



## **EBA Communication on slime toys and the safety of boron**

The European Borates Association (EBA), representing manufacturers and importers of borate substances in EU, would like to contribute to the debate on the safety of “slime” products made with borates (i.e. boric acid or disodium tetraborate decahydrate), mainly intended to be made and/or used by children. Indeed, over the past months several media around the globe have reported some issues related to health effects of slime products due to the presence of borates. Such allegations are essentially incorrect and have not been based on a rigorous investigation. The EBA would, therefore like to provide some clarification.

### **Key message**

EBA reminds the reader that compliance with the applicable laws in EU on health and safety aspects is a prerequisite for any actor involved in the supply chain of chemical products, notably regarding the restriction (ban) of borates for the general public as per the REACH Regulation (EC 1907/2006) and the provisions of the Directive on the safety of toys (Directive 2009/48/EC).

### **EBA requests compliance notably with the following relevant legislations**

- According to Regulation (EC) 1907/2006<sup>1</sup>, certain borate substances on their own are not allowed to be placed on the market for the general public. It is therefore unacceptable that those borates can be purchased on the internet or retail shops without proper controls. Also, boric acid and borax [disodium tetraborate decahydrate] are not allowed to be placed on the market for supply to the general public in the form of mixtures when their concentration in the mixture is equal to or greater than 5.5% and 8.5%, respectively.
- Directive 2009/48/EC lays down rules on the safety of toys and on their free movement in the European Community. The permitted migration limit that has been set by the authorities for boron in liquid or sticky toy material is 300 mg/kg. It is therefore unacceptable that toys placed on the EU market are in infringement with the law. These toys should be removed from the market by Authorities without undue delay, and controls should be reinforced upstream.

### **The hazardous properties of borates substances as identified by the authorities and industry are:**

- According to the CLP Regulation (EC) 1272/2008, certain borate substances have a harmonised classification as reproductive toxicant category 1B, i.e. may damage fertility and may damage the unborn child.
- Disodium tetraborate decahydrate (borax decahydrate) is in addition classified by the industry as eye irritant Category 2, i.e. causes serious eye irritation.

Contrary to what has been said in some media items, borates are not flammable, are not skin irritants or corrosive, are not acutely toxic and are not hazardous to the environment. Besides the

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<sup>1</sup> Regulation (EC) 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)



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eye irritancy of sodium borate, borates are generally safe for humans. The fertility and developmental effects observed in animals have never been observed in humans. It is also of crucial importance to stress that dermal absorption of boron through intact skin is very low. The plausible routes for humans of exposure to boron are either by ingestion (through improper or misuse) or inhalation (at the workplace environment).

#### **Benefits and uses of boron**

Boron is an essential micronutrient for plants and agricultural crops, and biologically important for higher animals including humans. The primary source of boron for humans is from a healthy diet of fruits and vegetables. Vegetarians have a larger boron intake than non-vegetarians. Studies of dietary deprivation on boron in animals have reported adverse effects (e.g., on growth, and bone calcification) that can be corrected by increasing boron intake. The above demonstrate that in low doses boron does not only have no adverse effects, but it can be beneficial for humans.

#### **For more information:**

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