



>>Entry Name: Barium tetrahydroxyborate

Synonym(s): Barium metaborate tetrahydrate

CAS Registry Number: 13701-59-2

$\text{Ba}[\text{B}(\text{OH})_4]_2$

Molecular Formula: $\text{B}_2\text{BaH}_8\text{O}_8$

Molecular Weight: 295.007

Accurate Mass: 295.945762

Percentage Composition: B 7.33%; Ba 46.55%; H 2.73%; O 43.39%

General Statement: Exists as several hydrates of formulation $\text{Ba}[\text{B}(\text{OH})_4]_2 \cdot n\text{H}_2\text{O}$ or $\text{BaO} \cdot \text{B}_2\text{O}_3 \cdot (n+2)\text{H}_2\text{O}$

>>Derivative: Monohydrate

Synonym(s): Barium tetrahydroxyborate hydrate. Barium metaborate pentahydrate. Barium diborate pentahydrate

CAS Registry Number: 20712-54-3

Molecular Formula: $\text{B}_2\text{BaH}_{10}\text{O}_9$

Molecular Weight: 313.023

Accurate Mass: 313.956327

Percentage Composition: B 6.91%; Ba 43.87%; H 3.22%; O 46.00%

Use/Importance: Component of flame retardants; fungicide

Physical Description: Colourless cryst.

Solubility: Sol. H_2O

Other Data: May also be formulated as $\text{Ba}(\text{BO}_2)_2 \cdot 5\text{H}_2\text{O}$ or $\text{BaO} \cdot \text{B}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$

References:

Ozols, J. *et al.*, *Zh. Neorg. Khim.*, 1957, **2**, 2473, (*synth, monohydrate*)

Kutschabsky, L., *Acta Cryst. B*, 1969, **25**, 1811, (*cryst struct, monohydrate*)

Ferguson, A. *et al.*, *Chem. Econ. Handb.*, "Boron Minerals and Chemicals", Stanford Res. Inst., USA, 1977, 717.1000A