



>>Entry Name: Tetrakis(2-propanolato)aluminate(1-)

Synonym(s): Tetraisopropoxyaluminate(1-)



Molecular Formula: $\text{C}_{12}\text{H}_{28}\text{AlO}_4^{(-)}$

Molecular Weight: 263.332

Accurate Mass: 263.180299

Percentage Composition: C 54.73%; H 10.72%; Al 10.25%; O 24.30%

>>Derivative: Li salt

CAS Registry Number: 58790-57-1

Molecular Formula: $\text{C}_{12}\text{H}_{28}\text{AlLiO}_4$

Molecular Weight: 270.273

Percentage Composition: C 53.33%; H 10.44%; Al 9.98%; Li 2.57%; O 23.68%

Source/Synthesis: Synth. from LiAlH_4 + Pr^iOH in Et_2O

Physical Description: Moisture-sensitive white cryst.

>>Derivative: Na salt

CAS Registry Number: 41139-22-4

Molecular Formula: $\text{C}_{12}\text{H}_{28}\text{AlNaO}_4$

Molecular Weight: 286.322

Percentage Composition: C 50.34%; H 9.86%; Al 9.42%; Na 8.03%; O 22.35%

Source/Synthesis: Synth. from Na, Pr^iOH and $\text{Al}(\text{OPr}^i)_3$

Physical Description: Moisture-sensitive white powder

>>Derivative: K salt

CAS Registry Number: 42572-61-2

Molecular Formula: $\text{C}_{12}\text{H}_{28}\text{AlKO}_4$

Molecular Weight: 302.431

Percentage Composition: C 47.66%; H 9.33%; Al 8.92%; K 12.93%; O 21.16%

Source/Synthesis: Synth. from K, Pr^iOH , and $\text{Al}(\text{OPr}^i)_3$

Physical Description: Moisture-sensitive white solid

>>Derivative: Mg salt (2:1)

CAS Registry Number: 69207-83-6

Molecular Formula: $\text{C}_{24}\text{H}_{56}\text{Al}_2\text{MgO}_8$

Molecular Weight: 550.97

Percentage Composition: C 52.32%; H 10.24%; Al 9.79%; Mg 4.41%; O 23.23%

Source/Synthesis: Synth. from Mg, $\text{Al}(\text{OPr}^i)_3$ and Pr^iOH

Use/Importance: Spinal precursor

Physical Description: Moisture-sensitive white solid

>>Derivative: Ca salt (2:1)

CAS Registry Number: 23275-27-6

Molecular Formula: $\text{C}_{24}\text{H}_{56}\text{Al}_2\text{CaO}_8$

Molecular Weight: 566.743

Percentage Composition: C 50.86%; H 9.96%; Al 9.52%; Ca 7.07%; O 22.58%

Physical Description: Moisture-sensitive white powder

References:

Brown, H.C. *et al.*, *J.A.C.S.*, 1958, **80**, 5372, (*synth*)

Abdel Kader, M.H. *et al.*, *Chem. Ber.*, 1970, **103**, 1225, (*ir*)

Jain, N.C. *et al.*, *Indian J. Chem., Sect. A*, 1976, **14**, 256; *CA*, **85**, 83802, (*titrations*)

Turova, N.Ya. *et al.*, *Inorg. Chim. Acta*, 1977, **21**, 157, (*synth*)

Rai, J. *et al.*, *Main Group Met. Chem.*, 1992, **15**, 209, (*ir, nmr, Ca salt*)

Meese-Marktscheffel, J.A. *et al.*, *Chem. Mater.*, 1993, 755, (*synth, pmr, cmr, ms, Mg salt*)

Meese-Marktscheffel, J.A. *et al.*, *Inorg. Chem.*, 1993, **32**, 5894, (*cryst struct, pmr, cmr, ms, Na salt, K salt*)

Rai, J. *et al.*, *J. Non-Cryst. Solids*, 1993, **152**, 118, (*synth, Mg salt*)

Sassmannshausen, J. *et al.*, *Z. Naturforsch., B*, 1993, **48**, 7, (*cryst struct, Mg salt*)