RESPONSE BY INTERNATIONAL FLAVORS AND FRAGRANCES (IFF)
TO THE

PROPOSAL FOR IDENTIFICATION OF A SUBSTANCE OF
VERY HIGH CONCERN ON THE BASIS OF THE CRITERIA
SET OUT IN REACH ARTICLE 57

Substance Name(s) :	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]
Annex XV Report Submitted By :	The Netherlands
Date of Annex XV Submission :	25 February 2015

Dear Madame, Dear Sir,

With reference to the above Annex XV report, which was prepared by the Member State Competent Authority (MSCA) of the Netherlands and submitted as a proposal for inclusion as a substance of very high concern on the 25th day of February 2015, IFF takes this opportunity of responding to this submission within the designated public consultation period, which expires as of 24h00 on the 16th day of April 2015 in relation to its material 1,3-Dioxane, 2-(2,4-dimethyl-3-cyclohexene-1-yl)-5-methyl-5-(1-methylpropyl)-, EC number 601-499-3 (Tradename: AURAWOOD), CAS# 117933-89-8 covered by this Annex XV report, Table 2, page 9.

IFF aims with this letter, to present, in detail, its objection to the proposal submitted by the Netherlands for inclusion of AURAWOOD on the list of substances for classification as a substance of very high concern on the basis of a status as very Persistent very Bioaccumulative (vPvB).

Summary

IFF is of the opinion that this MSCA Annex XV report insufficiently justifies the need for a vPvB assessment based on the volume of <10 tons for AURAWOOD, insufficiently justifies the inclusion of IFF's AURAWOOD in this Report based on ECHA letter 9th December, 2012, GB349025-60 where ECHA has deemed AURAWOOD not similar to Karanal, EC number 413-720-9, and incorrectly assigns a vPvB classification based on the available scientific data.

IFF has not previously assessed AURAWOOD for vPvB or PBT properties, as its volume is <10 tons, nor have we previously initiated any testing for such an assessment. IFF has nonetheless reviewed this Annex XV report which draws on the data provided on the material Karanal, (EC number 413-720-9) and tries to extend this to our material AURAWOOD and our comments are as follows:

a. IFF considers the process unclear, and unjustified for its material AURAWOOD

i. AURAWOOD has not been included in the earlier SVHC intention notification for material Karanal (EC number 413-720-9); Echa e-news 3 December 2014, SVHC intention
ii. ECHA previously communicated to IFF it finds AURAWOOD not similar to Karanal (ECHA letter 9th December, 2012, GB349025-60)
iii. IFF's AURAWOOD volumes are <10 tons at which volume a vPvB/PBT assessment is not required and risks are sufficiently covered through hazard labelling.

b. IFF rejects the conclusions drawn on the data around the material Karanal (EC number 413-720-9) as presented in the MSCA Annex Xv report, which are summarized here:
   i. Considering the vPvB characteristics of Karanal, IFF is of the opinion that the Karanal half-life of 56 days from the OECD TG 309 at 20°C is sufficiently reliable and adequate for the persistency assessment, showing that the substance is P but not vP, according to REACH Annex XIII criteria. IFF is of the opinion that the BCF derived from the OECD TG 305 at 0.003 mg/l being less than 2000 is reliable and adequate for the B/vB assessment because this concentration is the prescribed 1/100th of the LC50 fish in the OECD TG 305 guideline. This means that Karanal has some bioaccumulation potential but does not meet the B/vB criteria according to REACH Annex XIII. Overall this means that Karanal is not a vPvB substance.
   ii. In addition, IFF disagrees with the substance being borderline T as presented in the conclusion of the summary and in section 6.2.1.3 where it is presented as inconclusive. The STOT RE is not applicable (personal communication with the Lead Registrant for Karanal and presented by the MSCA in this Annex XV report) and the lowest NOEC is 0.03 mg/l being clearly above the 0.01 mg/l threshold for aquatic toxicity.

Process

IFF considers the process unclear and unjustified.

<u>Justification for inclusion of AURAWOOD in the Annex XV report</u>

Karanal (EC number 413-720-9) was listed as being under review for it SVHC properties (Echa e-news of December 3 2014; SVHC intentions). IFF's AURAWOOD was not included in this publication. IFF is therefore surprised that AURAWOOD was included in the MSCA Annex XV report as released on 25th February 2015. This means that IFF has not been given the opportunity to have any prior discussions with the MSCA on the properties of AURAWOOD.

The inclusion of AURAWOOD in the Annex XV report is even more surprising as ECHA has decided on an IFF inquiry that AURAWOOD is dissimilar to Karanal (ECHA letter 9th December, 2012, GB349025-60). To IFF this means that a read across justification is needed. Such a read across justification has not been presented in the MSCA Annex XV report. Annex 1 of an Annex XV report is intended to provide the opportunity for read across but the report as presented by The Netherlands has no such justification. Instead the MSCA for unknown reasons presents data on the self-classifications

according to the ECHA C&L inventory in this Annex 1. IFF is of the opinion that such a read across justification should have been added to justify the inclusion of AURAWOOD.

IFF further notes that section 1.2 of the Annex XV report provides a "Non-exhaustive list of substances covered by the group entry" (Table 2, page 9). In our opinion an Annex XV report should clearly define the substances being covered by this proposal. Given the potential impact of an Annex XV report, there can be no ambiguity as to the materials covered as this would lead to significant uncertainty on the side of authorities and industry. Clear identification and justification for inclusion of materials in this report is essential in our view.

Further to our surprise, IFF and its registration facility is mentioned in the MSCA Annex XV Annex-1 including its tonnage range. IFF is unclear what the intention of the MSCA is in providing this information solely on IFF's material where no other Registrant is being explicitly named in this manner.

It therefore remains speculative what the MSCA's intention is to present the number of notifications to ECHA's C&L Inventory in the MSCA Annex XV-Annex I. Notifications to the C&L inventory include downstream users and bear no relation to the overall volume of the materials covered by this Annex XV report.

If anything, Annex XV- Annex-1 actually presents that C&L is up to date for Karanal already restricting releases. The note that for IFFs AURAWOOD no entry is present in the self-classification database is superfluous because IFF registered AURAWOOD with an Annex VII dossier.

<u>Need for a vPvB/PBT assessment</u>

IFF questions the need for a vPvB/PBT assessment on AURAWOOD. This substance has been registered for a volume that is 1-10 tons. ECHA has furthermore decided on an IFF inquiry that AURAWOOD is dissimilar to Karanal (ECHA letter 9th December, 2012, GB349025-60).

IFF notes that a PBT assessment is only prepared at > 10 tons in accordance with Article 14 (3) when also a CSR is needed and recommending risk reduction measures when needed (heading of Article 14). This means that at < 10 tons classification and labelling, which is needed for all marketed substances will present risk reduction measures for substances of concern. This has been further acknowledged in the CARACAL meeting (Caracal, 2015 and Doc CA/16/2015, section 2.1). Article 58(2) also states that restrictions should be in proportion to risk. Although Article 59 presents that an Annex XV report can be limited to an entry in Annex 1, its section 0.1 presents again the need to take the risks into account. Also in the ECHA guidance on R11, in the introduction, it is highlighted that the PBT assessment is carried out when the volumes are > 10 tons in a CSA.

Therefore IFF is of the opinion that at this tonnage level classification and labelling for this substance (H410) presents sufficient risk reduction measures and putting the substance on the candidate list for authorization is disproportional to the risk anticipated. In addition, substances with these characteristics on persistency and toxicity will be restricted by the PEC /PNEC ratios in the aquatic and terrestrial environment when exceeding the 10 tons level.

In view of the above IFF considers the process unclear and unjustified.

IFF disagrees with the scientific conclusions of the MSCA leading to this Annex XV report

IFF does not agree with conclusions on the vPvB properties of Karanal in the MSCA Annex XV report.

The vPvB/PBT assessment is considered a hazard assessment (ECHA guidance C and R.11) and this means that the result of the OECD TG guidelines as such are leading for the vPvB assessment:

- For the vP assessment: IFF considers the temperature recalculation for persistency in the Annex XV dossier in conflict with the Annex XIII requirements and the vP being a hazard type assessment.
- For the vB assessment: IFF considers the BCF of 1898 the key value and a worst case when applying the WoE approach;

  This BCF value has been derived with a 0.003 mg/l concentration being 1/100th of the LC50 (0.3 mg/l) in accordance with the OECD TG 305 guideline. The 0.03 mg/l is therefore considered too high, because it may present effects which are not necessarily recorded e.g. metabolic overloading. In addition, the result indicates that the 0.03 mg/l concentration is overloading the metabolic capacity of the fish exposed and therefore presents unrealistic exposure concentrations.

vPvB/PBT assessment

The PBT assessment is considered mainly a hazard assessment (Guidance C pathfinder and ECHA R.11, pathfinder) which means that the result of the OECD TG guidelines as such are leading for the PBT assessment.

vP/P - In accordance with Annex XIII (1.1) the assessment of the persistency in the environment shall be based on available half-lives collected under adequate conditions.

In the OECD TG 309, the half-life of Karanal resulted in 56-days as agreed by the MSCA. This half-life is below the cut off criteria for vP. The test has been performed at 20°C in accordance with the criteria in this guideline. In the MSCA Annex XV report the half- life has been recalculated to 12°C to express 'European conditions' which is a region based assessment and thus risk based rather than a hazard based argument. IFF therefore views the 20°C result of the OECD TG 309 as leading for the vP/P assessment.

IFF concludes that the P criterion is met but not the vP criterion based on the REACH Annex XIII criteria.

vB/B – In accordance with Annex XIII the assessment of the vB criterion is fulfilled when the BCF is >5000. In addition, in the PBT guidance document (R11) it is explicitly mentioned that a weight of evidence (WoE) should be used, which is outlined below:

The OECD TG 305 (2006) that has been performed has several results. The MSCA presents two BCF values. According to the MSCA one is a BCF value of 1892 and one being 9893 based on measured concentration derived from centrifuged analysed data but leaving out the non-centrifuged analysed water consideration without justification (personal communication with Lead Registrant for Karanal).

The following WoE is presented in which the BCF of 1892 is considered a worst case result:

i. The low concentration used in this test (0.003 mg/l) is in accordance with the OECD TG 305 being 1/100 below the LC50 and 1/10 of the NOEC; the concentration of 0.03 mg/l being at the NOEC is considered to be out of the prescribed range and therefore unreliable.
ii. The MSCA derived BCF values which are based on water concentrations which are derived from centrifuged samples while also analysis were available from non-centrifuged samples. No justification is presented why the centrifuged samples were used. The centrifuged samples showed circa 40% of the nominal values while the non-centrifuged ones presented circa 60% of the nominal values. This means that the derived BCF values are considered conservative. In view of the substance concentrations being clearly below the water solubility there is no need to take preference of the centrifuged water concentration samples.
iii. The BCF value derived at a concentration of 0.003 mg/l is considered reliable because at this concentration the fish are capable of metabolising Karanal, while at higher dosing the metabolic pathway is overloaded as indicated by the study author (personal communication with the lead registrant for Karanal) further confirming that the dose of 0.03 mg/l is out of the domain of the method.
iv. Despite the 0.003 mg/l concentration of the substance showing somewhat more variability compared to the 0.03 mg/l, the fish concentrations were limitedly affected by this variability and therefore this variability is not considered to have influenced the BCF results.
v. The BCF of the 0.003 mg/l (1892) supports the predicted metabolism of the substance as is presented in the BCFWIN calculation and Arnot and Gobas of upper trophic levels.

IFF concludes the substance is not B and not vB according to the Annex XIII criteria.

Furthermore, IFF disagrees with the substance being borderline T as presented in the conclusion of the summary and in section 6.2.1.3 where it is presented as inconclusive. The STOT RE is not applicable (as presented by the MSCA) and the lowest NOEC is 0.03 mg/l being clearly above the 0.01 mg/l threshold for aquatic toxicity.

Therefore IFF is of the opinion that at this tonnage level classification and labelling for this substance (H410) presents sufficient risk reduction measures and presenting the substance on the candidate list for potential authorization is disproportional to the hazard and the risk anticipated. In addition, a substance with these characteristics on persistency and toxicity will be restricted by the PEC /PNEC ratios in the aquatic and terrestrial environment when exceeding the 10 tons level.

IFF concludes the substance is not T.

IFF disagrees with the substance being borderline T as presented in the conclusion of the summary and in section 6.2.1.3 where it is presented as inconclusive. The STOT RE is not applicable (personal communication with the Lead Registrant for Karanal and presented by the MSCA in this Annex XV

report) and the lowest NOEC is 0.03 mg/l being clearly above the 0.01 mg/l threshold for aquatic toxicity.

IFF sincerely hopes that these comments, observations and clarifications retain your attention and remain at your full disposal to clarify any of the points covered in this document, should that be necessary.

The corresponding IUCLID dossier is updated with the information of the MSCAs Annex XV report using read across and personal communication of the lead registrant for Karanal to the extent possible. IFF has to re-evaluate the acute toxicity data which may present a data gap for IFF e.g. Daphnia study. In that case IFF needs to gain legal access for data > 10 tons or may need to do testing.

Yours sincerely,

Ing. P.G. Hellewegen

Senior Regulatory Manager – Global Fragrance Product Stewardship

International Flavors & Fragrance

16th April 2015