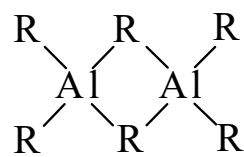




>>>Entry Name: Trimethylaluminium, 9CI

Synonym(s): Trimethylalane. Aluminium trimethyl



dimer

R = Me

CAS Registry Number: 75-24-1

Molecular Formula: C₃H₉Al

Molecular Weight: 72.086

Accurate Mass: 72.051964

Percentage Composition: C 49.99%; H 12.58%; Al 37.43%

Aldrich: 26856-9

Fluka: 92247

>>>Derivative: Dimer

Synonym(s): Di-μ-methyltetramethyldialuminium. Hexamethyldialuminium

CAS Registry Number: 15632-54-9

Molecular Formula: C₆H₁₈Al₂

Molecular Weight: 144.171

Accurate Mass: 144.103928

Percentage Composition: C 49.99%; H 12.58%; Al 37.43%

Source/Synthesis: Synth. from Me₃Al₂Cl₃ and Na

Use/Importance: Commercially available. With TiCl₄, reagent for nucleophilic alkylation e.g. in stereospecific synth. of 1,1-dialkylglycosides. Methylating agent for tertiary alcohols, ketones, etc.

Physical Description: Colourless liq.

Melting Point: Mp 15.4°

Boiling Point: Bp 130°. Bp₈ 20°

Density: d²⁰ 0.752

Other Data: Dec. on heating with elimination of CH₄

Hazard & Toxicity: Causes burns. Explodes with H₂O. Pyrophoric

>>>Derivative: NH₃ complex

Synonym(s): Amminetrimethylaluminium, 10CI

CAS Registry Number: 20775-95-5

Molecular Formula: C₃H₁₂AlN

Molecular Weight: 89.116

Accurate Mass: 89.078513

Percentage Composition: C 40.43%; H 13.57%; Al 30.28%; N 15.72%

Source/Synthesis: Synth. from the parent and NH₃ in hexane

Physical Description: Air- and moisture-sensitive colourless cryst.

Boiling Point: Bp_{0.001} 30°

Solubility: Sol. CH₂Cl₂, C₆H₆

>>>Derivative: NMe₂H complex

CAS Registry Number: 20775-94-4

Molecular Formula: C₅H₁₆AlN

Molecular Weight: 117.17

Accurate Mass: 117.109813

Percentage Composition: C 51.25%; H 13.76%; Al 23.03%; N 11.95%

Physical Description: White solid

Melting Point: Mp 51°

Other Data: On heating gives (Me₂AlNMe₂)₂