



>>Entry Name: Silver(1+) tetrafluoroborate

Synonym(s): Silver fluoboride

CAS Registry Number: 14104-20-2

Ag[BF₄]

Molecular Formula: AgBF₄

Molecular Weight: 194.673

Accurate Mass: 193.908009

Percentage Composition: Ag 55.41%; B 5.55%; F 39.04%

Source/Synthesis: Prepd. by reaction of BF₃ with AgF in MeNO₂ or C₆H₆

Use/Importance: Catalyst in org. synth. Commercially available

Physical Description: Deliquescent white cryst.

Solubility: V. sol. H₂O, Et₂O, toluene, MeNO₂; mod. sol. C₆H₆, cyclohexene; insol. cyclohexane

Hazard & Toxicity: Poisonous

Aldrich: 20836-1

Fluka: 85300

Sigma: S2273

References:

Sharpe, A.G., *J.C.S.*, 1952, 4538, (*synth*)

Olah, G.A. *et al.*, *J. Inorg. Nucl. Chem.*, 1960, **14**, 295, (*synth*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1967, **1**, 1015, (*synth, use*)

Clark, J.B. *et al.*, *Z. Phys. Chem. (Munich)*, 1974, **88**, 242, (*cryst struct, polymorphs*)

Sears, R.E.J., *J. Chem. Phys.*, 1980, **72**, 2888, (*F-19 nmr*)

Padma, D.K., *Synth. React. Inorg. Met.-Org. Chem.*, 1988, **18**, 401, (*synth*)

Encyclopaedia of Reagents for Organic Synthesis, (ed. Paquette, L.A.), Wiley, 1995, **6**, 4472-4474, (*rev, use*)

Synthetic Methods of Organometallic and Inorganic Chemistry, (ed. Hermann, W.A.), Thieme, 1997, **8**, 19-20, (*synth*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, SDN000