



>>Entry Name: Pentaethoxyniobium(V)

Synonym(s): Niobium ethoxide

CAS Registry Number: 3236-82-6

Nb(OEt)₅

Molecular Formula: C₁₀H₂₅NbO₅

Molecular Weight: 318.211

Accurate Mass: 318.076577

Percentage Composition: C 37.75%; H 7.92%; Nb 29.20%; O 25.14%

Source/Synthesis: Synth. from a suspension of NbCl₅ and EtOH in C₆H₆ satd. with NH₃

Use/Importance: Commercially available. Intermediate for piezoelectric LiNbO₃ films and sol-gel perovskites. Forms ferroelectric films with Sr and Ba alkoxides

Physical Description: Colourless liq.

Melting Point: Mp 5-6°

Boiling Point: Bp 203°. Bp_{0.1} 140-142°

Solubility: Sol. petrol

Hazard & Toxicity: Fl. p. 74°

Aldrich: 33920-2

Fluka: 72518

Other: Gelest AKN590

>>Derivative: Dimer

Synonym(s): Di-μ-ethoxyoctaethoxydiniobium

Molecular Formula: C₂₀H₅₀Nb₂O₁₀

Molecular Weight: 636.422

Accurate Mass: 636.153154

Percentage Composition: C 37.75%; H 7.92%; Nb 29.20%; O 25.14%

References:

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **3**, 743C, (*nmr*)

Barraclough, C.G. *et al.*, *J.C.S.*, 1961, 2601, (*ir*)

Jahr, K.F. *et al.*, *Chem. Ber.*, 1963, **96**, 2472, (*synth*)

Bradley, D.C. *et al.*, *Proc. Symp. Coord. Chem.*, 3rd, 1964, 309; *CA*, **65**, 1593e, (*ir*)

Xu, R. *et al.*, *J. Mater. Res.*, 1990, **5**, 916-918, (*use*)