block 2 – [redacted] block:

No information provided

Block 3 – [redacted] block:

- Study ii. – Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422) conducted in rats via the oral route with [redacted] 2014);

Block 4 – [redacted] block:

- Study iii. - Information from a 6-month repeated-dose toxicity study conducted via the inhalation route with [redacted] (Food and cosmetics toxicol. 17 (4), 1979);
- Study iv. - Information from a 14-week repeated-dose toxicity study conducted via the oral route with [redacted]) (Butterworth, 1975).

Block 5 – [redacted] block:

- Study v. – Information from a 90-day repeated-dose toxicity study conducted in rats via the inhalation route with [redacted], 1981).

Block 6 – [redacted] block:

No information provided

Block 7 – [redacted] block:

- Study vi. – Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422) conducted in rats via the oral route with [redacted] 2010);
- Study vii. – 90-day repeated-dose toxicity study (OECD TG 408) conducted in rats via the oral route with [redacted] 1997);
- Study viii. – 15-week and 1-year repeated dose toxicity studies conducted in rats via the oral route with [redacted] (Hagan, 1967).

Block 8 [redacted] block:

- Study ix. – Disseminated information from a 28-day repeated dose toxicity study (OECD TG 407) conducted in rats with [redacted] This study is included in the registration dossier of [redacted]

Block 9 – [redacted] block:

- Study x. – Disseminated information from a 90-day repeated dose toxicity study (OECD TG 413) conducted in rats via the inhalation route with [redacted] This study is included in the registration dossier of [redacted]
- Study xi. – Disseminated information from a 90-day repeated dose toxicity study (OECD TG 413) conducted in rats via the inhalation route with [redacted] This study is included in the registration dossier of [redacted]
- Study xii. – Disseminated information from a neurotoxicity study (OECD TG 424) conducted in rats via the inhalation route with [redacted]). This study is included in the registration dossier of [redacted]

Based on the presented sources of information, you argue that the available data gives sufficient information to conclude on the sub-chronic toxicity of the Substance because "*the most abundant constituents of the Substance are presented by existing, reliable repeated dose toxicity data and information that is available on minor constituents indicates that serious adverse toxicological effects following repeated exposure are not expected for these types of chemical structures*".

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

Annex XI, section 1.2 requires that adequate and reliable documentation is provided to describe your weight of evidence approach.

Relevant information that can be used to support weight of evidence adaptation for the information requirement of Section 8.6.2 includes similar information that is produced by the OECD TGs 408 or 413. The OECD TGs 408/413 enable the characterization of adverse effects following repeated daily oral/inhalation exposure to a test chemical for 90 days covering post-weaning maturation and growth into adulthood of the test animals. These studies provide information on the major toxic effects, indicate target organs and the possibility of accumulation of test chemical.

In a constituent-based approach, the hazard assessment is performed by integrating relevant and reliable information on each relevant constituent/block of constituents included in the composition of the Substance. In order to be adequate for classification and labelling/risk assessment, the overall set of information must address the properties of all the constituents of the Substance and provide a similar level of information to the one obtained from the relevant OECD TGs.

With respect to repeated dose toxicity we have identified the following issue(s):

1. Relevance of the information provided

a. Formation of the blocks of constituents

For the reasons presented in Section A.1 of the Appendix on Reasons common to several requests, the coverage of the range of constituents of the Substance considered in your adaptation is incomplete.

b. Missing information for some blocks

Section A.2.a of the Appendix on Reasons common to several requests identifies deficiencies in the coverage of the identified blocks of constituents. These deficiencies apply to the blocks of constituents 2 and 6 for this weight of evidence approach.

c. Access to the information

Section A.2.b of the Appendix on Reasons common to several requests identifies deficiencies in establishing legitimate access to the information used to address the properties of blocks of constituents. These deficiencies apply to the studies ix., x., xi. and xii. used in this weight of evidence approach.

d. Reporting of the information in the dossier

Section A.2.c of the Appendix on Reasons common to several requests identifies deficiencies in the reporting of information used to address the properties of blocks of constituents. These deficiencies apply to the studies iii., iv. and v. used in this weight of evidence approach.

2. Reliability of the information provided: Exposure period duration shorter than 90 days

The OECD TGs 408/413 provide information on the systemic toxicity of the Substance/all the constituents of the Substance after exposure for a period of 90 days covering post-weaning maturation and growth into adulthood of the test animals is required.

While the source(s) of information ii. and vi. provide relevant information on the adverse effects following repeated daily exposure to the test item, these sources of information have the following deficiencies affecting their reliability.

Relevant information that can be used to support weight of evidence adaptations for the information requirement of Annex IX, Section 8.6.2 includes similar information to the one produced by testing the Substance according to the OECD TGs 408 or 413. The OECD TGs 408/413 enable the characterization of adverse effects following repeated daily oral/inhalation exposure to a test chemical for 90 days covering post-weaning maturation and growth into adulthood of the test animals. These studies provide information on the major toxic effects, indicate target organs and the possibility of accumulation of test chemical.

Studies ii. and vi. are combined repeated dose toxicity study with the reproduction and developmental toxicity screening tests. These studies have been conducted in accordance

with OECD TG 422. The exposure duration of male and female animals in study ii. is 42 days and 56 days, respectively. The exposure duration of male animals in study vi. is 5 weeks. The exact duration of the exposure period for pregnant females in study vi. is not clearly reported in the robust study summary included in the dossier but lasted until post-natal day 7.

The studies ii. and vi. do not have the required exposure duration of 90 days as required in OECD TG 408. You have not provided a justification on why a shorter exposure duration would not impact your conclusions on the intrinsic properties of the Substance. Therefore, these sources of information are only partly reliable and contribute a low weight for your weight of evidence adaptation for sub-chronic toxicity.

3. Integration and weighing of the lines of information

The ECHA Guidance R.4 specifies that a WoE adaptation must involve an assessment of the relative values / weights of the several pieces of available information. This assessment must consider for instance the relevance and reliability of the information, the consistency of results/data, the nature and severity of effects. The lines of evidence should be integrated considering their relative values or weights in order to draw a conclusion.

a. Missing assessment of the relative weight and adequacy of the data provided

In your chemical safety report you provided a set of independent sources of information informing on the properties of constituents/blocks of constituents of the Substance. This information has been generated between 1967 and 2014 from testing different conditions. The species of the animals used, the exposure duration, the routes and modes of administration of the test materials vary among the lines of information. You conclude that "*the most abundant constituents of the Substance are presented by existing, reliable repeated dose toxicity data and information that is available on minor constituents indicates that serious adverse toxicological effects following repeated exposure are not expected for these types of chemical structures*".

No critical assessment of their relative weight and of the overall adequacy of the data set in the context of these WoE is included in the documentation of your adaptation.

The integration of the independent sources of information also needs to explain how the use of information obtained from different species and routes is compiled and taken together to come to a conclusion. You have provided information on the toxicokinetic properties of the constituents/blocks of constituents of the Substance in your chemical safety report, including detailed characterisations of the metabolism of these constituents. However you have not reported your assessment of potential toxicokinetic and toxicodynamic interactions between the constituents and the impact of co-exposure to these constituents on the toxicological properties of the Substance.

b. Inconsistency of the information provided for block 7

The consistency of results/data, the nature and severity of effects also need to be addressed in your assessment. When, due to the complexity of the composition of a substance, it is not feasible to fully identify, assess or isolate single constituents the composition of the substance can be divided into blocks. In each block the constituents are structurally similar to such extent that their properties can be predicted to follow a regular predictable pattern.

Studies vi. and vii. inform on the properties of the constituents of the Substance belonging to the block 7 – [redacted]. These studies have been conducted with different substances, i.e. [redacted] and [redacted] respectively. Toxicity to the testis was observed in the high dose group of study vi. The presence of degenerate spermatogenic cells in ducts, moderate to severe seminiferous tubular atrophy and minimal to slight seminiferous tubular vacuolation were seen in all animals dosed with 750 mg/kg bw/day for 5 weeks. No such effects were observed in study vii. despite a longer exposure period of 90 days up to a dose of [redacted] of 900 mg/kg/d.

You have not elaborated on the reasons for and impact of the observation of these discrepancies in the toxicity profiles of these constituents of the same block of [redacted] on your weight of evidence approach.

c. Selection of the key study for block 1

According to Annex I, Section 1.1.4 of the REACH Regulation, "*If there are several studies addressing the same effect, then, having taken into account possible variables (e.g. conduct, adequacy, relevance of test species, quality of results, etc.), normally the study or studies giving rise to the highest concern shall be used to establish the DNELs (...)If the study or studies giving rise to the highest concern are not used, then this shall be fully justified and included as part of the technical dossier, not only for the study being used but also for all studies demonstrating a higher concern than the study being used*".

Study i. has been conducted in two species: rats and mice. A NOAEC of 200 ppm was identified in the part of the study conducted in rats. This dose descriptor was set based on the observation of a reduction in body weight in males and females and mortality of females at higher doses. The investigations conducted in mice identified minimal to moderate hyperplasia in the transitional epithelium of the urinary bladder in animals dosed with more than 100 ppm. A NOAEC of 50 ppm was set for male and female mice on that basis. You have used the investigations in the rat as key study for this block and proceeded with the NOAEC of 200 ppm as the basis for the derivation of a no effect level in your chemical safety assessment. You have indicated that "*the test with rats is assigned as the key study since the EU classification criteria for repeated dose toxicity are based on this test species*".

The investigations conducted in mice identified adverse effects at a lower dose level than those in the rat. You have not established that the transitional epithelium of the urinary bladder observed in mice are not relevant for humans. You have indicated that "*the test with rats is assigned as the key study since the EU classification criteria for repeated dose toxicity are based on this test species*". However Annex I, 3.9.2.5 of the CLP Regulation informs on the non-human data which can be used to determine whether a substance should be classified as for single target organ toxicity after repeated exposure. It states that "*The standard animal studies in rats or mice that provide this information are 28 day, 90 day or lifetime studies (up to 2 years) that include haematological, clinicochemical and detailed macroscopic and microscopic examination to enable the toxic effects on target tissues/organs to be identified*". The results obtained in mice raise a higher concern on the toxicity of [redacted] than those in the rats. Therefore the results obtained in mice can and should be used for your chemical safety assessment for this endpoint and this block.

You have not communicated and documented in a robust and transparent manner your considerations on the relevance, reliability of the individual sources of information. No critical assessment of their relative weight and of the overall adequacy of the data set in the context

of these WoE is included in the documentation of your adaptations. Therefore your WoE adaptations are not supported by adequate documentation.

Your comments on this endpoint are addressed under sections 1, 3 and 5 of the Appendix on Reasons common to several requests above.

4. Conclusion

As explained in the assessment above and in the general section above, it is not possible to conclude, based on any source of information alone or considered together, whether the Substance has or has not the particular hazardous properties foreseen to be investigated in OECD TG 408/413 studies. Therefore your adaptation is rejected and the information requirement is not fulfilled.

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

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 although the information indicate that human exposure to the Substance by the inhalation route is possible, there is no concern for severe local effects following inhalation exposure. Therefore the sub-chronic toxicity study must be performed according to the OECD TG 408, in rats and with oral administration of the Substance.

2. Pre-natal developmental toxicity study in one species

You have adapted the standard information requirement according to Annex XI, Section 1.2 of REACH (weight of evidence).

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

Block 1 – [redacted] block:

- Study i. – [redacted]-sponsored study to investigate reproductive and developmental toxicity in rats via the oral route with oil of nutmeg ([redacted] 1973a);
- Study ii. – [redacted]-sponsored study to investigate reproductive and developmental toxicity in mouse via the oral route with oil of nutmeg ([redacted] 1973b);
- Study iii. – [redacted]-sponsored study to investigate reproductive and developmental toxicity in hamster via the oral route with oil of nutmeg ([redacted] 1973c).

Block 2 – [redacted] block:
No information provided

Block 3 – [redacted] block:

- Study iv. – Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422) conducted in rats via the oral route with [redacted] 2014);

Block 4 – [redacted] block:
No information provided

Block 5 – [redacted] block:
No information provided

Block 6 – [redacted] block:
No information provided

Block 7 – [redacted] block:

- Study v. – Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422) conducted in rats via the oral route with [redacted] 2010);
- Study vi. – Disseminated information from a pre-natal developmental toxicity study (OECD TG 414) conducted in rats with [redacted]). This study is included in the registration dossier of [redacted]

Block 8 – [redacted] block:

- Study vii. – Pre-natal developmental toxicity study (OECD TG 414) conducted in rats via the oral route with [redacted] 1992a);
- Study viii. – dose-range finding study for a pre-natal developmental toxicity study (OECD TG 414) conducted in rats via the oral route with [redacted] 1992b).

Block 9 – [redacted] block:

- Study ix. – Disseminated information from a pre-natal developmental toxicity study (OECD TG 414) conducted via the inhalation route with [redacted]. This study is included in the registration dossier of [redacted]
- Study x. – Disseminated information from a two-generation reproductive toxicity study (OECD TG 416) conducted via the inhalation route with [redacted] This study is included in the registration dossier of [redacted]

Based on the presented sources of information, you argue that the available data gives sufficient information to conlude on the pre-natal developmental toxicity of the Substance because *"the most abundant constituents of the Substance are presented by existing, developmental toxicity data and information that is available on minor constituents indicates that developmental effects are not expected for these types of chemical structures"*.

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

Annex XI, section 1.2 requires that adequate and reliable documentation is provided to describe your weight of evidence approach.

In a constituent-based approach, the hazard assessment is performed by integrating relevant and reliable information on each relevant constituent/block of constituents included in the composition of the Substance. In order to be adequate for classification and labelling/risk assessment, the overall set of information must address the properties of all the constituents of the Substance and provide a similar level of information to the one obtained from the relevant OECD TGs.

Relevant information that can be used to support weight of evidence adaptation for information requirement of Section 8.7.2 at Annex IX includes similar information that is produced by the OECD TG 414. The OECD TG 414 provides information on the pre-natal developmental toxicity of the Substance. This study investigates the potential of the test item to cause gross, skeletal and visceral malformations and variations, alterations of foetal body weights, maternal toxicity and maintenance of pregnancy.

With respect to pre-natal developmental toxicity, we have identified the following issue(s):

1. Relevance of the information provided

    a. Formation of the blocks of constituents

For the reasons presented in Section A.1 of the Appendix on Reasons common to several requests, the coverage of the range of constituents of the Substance considered in your adaptation is incomplete.

    b. Missing information for some blocks

Section A.2.a of the Appendix on Reasons common to several requests identifies deficiencies in the coverage of the identified blocks of constituents. These deficiencies apply to the blocks of constituents 2, 4, 5 and 6 for this weight of evidence approach.

    c. Access to the information

Section A.2.b of the Appendix on Reasons common to several requests identifies deficiencies in establishing legitimate access to the information used to address the properties of blocks of constituents. These deficiencies apply to the studies vi, ix. and x. used in this weight of evidence approach.

2. Reliability of the information provided

The OECD TG 414 provides information on the pre-natal developmental toxicity of the Substance. This study investigates the potential of the test item to cause gross, skeletal and visceral malformations and variations, alterations of foetal body weights, maternal toxicity and maintenance of pregnancy.

While the source(s) of information i., ii. iii., iv. and v provide relevant information on the adverse effects following repeated daily exposure to the test item, these sources of information have the following deficiencies affecting their reliability.

a. Scope of investigations of studies iv. and v.

Relevant information that can be used to support weight of evidence adaptations for the information requirement of Annex IX, Section 8.7.2 includes similar information to the one produced by testing the Substance according to the OECD TG 414. The OECD TG 414 provides information on the pre-natal developmental toxicity of the Substance. This study investigates the potential of the test item to cause gross, skeletal and visceral malformations and variations, alterations of foetal body weights, maternal toxicity and maintenance of pregnancy.

Studies iv. and v. have been conducted according to the OECD TG 422.

Screening studies for reproductive/developmental toxicity conducted according to the OECD TG 421/422 such as studies iv. and v. investigate peri-postnatal development of pups up to postnatal day 4. However these studies do not inform on the potential of the substances tested to cause skeletal and visceral malformations and variations. Therefore, these sources of information are only partly reliable and must be accorded a low weight for your weight of evidence adaptation for pre-natal developmental toxicity.

b. Selection of the test doses

The OECD TG 414 indicates that "*unless limited by the physical/chemical nature or biological properties of the test chemical, the highest dose should be chosen with the aim to induce some developmental and/or maternal toxicity (clinical signs or a decrease in body weight) but not death or severe suffering*". The OECD TG 414 also sets a limit dose of 1000 mg/kg/d.

The studies i., ii. and iii. have been conducted with the analogue substance oil of nutmeg. The composition of the test material is reported in the technical dossier: "*Essential oil consisting predominantly* [redacted] The test doses used in the studies are:

- Study i.: 0/3/56/260 mg/kg/d
- Study ii.: 0/3/26/120/560 mg/kg/d
- Study iii.: 0/6/28/130/600 mg/kg/d

The information from studies i., ii. and iii. is used in your weight of evidence to address the properties of the constituents of the [redacted] block. These substances are the main constituents of the Substance with a typical concentration of [redacted] % and a concentration ranging between [redacted] %. The composition of the test material used in these three studies includes [redacted] which are members of the [redacted] block of constituent. The concentration of these constituents in the test article is of [redacted] % for [redacted] and [redacted] % for [redacted]. Based on the test doses used in the studies, [redacted] and [redacted] were tested at the following concentrations in the high dose groups of the different studies:

Study i.: [redacted] 0.25 x 260 = 65 mg/kg/d / [redacted] 0.18 x 260 = 47 mg/kg/d
Study ii.: [redacted] 0.25 x 560 = 140 mg/kg/d / [redacted] 0.18 x 560 = 101 mg/kg/d
Study iii.: [redacted] 0.25 x 600 = 150 mg/kg/d / [redacted] 0.18 x 600 = 108 mg/kg/d

No information on the selection of the test doses used in these studies is included in your dossier. Similar information to the one produced by testing the Substance according to the OECD TG 414 is expected as part of a weight of evidence approach to derive reliable conclusion on the properties of the Substance. According to the information provided in table

1.2.2 in your Chemical Safety Report, the concentration of [redacted] in the composition of the Substance ranges from [redacted]%, and the concentration of [redacted] in the Substance ranges from [redacted]%. The OECD TG 414 sets a limit dose of 1000 mg/kg/d. Therefore, should the Substance be tested up to the highest dose, i.e. the limit dose, in an OECD TG 414 study, the animals would be exposed to 100-850 mg/kg/d of [redacted] and 0-400 mg/kg/d of [redacted] The test doses used in the studies i.-iii. inform on the hazardous properties of combined exposure to [redacted] and [redacted] at much lower levels than expected from a study conducted with the Substance. Therefore, these sources of information are only partly reliable and must be accorded a low weight for your weight of evidence adaptation for pre-natal developmental toxicity.

3. Integration and weighing of the lines of information

ECHA Guidance R.4 specifies that a WoE adaptation must involve an assessment of the relative values / weights of the several pieces of available information. This assessment must consider for instance the relevance and reliability of the information, the consistency of results/data, the nature and severity of effects. The lines of evidence should be integrated considering their relative values or weights in order to draw a conclusion.

In your chemical safety report you provided a set of independent sources of information informing on the properties of constituents/blocks of constituents of the Substance. This information has been generated between 1973 and 2014 from testing under different conditions. The species of the animals used, the exposure duration, the routes and modes of administration of the test materials vary among the lines of information. You conclude that *"the most abundant constituents of the Substance are represented by existing pre-natal developmental toxicity data and information that is available on minor constituents indicates that developmental effects are not expected for these types of chemical structures".*

No critical assessment of their relative weight and of the overall adequacy of the data set in the context of these WoE is included in the documentation of your adaptation.

You have provided information on the toxicokinetic properties of the constituents/blocks of constituents of the Substance in your chemical safety report, including detailed characterisations of the metabolism of these constituents. However, you have not reported your assessment of potential toxicokinetic and toxicodynamic interactions between the constituents and the impact of co-exposure to these constituents on the toxicological properties of the Substance.

You have not communicated and documented in a robust and transparent manner your considerations on the relevance, reliability of the individual sources of information. No critical assessment of their relative weight and of the overall adequacy of the data set in the context of these WoE is included in the documentation of your adaptations. Therefore your WoE adaptations are not supported by adequate documentation.

Your comments on this endpoint are addressed under sections 1, 3 and 5 of the Appendix on Reasons common to several requests above.

4. Conclusion

As explained in the assessment above, it is not possible to conclude, based on any source of information alone or considered together, whether the Substance has or has not the particular hazardous properties foreseen to be investigated in an OECD TG 414 study. Therefore your

adaptation is rejected and the information requirement is not fulfilled.

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

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

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

We understand that you intend to fulfil the standard information requirement for a long-term toxicity testing on aquatic invertebrates with the Substance by using QSAR predicted data for the constituents of the Substance under the rules set in Annex XI, Section 1.3.

As described in the Appendix on Reasons common to several requests (2), the adaptation you provided does not fulfil the criteria specified in Annex XI, Section 1.3. and it is therefore rejected.

In your comments to the draft decision, you disagree with the request in the decision to conduct long-term toxicity test on aquatic invertebrates using the whole registered UVCB substance and you ask to remove this request from the final decision.

More specifically, you claim that

- Any further ecotoxicity data would not change the environmental hazard classification and labelling as the registered substance is already classified as Aquatic Chronic 1 (H410: Very toxic to aquatic life with long lasting effects)
- Any further ecotoxicity data with the registered UVCB substance would not provide any useful information for the risk assessment as the PNECs for the substance have been derived for the relevant blocks within the registered substance
- Any further ecotoxicity data with the registered UVCB substance would not provide any useful information for the PBT assessment as the potential need to refine T-assessment would be based on the assessment of individual blocks of the substance.

In your comments to the draft decision, you propose that this standard information requirement is fulfilled by submission of QSAR estimations with appropriate QMRF/QPRF documentation. However, you also conclude that you potentially see a possible need for further ecotoxicity testing with Block 6 constituents as part of the tiered testing strategy once the P/vP and B/vB status of Block 6 has been determined.

ECHA acknowledges your intention to attach appropriate QMRF/QPRF documentations in your dossier update to support the QSAR adaptations. ECHA agrees that no further ecotoxicity data using the whole registered UVCB substance are needed for the environmental hazard classification and labelling.

ECHA also agrees that potential further ecotoxicity testing for the PBT assessment, if necessary, is more appropriate with the Block 6 constituents than the whole UVCB substance. However, regarding the aquatic risk assessment, ECHA considers that further long-term ecotoxicity data are needed for the reliable PNEC derivation in order to cover those

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

constituents/groups of constituents that are poorly water soluble. Based on the information in your dossier, Block 6 constituents are poorly water soluble.

Based on the above, ECHA has modified the decision and has indicated that the requested long-term ecotoxicity study shall be conducted with either the whole registered UVCB substance or with the Block 6 constituents of the Substance.

Study design

The Substance and especially the Block 6 constituents of the Substance are difficult to test due to the low water solubility and/or adsorptive properties of some of its constituents. OECD TG 211 specifies that for difficult to test substances, the OECD Guidance 23 is to be followed. To get reliable results, the substance properties need to be considered when performing the test, in particular with regard to the test design; including exposure system, test solution preparation, and sampling. OECD GD 23 (Table 1) describes how to approach testing difficulties related to a specific property of the substance. You may use the approaches described in OECD GD 23 or other approaches if more appropriate for your substance. The approach selected must be justified and documented.

Due to the substance properties it may be difficult to achieve and maintain the exposure concentrations. Therefore, you have to demonstrate that the concentration of the substance is stable throughout the test (i.e. measured concentrations remains within 80-120% of the nominal concentration). If it is not possible to demonstrate the stability, you must express the effect concentration based on measured values as described in the applicable test guideline. In case a dose-response relationship cannot be established (no observed effects), you must demonstrate that the test solution preparation method applied was sufficient to maximise the concentration of the Substance in the test solution.

The Substance is a UVCB comprising constituents with different properties. OECD GD 23 describes various techniques appropriate for aquatic toxicity testing of UVCBs. If you select the Water Accommodated Fraction (WAF) approach, you must in addition to the above:

- Provide full description of the method used to prepare the WAF (including loading, stirring speed and duration, method to separate any remaining non-dissolved test chemical components, among others);
- Prepare WAFs separately for each dose level (loading rate);
- Prepare WAFs in a consistent manner (including e.g. the stirring methods in all test solutions preparations);
- Choose/develop appropriate analytical methods for your substance, and conduct chemical analysis of the test medium to track the constituents including the changes in their ratios throughout the testing.

4. Long-term toxicity testing on fish

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

We understand that you intend to fulfil the standard information requirement for a long-term toxicity testing on fish with the Substance by using QSAR predicted data for the constituents of the Substance under the rules set in Annex XI, Section 1.3.

As described in the Appendix on Reasons common to several requests the adaptation you provided does not fulfil the criteria specified in Annex XI, Section 1.3. and it is therefore rejected.

In your comments to the draft decision, you disagree with the request in the decision to conduct long-term toxicity test on fish using the whole registered UVCB substance and you ask to remove this request from the final decision.

More specifically, you claim that

- Any further ecotoxicity data would not change the environmental hazard classification and labelling as the registered substance is already classified as Aquatic Chronic 1 (H410: Very toxic to aquatic life with long lasting effects)
- Any further ecotoxicity data with the registered UVCB substance would not provide any useful information for the risk assessment as the PNECs for the substance have been derived for the relevant blocks within the registered substance
- Any further ecotoxicity data with the registered UVCB substance would not provide any useful information for the PBT assessment as the potential need to refine T-assessment would be based on the assessment of individual blocks of the substance.

In your comments to the draft decision, you propose that this standard information requirement is fulfilled by submission of QSAR estimations with appropriate QMRF/QPRF documentation. However, you also conclude that you potentially see a possible need for further ecotoxicity testing with Block 6 constituents as part of the tiered testing strategy once the P/vP and B/vB status of Block 6 has been determined.

ECHA acknowledges your intention to attach appropriate QMRF/QPRF documentations in your dossier update to support the QSAR adaptations. ECHA agrees that no further ecotoxicity data using the whole registered UVCB substance are needed for the environmental hazard classification and labelling.

ECHA also agrees that potential further ecotoxicity testing for the PBT assessment, if necessary, is more appropriate with the Block 6 constituents than the whole UVCB substance. However, regarding the aquatic risk assessment, ECHA considers that further long-term ecotoxicity data are needed for the reliable PNEC derivation in order to cover those constituents/groups of constituents that are poorly water soluble. Based on the information in your dossier, Block 6 constituents are poorly water soluble.

Based on above, ECHA has modified the decision and has indicated that the requested long-term ecotoxicity study shall be conducted with either the whole registered UVCB substance or with the Block 6 constituents of the Substance.

Study design

OECD TG 210 specifies that for difficult to test substances, the OECD GD 23 is to be followed. The Substance and especially the Block 6 constituents of the Substance are difficult to test as explained above and therefore you must follow the study conditions as described in the study design section under request C.4.

5. Simulation testing on ultimate degradation in surface water

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

Under Annex XIII, you must assess the PBT/vPvB properties of the relevant constituents of the Substance. Therefore, the persistence of each relevant constituent present in concentrations at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable must be assessed.

Regarding the (Q)SAR results provided under the endpoint summary, this has to be rejected for the reasons described in the Appendix on Reasons common to several requests (2) above in this decision.

You have further sought to adapt this information requirement based on Annex IX, Section 9.2, Column 2. You justified the adaptation by stating that "*the study does not need to be conducted because the substance is readily biodegradable*".

In your case, the identified Block 6 constituents meet the screening criteria for B and vB and T as described in the Appendix on Reasons common to several requests (3). There is no reliable information available to characterise biodegradability/persistency of this block of constituents as the provided information for the ready biodegradability of the constituents/blocks of the Substance do not fulfil the standard information requirement of Annex VII, Section 9.2. as described in the Appendix A, Section 2 above.

Taking into account the above, no definitive conclusion can be reached for the P/vP assessments. Therefore, your CSA does not rule out the need to investigate further the degradation of the substance and its degradation products for the purpose of the PBT/vPvB assessment.

Therefore, your adaptation does not fulfil the information requirement.

In your comments to the draft decision, you agree that further testing on the persistence of the constituents of Block 6 may be appropriate and you agree that the main need for this further testing specifically on Block 6 constituents is in relation to the PBT and vPvB assessment (please, see Appendix on Reasons common to several requests, Section 3).

You propose first to conduct the ready biodegradation test requested in Appendix A, Section 2 of this decision. If based on this test Block 6 is shown to be not readily biodegradable, you conclude that a simulation test on ultimate degradation in surface water using Block 6 constituents/groups of constituents needs to be conducted.

ECHA agrees with your comment that the simulation test on ultimate degradation in surface water needs to be conducted if the constituent(s) of Block 6 are not readily biodegradable. Your comment is in line with the strategy described in Appendix F below.

Test material

As explained in the Appendix on Reasons common to several requests, in order to clarify the PBT concern you must test the block 6 constituents for the purpose of PBT assessment.

Study design

Under Annex XIII, the information must be based on data obtained under conditions relevant for the PBT/vPvB assessment. Therefore:

- You must perform the OECD TG 309 test, by following the pelagic test option with natural surface water containing approximately 15 mg dw/L of suspended solids (acceptable concentration between 10 and 20 mg dw/L) (ECHA Guidance R.11).

- You must perform the test at the temperature of 12 °C, the average environmental temperature for the EU (ECHA Guidance R.16, Table R.16-8). Performing the tests at this temperature is in line with the applicable test conditions of the OECD TG 309.

Non-extractable residues (NER) must be quantified 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).

6. Soil simulation testing

Soil simulation testing is a standard information requirement at Annex IX of REACH for substances with a high potential for adsorption to soil.

Under Annex XIII, you must assess the PBT/vPvB properties of the relevant constituents of the Substance. Therefore, the persistence of each relevant constituent present in concentrations at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable must be assessed.

Regarding the (Q)SAR results provided under the endpoint summary, this has to be rejected for the reasons described in the Appendix on Reasons common to several requests (2) above in this decision.

You have sought to adapt this information requirement based on Annex IX, Section 9.2, Column 2. You justified the adaptation by stating that *"the study does not need to be conducted because the substance is readily biodegradable"*.

In your case the identified Block 6 constituents meet the screening criteria for B and vB and T as described in the Appendix on Reasons common to several requests (3). Block 6 has constituents with low water solubility (0.05 mg/L mg/L), high partition coefficient (log Kow 6.3) and high adsorption coefficient (log Koc 5.4), indicating high adsorptive properties. There is no reliable information available to characterise biodegradability / persistency of this block of constituents as the provided information for the ready biodegradability of the constituents/blocks of the Substance do not fulfil the standard information requirement of Annex VII, Section 9.2. as described in the Appendix A, Section 2 above.

Taking into account the above, no definitive conclusion can be reached for the P/vP assessments. Therefore, your CSA does not rule out the need to investigate further the degradation of the substance and its degradation products for the purpose of the PBT/vPvB assessment.

Therefore, your adaptation does not fulfil the information requirement.

In your comments to the draft decision, you agree that further testing on the persistence of the constituents of Block 6 may be appropriate and you agree that the main need for this

further testing specifically on Block 6 constituents is in relation to the PBT and vPvB assessment (please, see Appendix on Reasons common to several requests, Section 3).

You propose first to conduct the ready biodegradation test requested in Appendix A, Section 2 of this decision and, if based on this test the constituent(s) of Block 6 are shown to be not readily biodegradable, conduct a simulation test on ultimate degradation in surface water requested in Appendix C, Section 5.

In your comments you claim that if the results of the simulation test on ultimate degradation in surface water shows that the constituent(s) of Block 6 meet the criteria for P or vP then no further degradation testing or identification of degradation products will be required as the substance can be concluded to be P or vP.

While you have not provided any endpoint specific comments for the request to conduct the soil simulation test, ECHA understands from your above comment that you agree to conduct soil simulation testing if the constituent(s) of Block 6 are not concluded to be P or vP based on the simulation test on ultimate degradation in surface water.

ECHA agrees with your comment that a further simulation test needs to be conducted if the constituent(s) of Block 6 are not readily biodegradable. If the constituent(s) of Block 6 are shown to be P/vP in the simulation test on ultimate degradation in surface water, no further soil simulation test needs to be conducted.

Test material

As explained in the Appendix on Reasons common to several requests, in order to clarify the PBT concern you must test the block 6 constituents for the purpose of PBT assessment.

Study design

OECD TG 307 is appropriate method for studying the degradation in soil. The requested simulation tests shall be performed under relevant conditions (12°C) and non-extractable residues (NER) must be quantified, for the reasons explained above in section C.4. The biodegradation of each relevant constituent present in concentration at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable, shall be assessed. This can be done simultaneously during the same study.

7. Sediment simulation testing

Sediment simulation testing is a standard information requirement at Annex IX of REACH for substances with a high potential for adsorption to sediment.

Under Annex XIII, you must assess the PBT/vPvB properties of the relevant constituents of the Substance. Therefore, the persistence of each relevant constituent present in concentrations at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable must be assessed.

Regarding the (Q)SAR results provided under the endpoint summary, this has to be rejected for the reasons described in the Appendix on Reasons common to several requests (2) above in this decision.

You have sought to adapt this information requirement based on Annex IX, Section 9.2, Column 2. You justified the adaptation by stating that "*the study does not need to be conducted because the substance is readily biodegradable*".

In your case the identified Block 6 constituents meet the screening criteria for B and vB and T as described in the Appendix on Reasons common to several requests (3). Block 6 has constituents with low water solubility (0.05 mg/L mg/L), high partition coefficient (log Kow 6.3) and high adsorption coefficient (log Koc 5.4), indicating high adsorptive properties. There is no reliable information to characterise biodegradability / persistency of this block of constituents as the provided information for the ready biodegradability of the constituents/blocks of the Substance do not fulfil the standard information requirement of Annex VII, Section 9.2., as described in the Appendix A, Section 2 above.

Taking into account the above, no definitive conclusion can be reached for the P/vP assessments. Therefore, your CSA does not rule out the need to investigate further the degradation of the substance and its degradation products for the purpose of the PBT/vPvB assessment.

Therefore, your adaptation does not fulfil the information requirement.

In your comments to the draft decision, you agree that further testing on the persistence of the constituents of Block 6 may be appropriate and you agree that the main need for this further testing specifically on Block 6 constituents is in relation to the PBT and vPvB assessment (please, see Appendix on Reasons common to several requests, Section 3).

You propose first to conduct the ready biodegradation test requested in Appendix A, Section 2 of this decision and, if based on this test the constituent(s) of Block 6 are shown to be not readily biodegradable, conduct a simulation test on ultimate degradation in surface water requested in Appendix C, Section 5.

In your comments you claim that if the results of the simulation test on ultimate degradation in surface water shows that the constituent(s) of Block 6 meet the criteria for P or vP then no further degradation testing or identification of degradation products will be required as the substance can be concluded to be P or vP.

While you have not provided any endpoint specific comments for the request to conduct sediment simulation test, ECHA understands from your above comment that you agree to conduct sediment simulation testing if the substance is not concluded to be P or vP based on the simulation test on ultimate degradation in surface water and the soil simulation test.

ECHA agrees with your comment that a further simulation test needs to be conducted if the constituent(s) of Block 6 are not readily biodegradable. If the constituent(s) of Block 6 are shown to be P/vP in the simulation test on ultimate degradation in surface water or in the soil simulation test, no further sediment simulation test needs to be conducted.

Test material

As explained in the Appendix on Reasons common to several requests, in order to clarify the PBT concern you must test the block 6 constituents for the purpose of PBT assessment.

Study design

OECD TG 308 is appropriate method for studying the degradation in sediment. The requested simulation tests shall be performed under relevant conditions (12°C) and non-extractable residues (NER) must be quantified, for the reasons explained above in section C.4. The biodegradation of each relevant constituent present in concentration at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable, shall be assessed. This can be done simultaneously during the same study.

8. Identification of degradation products

Identification of the degradation products is a standard information requirement at Annex IX of REACH. Column 2 of Section 9.2.3. of Annex IX further states that the information does not need to be provided if the substance is readily biodegradable.

You have not provided any information on the identification of degradation products but you have concluded the Substance as readily biodegradable.

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

As described in the Appendix A, Section 2 above, the provided information for the ready biodegradability of the constituents/blocks of the Substance do not fulfil the standard information requirement of Annex VII, Section 9.2 and no conclusion can be made on the ready biodegradability of the constituents/blocks of the substance.

Taking into account the above, no definitive conclusion can be reached for the P/vP assessments. Therefore, ECHA concludes that your CSA does not rule out the need to investigate further the degradation of the substance and its degradation products for the purpose of the PBT/vPvB assessment.

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

9. Bioaccumulation in aquatic species

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

Under Annex XIII, you must assess the PBT/vPvB properties of the relevant constituents of the Substance. Therefore, the bioaccumulation of each relevant constituent present in concentrations at or above 0.1% (w/w) or, if not technically feasible, in concentrations as low as technically detectable must be assessed. Alternatively, you would have to justify why you consider these not relevant for the PBT/vPvB assessment.

We understand that you intend to fulfil this standard information requirement by using QSAR predicted data for the constituents of the Substance under the rules set in Annex XI, Section 1.3.

As described in the Appendix on Reasons common to several requests (2) the adaptation you provided does not fulfil the criteria specified in Annex XI, Section 1.3. and it is therefore rejected.

In addition, as described in the Appendix on Reasons common to several requests (3) and Appendix B, the identified Block 6 constituents meet the screening criteria for B and vB

Therefore, there is no reliable information available to characterise bioaccumulation of this block of constituents.

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

In your comments to the draft decision, you agree that, in principle, further testing on the bioaccumulation potential of the constituent(s) of Block 6 may be needed in relation to the PBT and vPvB assessment. You specify that the need to perform a fish bioaccumulation study should be considered only if the substance or its constituent(s) is confirmed as meeting the criteria for P or vP. You also claim that the results from the persistence testing is needed in order to inform the relevant substance (e.g. parent or degradation product) to be used in the bioaccumulation study.

ECHA acknowledges your comment to conduct bioaccumulation study on the constituent(s) of Block 6 or the relevant degradation products if they are shown to meet the criteria for P or vP. ECHA agrees that your proposed tiered testing approach is in-line with Chapter R.11.4.1 of ECHA Guidance R.11.

Test material

As explained in the Appendix on Reasons common to several requests, in order to clarify the PBT concern you must test the block 6 constituents for the purpose of PBT assessment.

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. Therefore, the requested study must be conducted with aqueous exposure. If testing through aquatic exposure is technically not possible, you must provide scientifically valid justification for the infeasibility.

Appendix D: Reasons to request information required under Annex X of REACH

1. Pre-natal developmental toxicity study in a second species

Pre-natal developmental toxicity (PNDT) studies (OECD TG 414) in two species is a standard information requirement under Annex X to REACH.

You have adapted the standard information requirement according to Annex XI, Section 1.2. of REACH (weight of evidence) as described in Appendix C, Section 2.

For the reasons presented in the Appendix on Reasons common to several requests and in Appendix C, Section 2.2.b your adaptation is rejected. Therefore, the information requirement is not fulfilled.

Information on study design

A PNDT study according to the OECD TG 414 study should be performed in the rabbit or rat as the preferred second species, depending on the species tested in the first PNDT study (request C.2 in this decision). The study shall be performed with oral[3] administration of the Substance.

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

Appendix E: Requirements to fulfil when conducting and reporting new tests for REACH purposes

A. Test methods, GLP requirements and reporting

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

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

3. Under Article 10(a)(vi) and (vii) of REACH, all new data generated as a result of this decision must be reported as study summaries, or as robust study summaries, if required under Annex I of REACH. See ECHA Practical Guide on How to report robust study summaries[4].

B. Test material

Before generating new data, you must agree within the joint submission on the chemical composition of the material to be tested (Test Material) which must be relevant for all the registrants of the Substance.

1. *Selection of the Test material(s)*

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

   a) the variation in compositions reported by all members of the joint submission,
   b) the boundary composition(s) of the Substance,
   c) the impact of each constituent/ impurity on the test results for the endpoint to be assessed. For example, if a constituent/ impurity of the Substance is known to have an impact on (eco)toxicity, the selected Test Material must contain that constituent/ impurity.

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

   a) You must report the composition of the Test Material selected for each study, under the "Test material information" section, for each respective endpoint study record in IUCLID.
   b) The reported composition must include the careful identification and description of the characteristics of the Tests Materials in accordance with OECD GLP (ENV/MC/CHEM(98)16) and EU Test Methods Regulation (EU) 440/2008 (Note, Annex), namely all the constituents must be identified as far as possible as well as their concentration. Also any constituents that have harmonised classification and labelling according to the CLP Regulation must be identified and quantified using the appropriate analytical methods,

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

With that detailed information, ECHA can confirm whether the Test Material is relevant for the Substance and whether it is suitable for use by all members of the joint submission.

Technical instructions on how to report the above is available in the manual on How to prepare registration and PPORD dossiers[5].

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

Appendix F: General recommendations when conducting and reporting new tests for REACH purposes

A. Strategy 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 of the block 6 constituents to determine the sequence of the tests needed to reach the conclusion on PBT/vPvB. The guidance provides advice on 1) integrated testing strategies (ITS) for the P, B and T assessments and 2) the interpretation of results in concluding whether the Substance fulfils the PBT/vPvB criteria of Annex XIII.

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

If the block 6 constituents (or the sum of the constituents) exceeding 0.1% (w/w) concentration are shown to be readily biodegradable (with or without fulfilling the 10-d window) there is no need to provide the information requested in Appendix C, sections 5 to 9. However, if you consider that a ready biodegradation study would not provide any valuable information to clarify the P and/or vP status of the block 6 constituents, you may consider starting tiered testing for PBT/vPvB with a simulation study requests in Appendix C, Sections 5, 6, 7 and 8.

You must revise your PBT assessment when the new information is available.

B. Environmental testing for substances containing multiple constituents

Your Substance contains multiple constituents and, as indicated in ECHA Guidance R.11 (Section R.11.4.2.2), you are advised to consider the following approaches for aquatic toxicity testing:

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

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

Appendix G: Procedure

The information requirement for an Extended one-generation reproductive toxicity study (EOGRTS; Annexes IX or X, Section 8.7.3.) is not addressed in this decision. This may be addressed in a separate decision once the information from the Sub-chronic toxicity study (90-day) requested in the present decision is provided, because the results from the 90-day study are needed for the design of the EOGRTS. Similarly the information requirement for a Screening for reproductive/developmental toxicity (Annex VIII, Section 8.7.1.) is not addressed in this decision; as the EOGRTS will cover the same parameters.

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

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

The compliance check was initiated on 30 April 2019.

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

ECHA took into account your comments and amended requests C.3 and C.4, and the deadline.

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 H: List of references - ECHA Guidance[6] and other supporting documents

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 where relevant.

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 where relevant.

Read-across assessment framework (RAAF, March 2017)[7]

RAAF - considerations on multiconstituent substances and UVCBs (RAAF UVCB, March 2017)[7]

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.

Data sharing
Guidance on data-sharing (version 3.1, January 2017), referred to as ECHA Guidance on data sharing in this decision.

[6] https://echa.europa.eu/guidance-documents/guidance-on-information-requirements-and-chemical-safety-assessment
[7] https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across

OECD Guidance documents[8]

Guidance Document on aqueous-phase aquatic toxicity testing of difficult test chemicals – No 23, referred to as OECD GD 23.

Guidance document on transformation/dissolution of metals and metal compounds in aqueous media – No 29, referred to as OECD GD 29.

Guidance Document on Standardised Test Guidelines for Evaluating Chemicals for Endocrine Disruption – No 150, referred to as OECD GD 150.

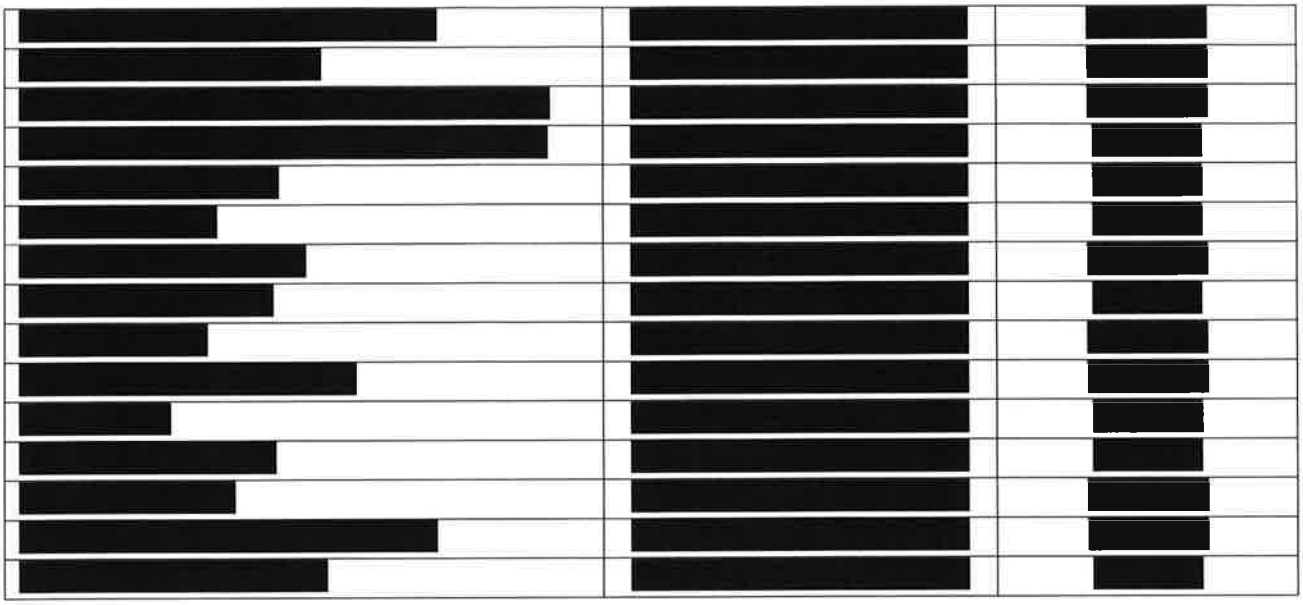
Guidance Document supporting OECD test guideline 443 on the extended one-generation reproductive toxicity test – No 151, referred to as OECD GD 151.

[8] http://www.oecd.org/chemicalsafety/testing/series-testing-assessment-publications-number.htm

Appendix I: Addressees of this decision and the corresponding information requirements applicable to them

You must provide the information requested in this decision for all REACH Annexes applicable to you.

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



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