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Helsinki, 25 April 2022

Addressees
Registrant(s) of [redacted] as listed in the last Appendix of this decision

Date of submission of the dossier subject to this decision
22/12/2017

Registered substance subject to this decision ("the Substance")
Substance name: Potassium sodium amino-hydroxy-[(3-{[2-(substituted)ethyl]sulfonyl}phenyl)diazenyl]-[(2-sulfonato-4-{[2-(substituted)ethyl]sulfonyl}phenyl)diazenyl]naphthalene-disulfonate
EC number: [redacted]
CAS number: [redacted]

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 ***30 January 2024***.

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. *In vivo* genotoxicity study, as requested below, in B.1.

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

1. In vivo mammalian alkaline comet assay (Annex VIII, Section 8.4., column 2; test method OECD TG 489) in rats, oral route, on the following tissues: liver, glandular stomach and duodenum, with the Substance

   OR

   Transgenic rodent somatic and germ cell gene mutation assays (Annex VIII, Section 8.4., column 2; test method EU B.58./OECD TG 488) in transgenic mice or rats, oral route on the following tissues: liver, glandular stomach, with the Substance; duodenum must be harvested and stored for up to 5 years. The duodenum must be analysed if the results of the glandular stomach and of the liver are negative or inconclusive.

2. Hydrolysis as a function of pH (Annex VIII, Section 9.2.2.1.; test method: EU C.7./OECD TG 111) – test under slightly alkaline conditions (i.e., covering only pH values between 7 and 8.5 and at least pH values of 8 and 8.5).

Reasons for the requests are explained in the following appendices:

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

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". For references used in this decision, please consult the Appendix entitled "List of references".

Appeal

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

Failure to comply

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

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

[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 for the requirements applicable to all the Registrants subject to Annex VII of REACH

1. In vivo mammalian alkaline comet assay or Transgenic rodent somatic and germ cell gene mutation assays

Under Annex VII, Section 8.4, column 2 of REACH, further mutagenicity studies must be considered in case of a positive result in an *in vitro* gene mutation study in bacteria.

The ECHA guidance R.*7a*[2] states that following a positive result in an *in vitro* test, *"adequately conducted somatic cell in vivo testing is required to ascertain if this potential can be expressed in vivo. In cases where it can be sufficiently deduced that a positive in vitro finding is not relevant for in vivo situations (e.g. due to the effect of the test substances on pH or cell viability, in vitro-specific metabolism: see also Section R.7.7.4.1), or where a clear threshold mechanism coming into play only at high concentrations that will not be reached in vivo has been identified (e.g. damage to non-DNA targets at high concentrations), in vivo testing will not be necessary*."

Your dossier contains a positive results for the *in vitro* gene mutation study in bacteria (OECD TG 471, 2014), which raise the concern for gene mutation.

In your comments to the initial draft decision, you acknowledge the above mentioned positive results obtained with the Substance in the E.coli WP2 uvrA strain in the presence of metabolic activation. However, you also refer to the negative results obtained with the Substance for *in vitro* chromosomal aberration (OECD TG 473, 2014), *in vivo* unscheduled DNA synthesis (UDS) (OECD TG 486, 2015) and *in vivo* micronucleus formation (OECD TG 474, 2015) to conclude that *"the initial effects of a potential mutagenic action of the test item in bacteria could not be confirmed in vivo indicating either a false positive outcome in this system or a bacteria specific effect in this test"*. In support of your conclusion, you mention *in vitro* and *in vivo* genotoxicity study results for more than 1000 other dyes with all kind of structures and indicate that none of the positive *in vitro* studies were confirmed *in vivo.*

However, ECHA considers the positive OECD TG 471 study (2014) with the Substance as valid. The OECD TG 473 study (2014) with the Substance your refer to in your comments investigates chromosomal aberration and does not investigate gene mutation. Therefore, it does not remove the concern for gene mutation raised by the positive OECD TG 471 study (2014).

Similarly, the OECD TG 486 (2015) and OECD TG 474 (2015) studies *in vivo* your refer to in your comments do not investigate gene mutation. Therefore, they cannot be used to address the gene mutation concern raised by the positive OECD TG 471 study (2014).

In addition, you have not provided any justification nor documentation to explain how and why the results from the other dyes you mention in your comments can be used to predict the outcome on mutagenicity for the Substance or address the above-mentioned concern for gene mutation. In the absence of such documentation, ECHA cannot assess the relevance of such comments in respect to the mutagenic properties of the Substance.

Based on the above, no data from an appropriate *in vivo* somatic cell genotoxicity study is available in the dossier. The *in vivo* studies submitted in your dossier and referred to in

[2] ECHA Guidance R.7a, section R.7.7.6.3, p.570.

your comments to the draft decision do not address the gene mutation concern as indicated above and further explained under Section B.1.

Therefore, ECHA considers that an appropriate *in vivo* follow up mutagenicity study is necessary to address the concern identified *in vitro*.

For the specifications of the study to be performed, see the request B.1.

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

1. In vivo mammalian alkaline comet assay or Transgenic rodent somatic and germ cell gene mutation assays

Under Annex VIII, Section 8.4, column 2 of REACH, the performance of an appropriate *in vivo* somatic cell genotoxicity study must be considered if there is a positive result in any of the *in vitro* genotoxicity studies in Annex VII or VIII.

Your dossier contains positive results for the *in vitro* gene mutation study in bacteria which raise the concerns for gene mutation. As described in Section A.2, the information provided in your comments to the draft decision does not remove this concern.

ECHA considers that an appropriate *in vivo* follow up mutagenicity study is necessary to address the concern(s) identified *in vitro*.

Your dossier contains the following *in vivo* studies:

i. key study, according to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) with the Substance, performed in 2015,
ii. key study, according to OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo) with the Substance, performed in 2015.

In your comments to the initial draft decision, you consider the above-mentioned studies as sufficient to prove safety of the Substance. You also refer to the negative *in vivo* genotoxicity study results obtained with some other dyes that were positive *in vitro* for gene mutation in bacteria and/or clastogenicity. You finally refer to animal welfare considerations to justify your disagreement to perform any further *in vivo* test.

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

In order to be appropriate, according to ECHA Guidance R.7a, the *in vivo* somatic cell genotoxicity study must address the specific concern raised by the *in vitro* positive result.

First, the *in vivo* micronucleus assay OECD TG 474 which you have provided, does not address gene mutations and is therefore not an adequate *in vivo* follow-up study.

Second, your dossier also contains a UDS test performed according to OECD TG 486. As you note in your comments to the draft decision, this test provides an indication of induced damage to DNA followed by DNA repair. As such, the UDS test is an indicator test that detects some DNA repair mechanisms (measured as unscheduled DNA synthesis in liver cells). As reminded in the ECHA Guidance[3], a negative result in a UDS assay alone is not a proof that a substance does not induce gene mutations in the conditions of the test.

Therefore, the first *in vivo* study provided is not addressing the gene mutation concern raised by the *in vitro* data while the second in vivo study provided does not address it properly. Therefore, the provided *in vivo* tests, are not appropriate.

Regarding the results from other dyes you refer to, you have not provided any justification nor documentation to explain how and why this information can be used to predict the outcome on mutagenicity for the Substance. In the absence of such documentation, ECHA

[3] ECHA Guidance R.7a, R.7.7.6.3, p. 568

cannot assess the relevance of such comments in respect to the mutagenic properties of the Substance.

Furthermore, minimisation of vertebrate animal testing is not on its own a legal ground for adaptation under Column 2 nor under the general rules of Annex XI.

ECHA considers that an appropriate *in vivo* follow up mutagenicity study is necessary to address the concern(s) identified *in vitro*.

i. Test selection

According to the ECHA Guidance Chapter R.7a, Section R.7.7.6.3, the transgenic rodent somatic and germ cell gene mutation assay ("TGR assay", OECD TG 488) and the *in vivo* mammalian alkaline comet assay ("comet assay", OECD TG 489) are suitable to follow up a positive *in vitro* result on gene mutation.

ii. Test design

In case you decide to perform the comet assay according to the test method OECD TG 489, the test must be performed in rats. Having considered the anticipated routes of human exposure and the need for adequate exposure of the target tissue(s) performance of the test by the oral route is appropriate.

In line with the test method OECD TG 489, the test must be performed by analysing tissues from liver as primary site of xenobiotic metabolism, glandular stomach and duodenum as sites of contact. There are several expected or possible variables between the glandular stomach and the duodenum (different tissue structure and function, different pH conditions, variable physico-chemical properties and fate of the Substance, and probable different local absorption rates of the Substance and its possible breakdown product(s)). In light of these expected or possible variables, it is necessary to analyse both tissues to ensure a sufficient evaluation of the potential for genotoxicity at the site of contact in the gastro-intestinal tract.

You are reminded that, in case you choose to perform a comet assay, you may decide to take into account the potential cross-linking properties of the Substance in the experimental setup of the comet assay and perform a modified comet assay in order to detect cross links. Therefore, you may consider preparing and analysing two sets of slides: one set of slides submitted to the standard experimental conditions (as described in OECD TG 489); the other set of slides submitted to modified experimental conditions that enable the detection of DNA. The modified experimental conditions may utilise one of the following options: (1) increase of electrophoresis time, e.g. as described in reference 23[4] in the OECD TG 489; (2) treatment of isolated cells (either in suspension or embedded in the slides) with a chemical (e.g. MMS); or (3) treatment of isolated cells (either in suspension or embedded in the slides) with ionising radiation (options 2 and 3 are described e.g. in

[4] Reference 23 of OECD TG 489 (2016): (23) Nesslany, F, Zennouche N, Simar-Meintieres S, Talahari I, NKili-Mboui E-N, Marzin D (2007), *In vivo* comet assay on isolated kidney cells to distinguish genotoxic carcinogens from epigenetic carcinogens or cytotoxic compounds, Mutation Research/Genetic Toxicology and Environmental Mutagenesis, Vol. 630/1, pp. 28-41.

references 36-39[5] in the OECD TG 489 or Pant[6] et al. 2015). In order to ensure the robustness of the test result a specific positive control group of animals would be needed.

In case you decide to perform the TGR assay according to the test method OECD TG 488, the test must be performed in transgenic mice or rats and the test substance is usually administered orally.

Based on the recent update[7] of OECD TG 488, you are requested to follow the new 28+28d regimen, as it permits the testing of mutations in somatic tissues and as well as in tubule germ cells from the same animals.

According to the test method OECD TG 488, the test must be performed by analysing tissues from liver as slowly proliferating tissue and primary site of xenobiotic metabolism, glandular stomach and duodenum as rapidly proliferating tissue and site of direct contact. There are several expected or possible variables between the glandular stomach and the duodenum (different tissue structure and function, different pH conditions, variable physico-chemical properties and fate of the Substance, and probable different local absorption rates of the Substance and its possible breakdown product(s)). In light of these expected or possible variables, it is necessary to analyse both tissues to ensure a sufficient evaluation of the potential for mutagenicity at the site of contact in the gastro-intestinal tract. However, duodenum must be stored (at or below −70 ºC) until the analysis of liver and glandular stomach is completed; the duodenum must then be analysed only if the results obtained for the glandular stomach and for the liver are negative or inconclusive.

iii. Germ cells

In case you decide to perform the comet assay, you may consider to collect the male gonadal cells collected from the seminiferous tubules in addition to the other aforementioned tissues in the comet assay, as it would optimise the use of animals. You can prepare the slides for male gonadal cells and store them for up to 2 months, at room temperature, in dry conditions and protected from light. Following the generation and analysis of data on somatic cells in the comet assay, you should consider analysing the slides prepared with gonadal cells.

In case you decide to perform the TGR, you may consider to collect the male germ cells (from the seminiferous tubules) at the same time as the other tissues, in order to limit additional animal testing. According to the OECD 488, the tissues (or tissue homogenates) can be stored under specific conditions and used for DNA isolation for up to 5 years (at or below −70 ºC). This duration is sufficient to allow you or ECHA, to decide on the need for assessment of mutation frequency in the collected germ cells.

[5] References 36 to 39 of OECD TG 489 (2016): (36) Merk, O., G. Speit (1999), Detection of crosslinks with the comet assay in relationship to genotoxicity and cytotoxicity, Environmental and Molecular Mutagenesis, Vol. 33/2, pp. 167-72; (37) Pfuhler, S., H.U. Wolf (1996), Detection of DNA-crosslinking agents with the alkaline comet assay, Environmental and Molecular Mutagenesis, Vol. 27/3, pp. 196-201; (38) Wu, J.H., N.J. Jones (2012), Assessment of DNA interstrand crosslinks using the modified alkaline comet assay, Methods in Molecular Biology, Vol. 817, pp. 165-81; (39) Spanswick, V.J., J.M. Hartley, J.A. Hartley (2010), Measurement of DNA interstrand crosslinking in individual cells using the Single Cell Gel Electrophoresis (Comet) assay, Methods in Molecular Biology, Vol. 613, pp. 267-282.

[6] Pant K, Roden N, Zhang C, Bruce C, Wood C, and Pendino K (2015) Modified *In Vivo* Comet Assay Detects the Genotoxic Potential of14-Hydroxycodeinone, an a,b-Unsaturated Ketone in Oxycodone. Environmental and Molecular Mutagenesis 56, 777-787.

[7] The updated OECD TG 488, adopted on 26 June 2020, is available on OECD website at https://www.oecd-ilibrary.org/docserver/9789264203907-en.pdf?expires=1596539942&id=id&accname=guest&checksum=D552783C4CB0FC8045D04C88EFFBFA66

This type of evidence may be relevant for the overall assessment of possible germ cell mutagenicity including classification and labelling according to the CLP Regulation.

2. Hydrolysis as a function of pH

Hydrolysis as a function of pH is an information requirement under Annex VIII to REACH (Section 9.2.2.1.).

You have provided the following information:

i. OECD TG 111 key study on the registered substance (2015, FAT 40868/A TE: Determination of General Physico-Chemical Properties).

We have assessed this information and identified the following issues:

To fulfil the information requirement, a study must comply with OECD TG 111 (Article 13(3) of REACH). This TG is designed as a tiered approach; each tier is triggered by the results of the previous tier. Therefore, the following specifications (among others) must be met:

Identification of hydrolysis products (Tier 3)

- all major hydrolysis products observed in Tier 2 testing (i.e. at least those representing > 10% of the applied dose) must be identified using an appropriate analytical method (Tier 3).

Technical specifications impacting the sensitivity/reliability of the test

- the analytical method must allow quantifying hydrolysis product(s) representing 10% or more of applied dose (at any time during the study) and down to 25 % or less of its peak concentration.

Testing at pH values other than 4, 7, 9

- additional tests at pH values other than 4, 7 and 9 may be required for a hydrolytically unstable test substance.

You have provided a study report indicating substantial hydrolytical degradation during test at pH 9 (the percentage of mean initial concentration of the Substance decreases during Tier 2 testing from approximately 79 to 21 % in 20°C and from 55 to 3 % in 30°C). You have also indicated the formation of hydrolysis products: *"An attempt was made to elucidate the structure of each main (m/z) ion found in a "hydrolyzed" test item solution compared to a parent test item solution using high performance liquid chromatography – mass spectrometry (HPLC-MS). Since the use of the ion-pairing reagents is not acceptable in HPLC-MS, the subsequent analysis resulted in the parent test item and the hydrolysis products essentially co-eluting. However, a review of the results, especially the m/z ions for the sample solution indicated that the hydrolysis products could not* [be] *positively identified. (…) it can be postulated that the hydrolysis products are most likely due to removal of one or both of the terminal sulphooxy- groups, with the central, diazo- group remaining essentially unaffected*." However, due to the claimed inability to identify the actual hydrolysis products, you have only provided unsubstantiated theoretical considerations on their identity.

You have performed the hydrolysis test at three pH: 4, 7 and 9. The Substance is stable at pH 4 and 7 (the half-lifes > 1 year), however the half-life determined at pH 9 is only 0.907 hours. You have not investigated the hydrolysis behaviour of the Substance between pH 7 and 9.

Based on the above, there are critical methodological deficiencies resulting in the rejection of the study results, specifically:

- the hydrolysis products were not identified;
- the analytical method did not allow to quantify hydrolysis products representing 10 % or more of applied dose (at any time during the study) down to 25 % or less of its peak concentration and you have not justified why an appropriate analytical method could not be used (e.g., without ion-pairing reagents considering the claim of removal of the sulphooxy groups which may cause a change on the hydrophilic character of the Substance);
- There is an abrupt change of the hydrolytical behaviour of the Substance between pH 7 and 9. This pH range is relevant both for the environmental assessment and for the interpretation of ecotoxicological tests. The pH of wastewater or sewage water is typically between 6–8 but can reach 8.5, implying that the Substance may be hydrolysed in the wastewater or sewage water before it reaches the environment[8]. Test guidelines for aquatic toxicity tests tolerate pH of up to 8.5 and even beyond for some of them. Therefore, investigating further the hydrolysis behaviour of the Substance between pH 7 and 8.5 is necessary for the environmental risk assessment of the Substance and for interpreting the results of the ecotoxicity tests. However, you have not considered testing hydrolysis at pH values other than 4, 7 and 9.

In your comments to the initial draft decision you state: *"Since hydrolysis at basic pH-levels and rising temperatures of this chemical is already a known fact and an intended chemical reaction process 'The Registrant' does not see any further advantage to further test the hydrolysis under the conditions requested by ECHA."* On that basis you disagree with the need to perform the requested test. You also mention: *"Nevertheless, 'The Registrant' will share additional lab data currently generated internally with ECHA to further demonstrate kinetics of spontaneous hydrolysis at different pH-levels between pH 7.5 and 8.5. Once these data are finalized, we will communicate them with an update of the dossier."*

We note that apart from the industrial dyeing of substrates at high pH and high temperatures, other uses of the Substance are reported in your dossier (e.g. formulation, consumer uses). You have not demonstrated that complete hydrolysis of the dye occurs during those other uses. Therefore, not only the fully hydrolysed form, but potentially also the parent substance and/or mixture thereof can be present in the wastewater or sewage water. Based on that, the identity of hydrolysis product(s) and the knowledge of hydrolytical behaviour of the Substance between pH 7 and 8.5 is necessary for the environmental risk assessment of the Substance and for interpreting the results of the ecotoxicity tests.

You do not provide specific information addressing the issues identified above. Therefore, the information provided in your comments does not change the assessment outcome.

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

[8] The pH of domestic wastewater is typically between 6–8 but is largely related to the alkalinity of the carriage water. In areas having soft water (alkalinity between 50 and 100 mg/L as $CaCO_3$), the pH of domestic wastewater is around 6.0 to 6.5. In areas having moderately hard water (alkalinity between 100 and 300 mg/L as $CaCO_3$) it is between 7.0 and 8.0. In areas having hard water (alkalinity higher than 300 mg/L as $CaCO_3$) it is between 7.5 and 9.0. Some industrial wastewaters can be quite acidic or alkaline. The optimum pH range for aerobic biodegradation lies between 6.5 and 8.5. Any wastewater beyond that range would need to be neutralised by the operator of the wastewater treatment system.

Study design

As explained above, the hydrolysis test must be performed under slightly alkaline conditions at pH values between 7 and 8.5 and at least at pH values of 8 and 8.5.

Appendix B: 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[9].

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.

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

Appendix C: Procedure

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

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

The compliance check was initiated on 21 April 2021.

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

ECHA took into account your comments and did not amend the 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 D: List of references - ECHA Guidance[10] 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)[11]

RAAF - considerations on multiconstituent substances and UVCBs (RAAF UVCB, March 2017)[12]

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

[10] https://echa.europa.eu/guidance-documents/guidance-on-information-requirements-and-chemical-safety-assessment
[11] https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across
[12] https://echa.europa.eu/documents/10162/13630/raaf_uvcb_report_en.pdf/3f79684d-07a5-e439-16c3-d2c8da96a316

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

OECD Guidance documents[13]
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.

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

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Appendix E: 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.