

Brussels, 19 February 2019

## **Fertilizers Europe comments on the CLH report Proposal for Harmonised Classification and Labelling**

of Boric acid; Diboron trioxide; Tetraboron disodium heptaoxide, hydrate; Disodium tetraborate, anhydrous; Orthoboric acid sodium salt; Disodium tetraborate decahydrate; Disodium tetraborate pentahydrate

(hereafter refer to 'boron substances').

Fertilizers Europe, on behalf of its members, welcomes the opportunity to submit comments on the Swedish Chemicals Agency's CLH report on boron substances, in the course of the Public Consultation opened by ECHA in December 2018.

Fertilizers Europe is aligned with EBA and supports the same arguments and conclusion, asking for a Generic Concentration Limit (GCL) to be applied as boron-based concentration limit –i.e. a GCL of 3% (w/w as boron) - for boron substances as justified by the toxicology and toxicokinetics of boron-substances. Please find below our detailed comments.

### **The proposed change is not motivated by hazard or risk**

The CLH report justifies the need for the change in existing values due to new evaluation of existing data. In the dossier it is stated: "Revising the SCL for the borates will ensure that all borates are assessed similarly and according to the new guidance. It will result in a level playing field in between the borates as well as in relation to other classified substances."

It is not stated in the dossier that the existing harmonized classification and SCLs needs to be changed from a safety perspective. Fertilizer Europe is of the opinion that change in existing SCL should mainly be motivated by safety issues and not due to the establishing of new guidelines (which are not legal requirements).

Following the last evaluation two retrospective studies, one concerning exposure to women during pregnancy and the other concerning effects of boron on semen parameters and reproductive hormone levels in environmentally and occupationally exposed workers have been published. In both studies no adverse effects following high exposure to boron were reported. Today there are therefore no studies showing a relationship between exposure to boron substances and reprotoxic adverse events in humans. Another epidemiological study suggested a relation between lower birth length and higher blood levels of boron in the mother. However, confounding factors in this study does not allow for a clear interpretation and a causal relationship cannot be established.

The lack of any evidence of adverse effect reported in humans suggest that even at high exposure through environment and work, humans will not achieve blood levels of borate/boric acid up to the level to induce adverse effects to fertility or development. Based on this, to implementation of significantly stricter classification limits is not justified and therefore the existing SCL should be maintained.

### **The proposed change is justified by the intent to ensure that all borates are assessed similarly**

At page 18 of the CLH report, the justification for re-evaluating the SCL is stated: “Revising the SCL for the borates will ensure that all borates are assessed similarly and according to the new guidance. It will result in a level playing field in between the borates as well as in relation to other classified substances.”

We agree that it is a good principle to assess the boron substances similarly to achieve a level playing field. However, to ensure a level playing field for the boron substances the concentration limits needs to be related to the borate moiety associated with the adverse effects. On page 24 of the report discussing toxicokinetic it is stated: “It is well established that borates have similar toxicokinetic and toxicological effects and that low concentrations of simple borates will mainly exist as undissociated boric acid in aqueous solutions at physiological and acidic pH. The existing SCLs for boric acid, diboron trioxide and the sodium borates were indeed derived on a boron-equivalent basis and it can therefore be assumed that a similar read-across may be used in the derivation of new concentration limits for the substances.”

The principle to link the concentration limit to the borate moiety rather than to the substance as such is also supported by the calculation in Table 30 on page 33 where the ED10 varies between 56 to 219 mg/kg bw day for fertility and LOAEL between 43 to 166 mg/kg bw day for development. Therefore, in order to achieve a leveled playing field as described in the justification of this proposal, the concentration limits should be based on potency and therefore on content of elemental B rather than on the molecular weight of the substance.

### **The boron substances should fall into the low potency category**

In the CLH report the potency of boron substances has been assessed based on the method recommended in the Guidance on the Application of the CLP Criteria. This method has some methodological restrictions based on a limited data pool and large variations in adverse effects reported and assessed. Because of these limitations and variations, cases by case evaluation will often be necessary and it is important to take into account substance-specific knowledge that is relevant to modify the preliminary potency category.

By the preliminary assessment the boron substances falls into the medium potency category. The CLP guideline recommend modifying factors as means to account for case-specific data but in the CLH report for the boron substances no modifying factors were applied.

In a previous CLH process (2013-2014) on boron substances, evidence from human studies with workers highly exposed to borates through their jobs and with no indication of an impairment of male reproduction, were not taken into account for the proposed harmonised classification as Repr. 2 and the classification as Repr. 1B was maintained.

Since then, two new retrospective studies, one concerning exposed women during pregnancy and the other concerning effects of boron on semen parameters and reproductive hormone levels in environmentally and occupationally exposed workers have been published. In both studies no adverse effects following high exposure to boron were reported. Another epidemiological study suggested a relation between lower birth length and higher blood levels of boron in the mother. However, confounding factors like lithium in this study does not allow for a clear interpretation and a causal relationship cannot be established. Today there are therefore no studies showing a relationship between exposure to boron substances and reprotoxic adverse events in humans and a real risk to human fertility and development has not been established even at high levels of exposure.

The CLP guideline describes that if substance-specific knowledge is available a lower potency class might be assigned. Thus, as the human evidences were disregarded in the setting of the CLH and there are new additional studies supporting and strengthening the pool and applicability of the human data, this data should be taken into account as a modifying factor. Therefore, the final potency group for the boron substances should be low potency (Group 3) resulting in a GCL of 3.