



>>Entry Name: Potassium triborate (K₃B₃O₆)

Synonym(s): Potassium metaborate. Boric acid (HBO₂) potassium salt, 8Cl

CAS Registry Number: 13709-94-9

K₃B₃O₆

Molecular Formula: B₃K₃O₆

Molecular Weight: 245.724

Accurate Mass: 245.888526

³⁽⁻⁾ anions

Source/Synthesis: Synth. by melting together KO₂ and B₂O₃ in molar ratio (2:1)

Use/Importance: Used in photographic bleaching solns.

Physical Description: Colourless hexagonal cryst.

Melting Point: Mp 947°

Solubility: Sol. H₂O

Other Data: $\Delta H_f^\circ -996 \text{ kJ mol}^{-1}$; $\Delta G_f^\circ -937 \text{ kJ mol}^{-1}$; $S^\circ 80 \text{ J K}^{-1} \text{ mol}^{-1}$

>>Derivative: "Monomer"

Synonym(s): Potassium metaborate (KBO₂)

Molecular Formula: BKO₂

Molecular Weight: 81.908

Accurate Mass: 81.962842

Percentage Composition: B 13.20%; K 47.73%; O 39.07%

References:

Zachariasen, W.H., *J. Chem. Phys.*, 1937, **5**, 919, (*cryst struct*)

Hart, P.B. *et al.*, *J. Inorg. Nucl. Chem.*, 1962, **24**, 1047, (*ir*)

Tolédano, P., *Rev. Chim. Miner.*, 1964, **1**, 353, (*synth*)

Epperlein, B.W. *et al.*, *Z. Naturforsch., A*, 1975, **30**, 955, (*B-10 nmr, B-11 nmr*)

Chase, M.W. *et al.*, *J. Phys. Chem. Ref. Data*, 1985, **14**, 238, (*thermochem data*)

Skvortsov, V.G., *Zh. Neorg. Khim.*, 1985, **30**, 2341, (*uv*)