



>>Entry Name: Lithium ethoxide

Synonym(s): Ethanol lithium salt, 9Cl. Ethyl alcohol lithium salt, 8Cl. Ethoxylithium

CAS Registry Number: 2388-07-0

LiOEt

Molecular Formula: C₂H₅LiO

Molecular Weight: 52.002

Accurate Mass: 52.050043

Percentage Composition: C 46.19%; H 9.69%; Li 13.35%; O 30.77%

Source/Synthesis: Prepd. by dissolution of Li metal in excess EtOH; isol. and purif. by vacuum sublimation

Use/Importance: Component of polym. and dehydrochlorination catalysts. Nucleophilic substitution reagent. Lithiation reagent. Forms complexes with EtLi in hydrocarbon solvs.

Physical Description: Colourless powder. Moisture sensitive. Reacts with H₂O to form LiOH and EtOH. Reacts with acidic protons to form the corresp. Li salts. Dec. on heating in a complex reaction giving H₂ and C₂H₄

Solubility: Sol. EtOH (12.5 g per 100 cm³ at 24°, 18.2 g per 100 cm³ at 70°); spar. sol. heptane (0.26 g per 100 cm³ at 26°), pentane, Et₂O

Other Data: $\Delta H_f^\circ -532 \text{ kJ mol}^{-1}$

Aldrich: 40020-3

Fluka: 62494

Other: Gelest AKL458

References:

Siminov, A.P. *et al.*, *Dokl. Akad. Nauk SSSR, Ser. Khim.*, 1961, **136**, 634, (*soln ir*)

Talalaeva, T.V. *et al.*, *Izv. Akad. Nauk SSSR, Ser. Khim.*, 1964, 638, (*synth*)

Bains, M.S., *CA*, 1965, **63**, 10706b, (*synth, pmr*)

Kamienski, C.W. *et al.*, *J.O.C.*, 1965, **30**, 3498, (*soly*)

Brown, T.L. *et al.*, *J. Organomet. Chem.*, 1965, **3**, 1, (*complex formn, ir, Li-7 nmr*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1967, **1**, 612, (*use*)

Turova, N.Ya. *et al.*, *Izv. Akad. Nauk SSSR, Ser. Khim.*, 1970, 752, (*soly, props*)

Blanchard, J.M. *et al.*, *J. Chim. Phys. Phys.-Chim. Biol.*, 1974, **71**, 472, (*thermochem data*)

Blanchard, J.M. *et al.*, *J. Therm. Anal.*, 1976, **9**, 191, (*thermal dec*)