>>**Entry Name: Aluminium *tert*-butoxide**
Synonym(s): 2-Methyl-2-propanol aluminium salt, $_{9Cl}$. *tert*-Butyl alcohol aluminium salt, $_{8Cl}$. Aluminium 2-methyl-2-propoxide

CAS Registry Number: 556-91-2
$Al[OC(CH_3)_3]_3$

Molecular Formula: $C_{12}H_{27}AlO_3$
Molecular Weight: 246.325
Accurate Mass: 246.177559
Percentage Composition: C 58.51%; H 11.05%; Al 10.95%; O 19.49%
General Statement: Dimeric in C_6H_6
Other Data: Traces of moisture or alcohols cause melting at 160-200°. $Al_2(NMe_2)(OBu^t)_5$ also descr.

Aldrich: 23584-9
Fluka: 6201
Other: Gelest AKA030

>>**Derivative:** Dimer

Molecular Formula: $C_{24}H_{54}Al_2O_6$
Molecular Weight: 492.65
Accurate Mass: 492.355118
Percentage Composition: C 58.51%; H 11.05%; Al 10.95%; O 19.49%
Source/Synthesis: Synth. from $Al_2(NMe_2)_6$ and Bu^tOH in C_6H_6
Use/Importance: Condensing agent. Reagent for the Oppenauer oxidn. of alcohols to carbonyl compds.
Physical Description: Colourless cryst. (toluene)
Melting Point: Mp 300° (sealed tube)
Boiling Point: Subl. 180°

>>**Derivative:** $NHMe_2$ complex

Molecular Formula: $C_{14}H_{34}AlNO_3$
Molecular Weight: 291.409
Percentage Composition: C 57.70%; H 11.76%; Al 9.26%; N 4.81%; O 16.47%
Physical Description: Moisture-sensitive white cryst. (toluene)
Other Data: $Subl._{0.1}$ 40-50°

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 1281A, *(ir)*
Mehrotra, R.C., *J. Indian Chem. Soc.*, 1953, **30**, 585, *(synth)*
Coffey, S. *et al.*, *J.C.S.*, 1954, 2468, *(synth)*
Org. Synth., Coll. Vol., 3, 1955, 48, *(synth)*
Shiner, V.J. *et al.*, *J.A.C.S.*, 1963, **85**, 2318, *(pmr, struct)*
Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1967, **1**, 23
Kozlova, I.K. *et al.*, *CA*, 1968, **70**, 3179, *(synth)*
Chisholm, M.H. *et al.*, *Inorg. Chem.*, 1991, **30**, 1020, *(synth, cryst struct)*