Australian Government | IChEMS Industrial Chemicals Environmental Management Standard

March 2024

Chemical profile

Boric acid and its precursors

Summary

- Boric acid and borax are used in large volumes in Australia, in a wide range of applications.
- The environmental risk of the chemical was assessed by the National Industrial Chemicals Notification and Assessment Scheme (NICNAS).
- Boric acid and its precursors are mainly used in construction materials, as additives, flame retardants, fire-preventing agents, tanning agents, domestic/cleaning products and for the manufacture of other chemicals.
- Based on these assessed use patterns, the chemicals pose a low risk to aquatic and soil ecosystems.
- The chemicals do not satisfy the criteria for classification for acute or chronic aquatic hazard under the Globally Harmonised System of Classification and Labelling of Chemicals (GHS).
- The chemicals have risk characteristics of a Schedule 2 chemical, as set out in the IChEMS Principles.

End Use

Boric acid and borax are used industrially in construction materials, as additives, flame retardants, fire-preventing agents, tanning agents, in domestic/cleaning products and for the manufacture of other chemicals and products such as glass, fibreglass and porcelain.

Chemical identity

CAS Name	CAS RN	Synonyms
Boric acid (H_3BO_3)	10043-35-3 11113-50-1	boric acid
Boric acid ($H_3B_3O_6$)	13460-51-0	metaboric acid
Boric acid, ($H_2B_8O_{13}$), disodium salt	12008-41-2	disodium octaborate sodium borate
Borax ($Na_2(B_4O_7).10H_2O$)	1303-96-4	disodium tetraborate decahydrate borax boric acid ($H_2B_4O_7$), disodium salt decahydrate Tincal

Table 1 – Chemicals which make up the "boric acid and its precursors" group.

Provisional scheduling outcome rationale

- Boric acid and its precursors were assessed against the IChEMS Principles. The chemicals in this group do not have risk characteristics of a Schedule 3 or higher substance.
- The chemicals in this group will dissociate and/or hydrolyse to release boron as boric acid and/or borate anions (resulting in similar chemical and toxicological properties) which is the basis of the rationale for scheduling them as a group.
- The chemicals in this group contain an inorganic component that is bioavailable but is not likely to be harmful to aquatic life.
- Environmental release resulting from the assessed use is considered to pose a low risk to aquatic and soil ecosystems.
- The chemicals in this group do not satisfy the criteria for classification under the GHS.
- Boric acid and its precursors are proposed to be added to Schedule 2 of the Register.