

BORON COMPOUNDS TEST METHOD SELECTION IN CANDIDATE LIST OF SVHC

Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of the Chemicals (REACH) requires for example that information of certain Substances of Very High Concern (SVHC) is communicated in the supply chain when it is over 0.1% in the article, preparation or substance. For further information please visit [SVHC candidate obligations](#) and [SVHC candidate list](#).

Boric acid, disodium tetraborate (anhydrous) and tetraboron disodium heptaoxide (hydrate) have been placed on the candidate list of SVHC on 18th June, 2010 due to the identification as being substances toxic for reproduction substances.

Diboron trioxide has been placed on the consultation list of SVHC on 27th February, 2012 due to the identification as carcinogenic, mutagenic and toxic for reproduction (CMR) substances.

Sodium perborate; perboric acid, sodium salt and sodium peroxometaborate have been placed on the consultation list of SVHC on 16th June, 2014 due to the identification as being substances toxic for reproduction substances.

There are currently no international test standards available to identify and determine quantitatively the amounts of these SVHC present in consumer products finished articles. After careful consideration of ECHA requirements and thorough research, a SGS in-house screening method has been developed by checking the presence of sodium and boron in the sample. This approach is confirmed as valid according to the recommendation from the ECHA helpdesk. The anhydrous form of disodium tetraborate is evaluated according to ECHA explanation (Ref no.: INC 000000032519).

To even enhance the analytical evidence an extractive confirmation test was developed by SGS in order to distinguish SVHC boron compounds from some other widely used boron containing substances in various applications. This approach makes use of substance specific solubility under certain extraction conditions.

Consequently we offer our clients two options to choose from:

1. ECHA approach: Test total boron and sodium by elemental screening.

The total element content is used to calculate the boron compounds in SVHC candidate list.

2. Enhanced ECHA approach: Test total boron and sodium by elemental screening. In case of positive findings additional confirmation by an extractive approach and calculate the boron compounds in candidate list from extracted contents. (Recommended method, not applicable to raw chemical)

Whenever there is a positive finding, clients are advised to review the chemical formulation as well as the related production process in order to ascertain the material of concern which is present in the article. We would like to inform you that there may be further obligations in connection with REACH for placing articles containing >0.1% SVHC on the markets of EU member states. Please contact reach@sgs.com for further information.

SGS GLOBAL REACH AND RSTS TEAM

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| SUBSTANCE NAME | EC NUMBER | CAS NUMBER |
|-------------------------------------------------|------------|------------|
| Boric acid | 233-139-2 | 10043-35-3 |
| | 234-343-4 | 11113-50-1 |
| Disodium tetraborate (anhydrous) | 215-540-4 | 1303-96-4 |
| | | 1330-43-4 |
| | | 12179-04-3 |
| Tetraboron disodium heptaoxide (hydrate) | 235-541-3 | 12267-73-1 |
| Diboron trioxide | 215-125-8 | 1303-86-2 |
| Sodium perborate; perboric acid, sodium salt | 234-390-0; | -- |
| | 239-172-9 | |
| Sodium peroxometaborate | 231-556-4 | 7632-04-4 |

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