ECHA
EUROPEAN CHEMICALS AGENCY

~~Confidential~~

Helsinki, 26 May 2021

Addressees
Registrant(s) of JS_445-760-8 as listed in the last Appendix of this decision

Date of submission of the dossier subject to this decision
05/04/2018

Registered substance subject to this decision ("the Substance")
Substance name: N,N''-(methylenedi-4,1-phenylene)bis[N'-octyl]urea
EC number: 445-760-8
CAS number: NS

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

DECISION ON A COMPLIANCE CHECK

Under Article 41 of Regulation (EC) No 1907/2006 (REACH), you must submit the information listed below, by the deadline of ***31 August 2023***.

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

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

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

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

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

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

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

1. Long-term toxicity testing on aquatic invertebrates (Annex IX, Section 9.1.5.; test method: EU C.20./OECD TG 211)

2. Long-term toxicity testing on fish (Annex IX, Section 9.1.6.; test method: OECD TG 210)

3. Soil simulation testing (Annex IX, Section 9.2.1.3.; test method: EU C.23./OECD TG 307) at a temperature of 12°C. Non-extractable residues (NER) must be quantified and a scientific justification of the selected extraction procedures and solvents must be provided.

4. Sediment simulation testing (Annex IX, Section 9.2.1.4.; test method: EU C.24./OECD TG 308) at a temperature of 12°C. Non-extractable residues (NER) must be quantified and a scientific justification of the selected extraction procedures and solvents must be provided.

5. Identification of degradation products (Annex IX, 9.2.3.; test method: using an appropriate test method)

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

- Appendices entitled "Reasons to request information required under Annexes VII to IX 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;

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

For certain endpoints, ECHA requests the same study from registrants at different tonnages. In such cases, only the reasoning why the information is required at lower tonnages is provided in the corresponding Appendices. For the tonnage where the study is a standard information requirement, the full reasoning for the request including study design is given. Only one study is to be conducted; the registrants concerned must make every effort to reach an agreement as to who is to carry out the study on behalf of the other registrants under Article 53 of REACH.

How to comply with your information requirements

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

You must follow the general 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.

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

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

Short-term toxicity testing on aquatic invertebrates is an information requirement under Annex VII to REACH (Section 9.1.1.). Long-term toxicity testing on aquatic invertebrates must be considered (Section 9.1.1., Column 2) if the substance is poorly water soluble.

You have provided:
- OECD TG 202 study conducted with the Substance,
- adaptation to omit information on long-term toxicity on aquatic invertebrates for the Substance.

We have assessed this information and identified the following issue:

Poorly water soluble substances require longer time to reach steady-state conditions. As a result, the short-term tests do not give a true measure of toxicity for this type of substances and the long-term test is required. A substance is regarded as poorly water soluble if, for instance, it has a water solubility below 1 mg/L or below the detection limit of the analytical method of the test material (ECHA Guidance R.7.8.5).

In the provided EU Method A.6 water solubility study (2003), the solubility of the Substance in water was determined to be 4.38 µg/L.

Therefore, the Substance is poorly water soluble and information on long-term toxicity on aquatic invertebrates must be provided. In your comments on the draft decision, you agree that the Substance is poorly soluble and that long-term aquatic toxicity testing is required.

The examination of the information provided and your testing strategy to address this information gap, as well as the selection of the requested test and the test design are addressed under Appendix C.1.

2. Growth inhibition study aquatic plants

Growth inhibition study aquatic plants is an information requirement under Annex VII to REACH (Section 9.1.2.).

You have provided the following information:
i. key study, according to OECD TG 201 ([redacted] 2015)
ii. disregarded study, according to OECD TG 201 ([redacted] 2003)

We have assessed this information and identified the following issues:

To fulfil the information requirement, a study must comply with OECD TG 201 and the requirements of OECD GD 23 (ENV/JM/MONO(2000)6/REV1) if the substance is difficult to test (Article 13(3) of REACH). Therefore, the following specifications must be met:

- the results of algal biomass determined in each flask at least daily during the test period are reported in a tabular form;
- if the test material is tested at the saturation concentration, evidence must be provided that all reasonable efforts have been taken to achieve a saturation concentration, which include:
  1) an analytical method validation report demonstrating that the analytical method is appropriate, and

2) the results of a preliminary experiment demonstrating that the test solution preparation method is adequate to maximize the concentration of the test material in solution;
- a justification for, or validation of, the separation technique is provided, in particular when filtration is used as this technique can cause potential for losses due to adsorption onto the filter matrix.

Your registration dossier provides OECD TG 201 studies showing the following:

- tabulated data on the algal biomass determined daily for each treatment group and control are not reported for neither studies (i) and (ii) in the registration dossier. In the comments on the draft decision you have provided tabulated data for both studies;
- Filtration was used as separation method (glass fiber filter, GB-140, 0.4 µm pore size in study (i) and a filter with 4-7 µm porosity and 0.45 µm in study (ii)). No justification for the separation technique is provided for neither studies (i) and (ii) in the registration dossier. In the comments on the draft decision you argue that in the preliminary experiment for study (i), pre-conditioning of the filters was investigated. No difference was observed in achiving measurable concentrations in the test media when compared to filters which were not pre-conditioned;
- for key study (i) you report a NOEC equal to maximum soluble concentration of test substance in medium. No analytical method validation report or results of a preliminary solubility experiment is provided for neither studies (i) and (ii) in the registration dossier. In the comments on the draft decision you have provided a full study report for study (i) which includes information on the analytical methods and preliminary solubility study. The preliminary solubility study investigated only direct addition method with 100mg/L followed by stirring 24-h and 48-h and separation by glass fiber filter (0.4 µm pore size). These test solution preparation methods resulted in concentrations below detection limit but were still used in prepration of test solution in the test. In the comments on the draft decision, you also state that a spiking technique in an organic solvent m-cresol has been investigated but you argue that m-cresol is proved very toxic to algae, and thus this study was ceased before finalisation.

Based on the above,
- the tabulated data in the comments on the draft decision indicates that the validity criteria of OECD TG 201 are met;
- while the registration dossier did not provide any justification for the separation technique, in the comments on the draft decision you justify the use of the filters by the investigation on pre-conditioning of the filters in the full study report provided with your comments. This serves as evidence that the technique used for separation did not cause losses of the test substance;

However, the Substance is difficult to test (water solubility of 4.38 µg/L, which is well below the indicator water solubility value of 100 mg/L provided in OECD GD 23, Table 2) and there are critical methodological deficiencies resulting in the rejection of the study results. More specifically:

- Based on the full study report provided in the comments on the draft decision, a preliminary stability study was conducted for study (i) but this study does not indicate that all reasonable efforts have been taken to achieve a saturation concentration, but merely investigated one direct addition method. You have provided no further information on the study where m-cresol was used as a solvent and we cannot assess if the toxicity in that study would indeed be caused by the solvent or potentially the dissolved test substance. Therefore there is no evidence that all reasonable efforts have been taken to achieve maximum saturation concentration of the test substance.

Therefore, the requirements of OECD TG 201 are not met.

On this basis, the information requirement is not fulfilled.

Study design

The Substance is difficult to test due to the low water solubility (4.38 µg/L). OECD TG 201 specifies that, for difficult to test substances, you must consider the approach described in OECD GD 23 or other approaches, if more appropriate for your substance. In all cases, the approach selected must be justified and documented. Due to the properties of Substance, it may be difficult to achieve and maintain the desired exposure concentrations. Therefore, you must monitor the test concentration(s) of the Substance throughout the exposure duration and report the results. If it is not possible to demonstrate the stability of exposure concentrations (i.e. measured concentration(s) not within 80-120% of the nominal concentration(s)), you must express the effect concentration based on measured values as described in OECD TG 201. In case a dose-response relationship cannot be established (no observed effects), you must demonstrate that the approach used to prepare test solutions was adequate to maximise the concentration of the Substance in the test solution.

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

1. **Long-term toxicity testing on fish (triggered by Annex VIII, Section 9.1.3., column 2)**

Short-term toxicity testing on fish is an information requirement under Annex VIII to REACH (Section 9.1.3.). Long-term toxicity testing on fish must be considered (Section 9.1.3., Column 2) if the substance is poorly water soluble.

You have provided:
- OECD TG 203 study,
- adaptation to omit information on long-term toxicity on fish for the Substance.

We have assessed this information and identified the following issue:

Poorly water soluble substances require longer time to reach steady-state conditions. As a result, the short-term tests do not give a true measure of toxicity for this type of substances and the long-term test is required. A substance is regarded as poorly water soluble if, for instance, it has a water solubility below 1 mg/L or below the detection limit of the analytical method of the test material (ECHA Guidance R.7.8.5).

As already explained under Section A.1, the Substance is poorly water soluble. Therefore, information on long-term toxicity on fish must be provided. In your comments on the draft decision, you agree that the Substance is poorly soluble and that long-term aquatic toxicity testing is required.

The examination of the information provided and your testing strategy to address this information gap, as well as the selection of the requested test and the test design are addressed under section C.2.

2. **Soil simulation testing; and**
3. **Sediment simulation testing**

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

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

- it is potentially persistent or very persistent (P/vP) as:
  - it is not readily biodegradable (*i.e.* <60% degradation in an OECD 301B)
- it is potentially bioaccumulative or very bioaccumulative (B/vB) as:
  - it has a high potential to partition to lipid storage (*e.g.* log K_{ow} > 4.5)

Your registration dossier provides the following:

- The Substance is not readily biodegradable (32.4% degradation after 28 days in OECD TG 301B);
- The Substance has a high potential to partition to lipid storage (Log K_{ow} of >6 based on OECD TG 117);

You have provided no definitive information to assess whether the Substance, or its relevant constituents or degradation products would meet the PBT/vPvB criteria.

In your PBT assessment in your dossier you agree that no definitive conclusion can made whether the Substance is potentially P/vP. In your comments on the draft decision, you argue that the parent substance can be considered non-P, based on relatively high amount of biodegradation in the OECD 301B (32.4% after 28 days), and the shape of the curve (there is no plateau in the curve in 28 days). You further speculate that if the test duration of the study would have been extended, an even higher amount of biodegradation could have been attained.

If the substance is confirmed to meet the test criteria set for ready biodegradability (i.e. <60% degradation for OECD 301B) under specific enhanced conditions, the results may be used to indicate that the substance is not P/vP. For the purpose of P assessment, one potential enhancement of the ready biodegradation tests is the prolongation of the test duration. Where biodegradation is still occurring in a ready biodegradability test, weekly determinations could be continued and made up to day 60 until degradation has ceased i.e. three time points give the same result (ECHA Guidance R.7.9.4.1).

In the comments on the draft decision you argue that the Substance would have reached the threshold for ready biodegradation if the test OECD 301B would have been continued. You provide a graph of cumulative degradation of the substance, indicating that the degradation was still occurring at day 28.

While the continuation of the provided OECD TG 301B study would have been merited, the resulting biodegradation in 60 days after such enhancement is still unknown as the test was ceased at day 28. Therefore, this test does not provide evidence that the Substance would not be P/vP.

With regards to B/vB, you consider that the Substance would not be B or vB based on predicted BCF values provided in IUCLID section 5.3.1 (BCFBAF v3.01, Arnot-Gobas BCF & BAF Methods), and low bioavailability based on high molecular weight (509-789 g/mol) and a calculated Dmax (2.4 nm for smallest constituent CAS# 122886-55-9).

ECHA notes the following shortcomings in your conclusion on non B/vB:

1. BCF estimations

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

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

Under Appendix C of the OECD Guidance document on the validation of (Q)SAR models (ENV/JM/MONO(2007)2) and ECHA Guidance R.6.1.6.3., adequate and reliable documentation must include a (Q)SAR Model Reporting Format document (QMRF) and (Q)SAR Prediction Reporting Format document (QPRF).

You provided Summary results files for the prediction of bioaccumulation potential of the three constituents of the Substance. However you have not provided QMRF and QPRF including the applicability domain of the model and the relationship between the modelled substance and

the defined applicability domain. In the comments on the draft decision you acknowledge that the BCF estimations were not accompanied by QMRF and QPRF documents.

In absence of such information, ECHA cannot establish that the prediction can be used to predict bioaccumulation potential of the Substance.

2. Arguments on low bioavailability based on high molecular weight and Dmax

ECHA Guidance R.7.8.5. explains that there is no scientific basis to define molecular characteristics that would render a substance unlikely to cross biological membranes. In this context, the indicators used for low likelihood of a high bioaccumulation potential (ECHA Guidance R.11, Figure R.11-4) must be considered, including:

- physico-chemical indicators of hindered uptake due to large molecular size (*e.g.* D_{max} > 17.4 Å or 1.7 nm) or high octanol-water partition coefficient (log K_{ow} > 10) or low potential for mass storage (octanol solubility (mg/L) < 0.002 x MW), and
- supporting experimental evidence of hindered uptake (no chronic toxicity for mammals and birds, no chronic ecotoxicity, no uptake in mammalian toxicokinetic studies, very low uptake after chronic exposure).

Your arguments on low bioaccumulation potential includes physicochemical indicators such as high molecular weight of the Substance (a calculated Dmax for the smallest molecule is 2.4 nm). While this information may indicate hindered uptake, the physicochemical indicators for hindered uptake must be assessed in conjuction with experimental indicators such as chronic toxicity and toxicokinetic studies for mammals and birds. You have not considered the experimental indicators in your PBT assessment.

In the comments on the draft decision, you refer to a sub-chronic 90-day repeated dose study and use the results of the study to indicate hindered uptake of the Substance. You argue that no treatment related effects on mortality, clinical signs, body weight, food consumption, water consumption, functional observation battery, urine analysis, ophthalmoscopy, hematology, clinical biochemistry, marcoscopy, organ weights and histopathology were observed.

You have not provided reference to this study and therefore no independent assessment of the outcome can be made. However, we note that a 90 day study is provided in the registration dossier of the Substance where some minor effects in liver and kidney at 800 mg/kg bw/d, but not in controls or other treated groups. Therefore, we agree that no (sub)chronic toxicity for mammals was observed, and even if you have not provided toxicokinetic studies to substantiate low/no adsorption, the toxicological studies do indicate hindered uptake of the parent constituents of the Substance. However, the below described issue on PBT assessment of degradation products still applies.

3. Potential degradation products are not considered

In the context of the PBT/vPvB assessment (Annex I, Section 4) and the risk assessment (Annex I, Section 6) of the Substance, the CSA must address relevant transformation/degradation products (Annex XIII, 5th paragraph; ECHA Guidance R.11.4.1.).

Your justification of the PBT properties is solely based on the properties of the parent substance and does not address the identity and PBT/vPvB properties of its relevant transformation/degradation products.

In the comments on the draft decision you provide identity of two theoretically predicted degradation products. You state that the two degradation products may be persistent (EC 202-974-4 which is persistent in soil), however they are much more polar and have lower

logKow values (1.44 and 2.2). Therefore the degradation products would not be bioaccumulative even if they were persistent.

You have not provided any information how you have derived the identity of the degradation products. Therefore, we cannot assess the information provided and confirm the identity and the related properties of the degradation products. Consequently, the information provided is considered not reliable.
Without this information, no conclusion on vPvB and PBT properties of the Substance and its potential degradation products can be made.

In conclusion, the PBT properties of the Substance, its constituent and relevant transformation/degradation products cannot be yet assessed with the information provided. The information above indicates that the Substance is a potential PBT/vPvB substance. The Substance has low water solubility (4.38 µg/L), high partition coefficient (log Kow: ≥6) and high adsorption coefficient (log Koc of one constituent: 4.76, and the other two constituents >5.63), indicating high potential to adsorb to soil and sediment.

Therefore, the chemical safety assessment (CSA) indicates the need for further degradation investigation. Based on the adsorptive properties of the Substance, soil and sediment represent relevant environmental compartments.

The examination of the available information or adaptations, your proposed testing strategy, as well as the selection of the requested tests and the tests design are addressed respectively in Appendices C.3 and C.4.

4. Identification of degradation products

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

As already explained under Section B.2/B.3, the Substance is a potential PBT/vPvB substance. Therefore, the chemical safety assessment (CSA) indicates the need for further degradation investigation.

You have not provided information on the identity of transformation/degradation products for the Substance. In the comments on the draft decision you have provided the identity of two theoretically derived degradation products. As already explained under Section B.2/B.3, we cannot assess the information provided and it is considered unreliable.

The examination of the available information or adaptations, as well as further information on the selection of the approach to generate this information are addressed in Appendix C.5.

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

1. **Long-term toxicity testing on aquatic invertebrates; and**
2. **Long-term toxicity testing on fish**

Long-term toxicity testing on aquatic invertebrates is an information requirement under Annex IX to REACH (Section 9.1.5.).

Long-term toxicity testing on fish is an information requirement under Annex IX to REACH (Section 9.1.6.).

You have provided a justification to omit the studies based on Annex IX, Section 9.1., Column 2. In support of your adaptation, you provided the following justification: *"According to Column 2 of REACH Annex IX 9.1.5, long-term toxicity testing on [invertebrates/fish] is not proposed by the registrant as the CSA indicates no expected release to the aquatic compartment."*

We have assessed this information and identified the following issue:

Adaptation based on CSA
Annex IX, Section 9.1., Column 2 does not allow omitting the need to submit information on long-term toxicity to aquatic invertebrates or fish under Column 1. It must be understood as a trigger for providing further information on aquatic invertebrates or fish if the chemical safety assessment according to Annex I indicates the need (Decision of the Board of Appeal in case A-011-2018).

Exposure based adaptation
For the sake of completeness, ECHA also evaluated your adaptation under Annex XI, Section 3.2(b) (Substance-tailored exposure-driven testing).

Under Annex XI, Section 3, this information may be omitted based on the exposure scenario(s) developed in the Chemical Safety Report. The justification must be based on a rigorous exposure assessment in accordance with Annex I, Section 5 and must meet the following criteria:

- For substances that are not included in articles, it must be demonstrated for all relevant scenarios that strictly controlled conditions as set out in Article 18(4)(a) to (f) apply throughout the life cycle.

In all cases, adequate justification and documentation must be provided when testing is omitted.

The justification based on Annex XI section 3.2 (b) must include a qualitative assessment including three elements: the description of operational conditions and risk management measures in all related exposure scenarios; the quantification of the resulting release/exposure for all routes; and a qualitative statement why the release is low enough (ECHA Guidance R.5.1.3).

In Section 3.5 of your registration dossier you report different uses for the Substance, including professional uses as lubricating agent and article service-life (Waste life stage: Cars/Motorcycles with grease product).

Your adaptation to omit information on long-term toxicity to fish and invertebrates you indicate that the *"CSA indicates no expected release to the aquatic compartment"*. In your exposure assessment you report that *"There is no local release of the substance to waste*

water. Wastes containing the substance are collected" but you do not provide justification including description of operational conditions and risk management measures, nor the quantification of the resulting release/exposure for all routes.

Therefore, you have not documented that strictly controlled conditions throughout the life-cycle including waste stage of the Substance apply.

In conclusion, your adaptation is rejected.

Adaptation based on technical feasibility
In your comments on the draft decision, you acknowledge the reasons to reject your adaptation and indicate that you may adapt the information requirement based on Annex XI, Section 2 in case no analytically confirmable maximum dissolved concentrations are achived within the preliminary studies.

Toxicity may be observed at concentrations below the detection limit of the analytical method (ECHA Guidance Appendix R.7.8-1) and for tests with chemicals that cannot be quantified by the most sensitive analytical methods at relevant concentrations, the effect concentration can be expressed based on the limit of detection for the method (ECHA Guidance Appendix 7.8-1).

In your comments on the draft decision you propose to waive the studies based on Annex XI, Section 2 (testing is technically not feasible) if you do not succeed with development of test solution preparation procedures required to achieve analytically confirmable maximum dissolved concentrations.

We agree with the need to develop a sensitive analytical method and performing a preliminary stability study. However, considering the tests technically unfeasible is not justified based on lack of sensitive analytical method alone, as the toxicity may occur below the limits of detection and test may be still feasible to conduct in the absence of sensitive analytical method by expressing the results using limit of detection for the method.

On this basis, the information requirement is not fulfilled.

Study design

To fulfil the information requirement for long-term toxicity testing on invertebrates, the Daphnia magna Reproduction Test (test method OECD TG 211) is the most appropriate (ECHA Guidance R.7.8.4.).

To fulfil the information requirement for long-term toxicity testing on fish, the Fish, Early-life Stage Toxicity Test (test method OECD TG 210) is the most appropriate (ECHA Guidance R.7.8.2.).

OECD TG 211 and 210 specify that for difficult to test substances OECD GD 23 must be followed. As already explained above, the Substance is difficult to test. Therefore, you must fulfil the requirements described in 'Study design' under Appendix A.2.

In your comments on the draft decision, you acknowledge that the Substance is difficult to test and you propose to develop an analytical method for the test substance and perform a preliminary stability study prior to testing. You propose to test one constituent of the Substance.

To fulfil the information requirement, a study must comply with the preferred test guideline and the requirements of OECD GD 23 (ENV/JM/MONO(2000)6/REV1) if the substance is difficult to test (Article 13(3) of REACH). Therefore, the following specifications must be met:

- a sufficiently sensitive analytical method is necessary for the analysis of the test chemical in the test solution. Where the dissolved fraction cannot be analytically measured (e.g. when solubility is below a quantifiable level), a statement from an analytical chemist in the study report confirming that the analytical methods used were state of the art, and a justification as to why lower detection limits were not feasible must be provided;
- a solubility experiment must be conducted prior to conducting any testing with poorly water-soluble test chemicals to determine the maximum dissolved concentration that can be achieved in the specific test solution under test conditions, and the preparation conditions that are required to achieve it;
- as explained in Appendix E, section B, constituents that have structural and physico-chemical similarities can be grouped and treated as if the whole 'block' were one single compound (ECHA Guidance Appendix R.7.8-1).

In your comments on the draft decision you propose to:

- determine if the development of a (more) sensitive analytical method is possible for KY-UN in order to measure KY-UN concentrations at or below the maximum solubility level in medium;
- perform a preliminary solubility test in the aquatic toxicity test medium over time for the component KY-UN;
- test the constituent having the shortest carbon chain length, highest water solubility and lowest logKow as a worst-case structure of the Substance (which contains three components of same structural backbone).

We agree with

- the need to develop a sensitive analytical method to measure the test concentrations; and
- conducting a preliminary solubility experiment in test medium to determine the test solution preparation procedures for the toxicity tests.

Furthermore, selecting one constituent for testing is justified based on structural similarity, in this case the same structural backbone with differing carbon chain length. If the most water soluble constituent is tested from these poorly soluble constituents, it is reasonable to assume that this constituent is the most bioavailable to aquatic organisms and thus is suitable representative structure to be tested.

3. Soil simulation testing; and

4. Sediment simulation testing

Soil simulation testing is an information requirement under Annex IX to REACH (Section 9.2.1.3.) for substances with a high potential for adsorption to soil.

Sediment simulation testing is an information requirement under Annex IX to REACH (Section 9.2.1.4.) for substances with a high potential for adsorption to sediment.

The Substance has a low water solubility (4.38 µg/L), high partition coefficient (log Kow: ≥6) and high adsorption coefficient (log Koc of one constituent: 4.76, and the other two constituents >5.63) and therefore has high potential for adsorption to soil and sediment.

You have provided an adaptation under Annex IX, Section 9.2., Column 2 with the following justification: "*According to Column 2 of REACH Annex IX 9.2., no further biotic degradation*

testing are proposed as the CSA indicates no need to investigate further the degradation of the substance and its degradation products."

We have assessed this information and identified the following issue:

Under Section 9.2., Column 2 of Annex IX to REACH, the study may be omitted if the chemical safety assessment (CSA) does not indicate the need for further biotic degradation testing. The CSA does indicate such need (Annex I, Section 4; Annex XIII, Section 2.1) if, for instance, the substance is a potential PBT/vPvB substance (ECHA Guidance R.11.4). This is the case if the Substance itself or any of its constituent, impurity or transformation/degradation product present in concentration ≥ 0.1% (w/w) meets the criteria already listed in Appendix B.2 and B.3.

As already explained under Appendix B.2 and B.3, you have not demonstrated that the CSA does not indicate the need for further biotic degradation testing and your adaption is rejected.

On this basis, the information requirement is not fulfilled.

In your comments on the draft decision, you acknowledge that the soil simulation testing and sediment simulation testing are standard information requirements under Annex IX but argue that this further biotic degradation testing is related to the need to investigate the persistency in the PBT assessment. You propose to perform the soil simulation test first, and potentially adapt the sediment simulation study requested if P can be concluded with soil simulation test.

In ECHA Guidance R.11 it is stated that:

- for adsorptive substances, a simulation test in soil (OECD TG 307) could be more relevant than a simulation test in sediment (OECD TG 308) due to removal of the substance during the WWTP process (ECHA Guidance R.11.4.1.1.3);
- appropriate data need to be available to conclude the P/vP-assessment with a conclusion "not P/vP" on all three (five) compartments: water (marine water), sediment (marine sediment) and soil. If a conclusion "P" or "vP" is reached for one compartment, no further testing or assessment of persistence of other environmental compartments is normally necessary (ECHA Guidance R.11.4.1.1.1);

In your comments on the draft decision, you propose a tiered testing strategy:

- You propose to start with performing the OECD 307 first, on the basis of feasibility and higher concern (low water solubility and high adsorption coefficient resulting in adsorption to WWTP sludge and following application of sludge to soil);
- if the result of the OECD TG 307 study would indicate that the parent substance and/or any of the degradation product(s) are persistent, no further studies would be warranted and you intend to adapt the sediment simulation test according to OECD TG 308.

Based on the above, we acknowledge that

- performing the soil simulation study according to OECD TG 307 may be more relevant to start the persistency testing;
- the persistency testing can be stopped if a conclusion "P" or "vP" is reached for one compartment for the purpose of PBT/vPvB assessment. However, for the Substance no conclusion can be made on B and T properties as already explained under Appendix B.2 and B.3. and Appendix C.1 and C.2. Therefore, only a conclusion on "vP" can be considered sufficient to adapt the sediment simulation testing.

Study design

Simulation degradation studies must include two types of investigations (ECHA Guidance R.7.9.4.1):

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

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

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

The required test temperature is 12°C, which corresponds to the average environmental temperature for the EU (ECHA Guidance R.16, Table R.16-8) and is in line with the applicable test conditions of the OECD TG 307 and 308.

In accordance with the specifications of OECD TG 307 and 308, non-extractable residues (NER) must be quantified. The reporting of results must include a scientific justification of the used extraction procedures and solvents (ECHA Guidance R.7.9.4.1.). By default, total NER is regarded as non-degraded Substance. However, if reasonably justified and analytically demonstrated a certain part of NER may be differentiated and quantified as irreversibly bound or as degraded to biogenic NER, such fractions could be regarded as removed when calculating the degradation half-life(s) (ECHA Guidance R.11.4.1.1.3.). Further recommendations may be found in the background note on options to address non-extractable residues in regulatory persistence assessment available on the ECHA website.

Relevant transformation/degradation products are at least those detected at ≥ 10% of the applied dose at any sampling time or those that are continuously increasing during the study even if their concentrations do not exceed 10% of the applied dose, as this may indicate persistence (OECD TG 307 and 308; ECHA Guidance R.11.4.1.).

In your comments on the draft decision, you propose to perform the simulation studies using one (worst-case) constituent of the Substance.

As explained in Appendix E, section B, "known constituents" approach in PBT assessment can be applied. This approach is acceptable when specific constituents of a substance are suspected to represent the worst case of the (v)P, (v)B and T properties of all constituents of the substance. A justification must be provided for the selection of representative constituent for testing as a reasonable worst case (ECHA Guidance R.11.4.2.2.2).

In your comments on the draft decision, you propose that known constituent approach can be used and the simulation studies will be performed only using one (worst-case) constituent [redacted] with a justification that in the ready biodegradation studies, KY-UN biodegrades 21% in 28 days, [redacted] only 7.8% in 28 days.

We acknowledge that known constituent approach is justified considering the structural similarity of the constituents and the worst case assumption based on ready biodegradation studies on constituents. However, the justification does not address how differences in

structure influence the formation, identity and PBT related properties of the degradation products.

5. Identification of degradation products

Identification of degradation products is an information requirement under Annex IX to REACH (Section 9.2.3.).

You have provided no information on the identity of transformation/degradation products for the Substance. In the comments on the draft decision you have provided the identity of two theoretically derived degradation products. As already explained under Section B.2/B.3, we cannot assess the information provided and it is considered unreliable.

Therefore, this information requirement is not met.

This information is required for the purpose of the PBT/vPvB assessment (Annex I, Section 4) and the risk assessment (Annex I, Section 6) of the Substance.

On this basis, the information requirement is not fulfilled.

Study design

Regarding the selection of appropriate and suitable test method(s), the method(s) will have to be substance-specific. Identity, stability, behaviour, and molar quantity of the degradation/transformation products relative to the Substance must be evaluated and reported, when analytically possible. In addition, degradation half-life, log K_{ow} and potential toxicity of the transformation/degradation may need to be investigated. You may obtain this information from the degradation studies requested in Appendix C.3 and C.4 or by some other measure. If any other method is used for the identification of the transformation/degradation products, you must provide a scientifically valid justification for the chosen method.

To determine the degradation rate of the Substance, the requested studies according to OECD TG 308/307 (Appendix C.3 and C.4) must be conducted at 12°C and at test material application rates reflecting realistic assumptions. However, to overcome potential analytical limitations with the identification and quantification of major transformation/degradation products, you may consider running a parallel test at higher temperature (but within the frame provided by the test guideline) and at higher application rate (*e.g.* 10 times).

Appendix D: 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[2].

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:
   - the variation in compositions reported by all members of the joint submission,
   - the boundary composition(s) of the Substance,
   - 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
   - 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.
   - The reported composition must include all constituents of each Test Material and their concentration values and other parameters relevant for the property to be tested.

This information is needed to assess 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[3].

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

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

A. Strategy for the PBT/vPvB assessment

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

You are advised to consult ECHA Guidance R.7b (Section R.7.9.), R.7c (Section R.7.10) and R.11 on PBT assessment to determine the sequence of the tests needed to reach the conclusion on PBT/vPvB. The guidance provides advice on 1) integrated testing strategies (ITS) for the P, B and T assessments and 2) the interpretation of results in concluding whether the Substance fulfils the PBT/vPvB criteria of Annex XIII.

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

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 persistency, bioaccumulation and aquatic toxicity testing:

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

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

Appendix F: Procedure

The information requirement for Bioaccumulation in aquatic species, preferably fish (Annex IX, Section 9.3.2.) is not addressed in this decision. This may be addressed in a separate decision once the information from the Soil and sediment simulation studies and identification of degradation products requested in the present decision is provided; due to the fact that the relevant constituents and degradation products need to be identified in order to decide the test material for Bioaccumulation study.

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 15 June 2020.

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

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

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

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

Appendix G: List of references - ECHA Guidance[4] 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)[5]

RAAF - considerations on multiconstituent substances and UVCBs (RAAF UVCB, March 2017)[5]

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.

OECD Guidance documents[6]
Guidance Document on aqueous–phase aquatic toxicity testing of difficult test chemicals – No 23, referred to as OECD GD 23.

[4] https://echa.europa.eu/guidance-documents/guidance-on-information-requirements-and-chemical-safety-assessment
[5] https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across
[6] http://www.oecd.org/chemicalsafety/testing/series-testing-assessment-publications-number.htm

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.

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

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]
[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.