~~Confidential~~

Helsinki, 16 January 2024

Addressee(s)
Registrant(s) of JS_29240-17-3 as listed in Appendix 3 of this decision

Date of submission of the dossier subject to this decision
13 July 2023

Registered substance subject to this decision ("the Substance")
Substance name: tert-pentyl peroxypivalate
EC/List number: 249-530-6

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 ***23 April 2026***.

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

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

1. Short-term repeated dose toxicity (28 days) (Annex VIII, Section 8.6.1.) by oral route, in rats, to be combined with the screening for reproductive/developmental toxicity requested below.

2. Screening study for reproductive/developmental toxicity (Annex VIII, Section 8.7.1.; test method: EU B.64/OECD TG 422) by oral route, in rats.

Information required depends on your tonnage band

You must provide the information listed above for all REACH Annexes applicable to you in accordance with Articles 10(a) and 12(1) of REACH. The addressees of the decision and their corresponding information requirements based on registered tonnage band are listed in Appendix 3.

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 requirements for testing and reporting new tests under REACH, see Appendix 4.

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

Appendix 1: Reasons for the request(s)
Appendix 2: Procedure
Appendix 3: Addressees of the decision and their individual information requirements
Appendix 4: Conducting and reporting new tests under REACH

[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 1: Reasons for the request(s)

Reasons common to several requests

0.1 Read-across adaptation rejected

1 You have adapted the following standard information requirements by using grouping and read-across approach under Annex XI, Section 1.5:

- Short-term repeated dose toxicity (28 day), (Annex VIII, Section 8.6.1.);
- Screening for reproductive/developmental toxicity (Annex VIII, Section 8.7.1.).

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

3 Annex XI, Section 1.5. specifies two conditions which must be fulfilled whenever a read-across approach is used. Firstly, there needs to be structural similarity between substances which results in a likelihood that the substances have similar physicochemical, toxicological and ecotoxicological properties so that the substances may be considered as a group or category. Secondly, it is required that the relevant properties of a substance within the group may be predicted from data for reference substance(s) within the group.

4 Additional information on what is necessary when justifying a read-across approach can be found in the Guidance on IRs and CSA, Chapter R.6. and related documents (RAAF, 2017; RAAF UVCB, 2017).

5 You provide a read-across justification document in IUCLID Section 13.

0.1.1. Scope of the grouping of substances

6 You predict the properties of the Substance from information obtained from the following source substance:

- tert-butyl peroxypivalate (TBPPI), EC 213-147-2.

7 You provide the following reasoning for the prediction of toxicological properties: You consider that your Substance (TAPPI) and the source substance (TBPPI) have closely related chemical structure and they both "*degrade to pivalic acid and a hydroperoxide: tert-butyl hydroperoxide (only TBPPI) and tert-amyl hydroperoxide (only TAPPI), respectively*". You claim that "*Tert-butyl hydroperoxide as the smaller molecule is regarded to be more reactive in comparison to tert-amyl hydroperoxide*". In addition, you note that the source substance, being "*the smaller molecule has a higher water solubility and a slightly lower log Pow and is thus expected to be more mobile and better available*". Based on this you conclude that "*the read-across from TBPPI to TAPPI represents a worst case approach*".

8 ECHA understands that your read-across hypothesis assumes that different compounds have the same type of effects. You predict the properties of your Substance based on a worst-case approach.

9 Specifically, your read across hypothesis is based on two arguments. First you assume that your Substance and the source substance have similar toxicological profile based on structural similarity. Secondly, you consider the source substance as a worst case due to (1) its physico-chemical properties (higher water solubility and a slightly lower log Pow) that makes it more bioavailable and (2) its more reactive hydrolysis product (tert-butyl hydroperoxide) compared to the hydrolysis product of the Substance (tert-amyl hydroperoxide).

10 We have identified the following issue(s) with the prediction(s) of toxicological properties:

0.1.2. Missing supporting information to substantiate worst-case consideration

11 Annex XI, Section 1.5. requires that whenever read-across is used adequate and reliable documentation of the applied method must be provided. Such documentation must provide supporting information to scientifically justify the read-across explanation for prediction of properties. The set of supporting information should strengthen the rationale for the read-across in allowing to verify the crucial aspects of the read-across hypothesis and establishing that the properties of the Substance can be predicted from the data on the source substance(s) (Guidance on IRs and CSA R.6, Section R.6.2.2.1.f.).

12 As indicated above, your read-across hypothesis is based on the assumption that the source substance constitutes a worst-case for the prediction of the properties under consideration of the Substance, because of its higher bioavailability as well as the higher reactivity of its hydrolysis product. In this context, relevant reliable information allowing to establish the rate of absorption, and compare the properties of the Substance and the source substance is necessary to confirm a conservative prediction of the properties of the Substance from the data on the source substance. Such information can be obtained, for example, from toxicokinetic studies, bridging studies of comparable design and duration with the Substance and the source substance.

13 In your justification document you have provided a data matrix, comparing the physico-chemical properties of your Substance and the source substance, indicating that the higher water solubility and lower log Pow of the source substance makes it "*more mobile and better available*".

14 ECHA understands that you use this information to support your hypothesis that the absorption potential of the source substance is expected to be "*slightly higher*" than that of the Substance, therefore the source substance represents a worst case in terms of bioavailability.

15 ECHA notes that the information on physico-chemical properties on its own is insufficient to conclude on the toxicokinetic behaviour, in this case on absorption rate of the Substance and the source substance. You have not provided any experimental toxicokinetic data neither with the Substance nor with the source substance to support your claim for lower bioavailability of the Substance. Without such information, it is not possible to assess and compare the quantitative systemic exposure of the test organism and confirm your hypothesis of worst case for bioavailability. Furthermore, you have not provided experimental data neither with the hydrolysis product of the Substance nor with the hydrolysis product of the source substance to support your claim for higher reactivity of the source substance's hydrolysis product.

16 Further, you did not provide any experimental data, in particular bridging studies of comparable design and duration for the Substance. In the absence of such information, you have not established that the source substance constitutes a worst-case for the prediction of the propertiesunder consideration of the Substance.

17 Finally, ECHA points out that the information on acute toxicity, irritation, skin sensitisation, and *in vitro* genotoxicity of the Substance and the source substance is not relevant to predict the toxicity after repeated dose administration, incl. reproductive and developmental toxicity, since those studies do not inform on systemic (target-organ) toxicity, sexual function, fertility and developmental properties of the Substance and source substance. Therefore, this information does not provide relevant information for the Substance and the source substance to support your read-across hypothesis for the information requirements you attempt to adapt.

18 Based on the above, you have not provided sufficient supporting information to scientifically justify the read-across.

0.3 Conclusion

19 For the reasons above, you have not established that relevant properties of the Substance can be predicted from data on the source substance. Your read-across approaches under Annex XI, Section 1.5. are rejected.

Reasons related to the information under Annex VIII of REACH

1. Short-term repeated dose toxicity (28 days)

20 A short-term repeated dose toxicity study (28 days) is an information requirement under Annex VIII, Section 8.6.1.

1.1 Information provided

21 You have adapted this information requirement by using Annex XI, Section 1.5. (Grouping of substances and read-across approach) based on the following experimental data:

(i) Combined repeated dose toxicity study with reproduction/developmental toxicity screening study (2012) with the source substance TBPPI, EC 213-147-2.

1.2 Assessment of the information provided

22 As explained in Section 0.1 your adaptation based on grouping of substances and read-across approach under Annex XI, Section 1.5 is rejected.

23 Therefore, the information requirement is not fulfilled.

1.3 Study design

24 When there is no information available neither for the 28-day repeated dose toxicity (EU B.7, OECD TG 407), nor for the screening study for reproductive/developmental toxicity (OECD TG 421 or TG 422), the conduct of a combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422) is preferred to ensure that unnecessary animal testing is avoided (Guidance on IRs and CSA, Section R.7.6.2.3.2.).

25 The study design is addressed in request 2.

26 In your comments to the draft decision you agreed to perform the requested study.

2. Screening study for reproductive/developmental toxicity

27 A screening study for reproductive/developmental toxicity study (OECD 421 or OECD 422) is an information requirement under Annex VIII, Section 8.7.1.

2.1. Information provided

28 You have adapted this information requirement by using Annex XI, Section 1.5. (Grouping of substances and read-across approach) based on the following experimental data:

(i) Combined repeated dose toxicity study with reproduction/developmental toxicity screening study (2012) with the source substance TBPPI, EC 213-147-2.

2.2. Assessment of the information provided

29 As explained in Section 0.1, your adaptation based on grouping of substances and read-across approach under Annex XI, Section 1.5 is rejected.

30 Therefore, the information requirement is not fulfilled.

2.2.1. Study design

31 A study according to the test method EU B.64/OECD TG 422 must be performed in rats.

32 As the Substance is a liquid, the study must be conducted with oral administration of the Substance (Annex VIII, Section 8.7.1., Column 1).

33 Therefore, the study must be conducted in rats with oral administration of the Substance.

34 In your comments to the draft decision you agreed to perform the requested study.

References

The following documents may have been cited in the decision.

Guidance on information requirements and chemical safety assessment (Guidance on IRs & CSA)

Chapter R.4 Evaluation of available information; ECHA (2011).
Chapter R.6 QSARs, read-across and grouping; ECHA (2008).
Appendix to Chapter R.6 for nanoforms; ECHA (2019).
Chapter R.7a Endpoint specific guidance, Sections R.7.1 – R.7.7; ECHA (2017).
Appendix to Chapter R.7a for nanomaterials; ECHA (2017).
Chapter R.7b Endpoint specific guidance, Sections R.7.8 – R.7.9; ECHA (2017).
Appendix to Chapter R.7b for nanomaterials; ECHA (2017).
Chapter R.7c Endpoint specific guidance, Sections R.7.10 – R.7.13; ECHA (2017).
Appendix to Chapter R.7a for nanomaterials; ECHA (2017).
Appendix R.7.13-2 Environmental risk assessment for metals and metal compounds; ECHA (2008).
Chapter R.11 PBT/vPvB assessment; ECHA (2017).
Chapter R.16 Environmental exposure assessment; ECHA (2016).

Guidance on data-sharing; ECHA (2017).
Guidance for monomers and polymers; ECHA (2023).
***Guidance on intermediates*;** ECHA (2010).
All guidance documents are available online: https://echa.europa.eu/guidance-documents/guidance-on-reach

Read-across assessment framework (RAAF)

RAAF, 2017 Read-across assessment framework (RAAF); ECHA (2017).
RAAF UVCB, 2017 Read-across assessment framework (RAAF) – considerations on multi- constituent substances and UVCBs; ECHA (2017).

The RAAF and related documents are available online:
https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across

***OECD Guidance documents* (OECD GDs)**

OECD GD 23 Guidance document on aquatic toxicity testing of difficult substances and mixtures; No. 23 in the OECD series on testing and assessment, OECD (2019).
OECD GD 29 Guidance document on transformation/dissolution of metals and metal compounds in aqueous media; No. 29 in the OECD series on testing and assessment, OECD (2002).
OECD GD 150 Revised guidance document 150 on standardised test guidelines for evaluating chemicals for endocrine disruption; No. 150 in the OECD series on testing and assessment, OECD (2018).
OECD GD 151 Guidance document supporting OECD test guideline 443 on the extended one-generation reproductive toxicity test; No. 151 in the OECD series on testing and assessment, OECD (2013).

Appendix 2: 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 23 August 2022.

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

ECHA took into account your comments and amended the deadline.

In your comments to the draft decision, you requested an extension of the deadline to provide information from 12 to 24 months from the date of adoption of the decision. You justified the request by additional time required to complete the testing due to longer lead times in the testing laboratory. Based on the documentary evidence provided, ECHA has agreed with your request for a deadline extension. On this basis, ECHA has extended the deadline to 24 months.

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 3: Addressee(s) of this decision and their corresponding information requirements

In accordance with Articles 10(a) and 12(1) of REACH, the information requirements for individual registrations are defined as follows:

- 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;
- 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.

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

Appendix 4: Conducting and reporting new tests for REACH purposes

1. Requirements when conducting and reporting new tests for REACH purposes

1.1 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 (https://echa.europa.eu/practical-guides).

(4) Under the introductory part of Annexes VII/VIII/IX/X to REACH, where a test method offers flexibility in the study design, for example in relation to the choice of dose levels or concentrations, the chosen study design must ensure that the data generated are adequate for hazard identification and risk assessment.

1.2 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.

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 (https://echa.europa.eu/manuals).