



Al (<5% impurities). High deposition rates can be achieved. Low resistivity of deposits ($6.5 \mu\Omega\text{cm}$). Can be used for direct writing of Al lines for IC rewiring applications on GaAs. Precursor to AlN for use in MOCVD processes in an NH_3 atmosphere

Physical Description: White cryst.

Melting Point: Mp 95°

Other Data: Trigonal pyramidal at Al. Dec. into 1:1 complex $>0^\circ$

Aldrich: 47065-1

>> **Derivative:** Me_3N complex (2:2)

CAS Registry Number: 145425-34-9

Molecular Formula: $\text{C}_6\text{H}_{24}\text{Al}_2\text{N}_2$

Molecular Weight: 178.232

Accurate Mass: 178.157026

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

Source/Synthesis: Synth. from LiAlH_4 and $[\text{Me}_3\text{NH}]\text{Cl}$

Physical Description: V. air- and moisture-sensitive white solid

Melting Point: Mp 76°

>> **Derivative:** Et_3N complex (1:1)

CAS Registry Number: 12076-08-3

Molecular Formula: $\text{C}_6\text{H}_{18}\text{AlN}$

Molecular Weight: 131.196

Accurate Mass: 131.125463

Percentage Composition: C 54.93%; H 13.83%; Al 20.57%; N 10.68%

Source/Synthesis: Synth. from $[\text{Et}_3\text{NH}]\text{Cl}$ and LiAlH_4

Physical Description: Air- and moisture-sensitive white liq.

Melting Point: Mp $13-15^\circ$

>> **Derivative:** Me_2EtN complex (1:1)

Synonym(s): DMEAA

CAS Registry Number: 124330-23-0

Molecular Formula: $\text{C}_4\text{H}_{14}\text{AlN}$

Molecular Weight: 103.143

Accurate Mass: 103.094163

Percentage Composition: C 46.58%; H 13.68%; Al 26.16%; N 13.58%

Source/Synthesis: Synth. from Me_2EtNHCl + LiAlH_4

Use/Importance: Precursor for chem. vapour deposition of Al thin films

Physical Description: Stable liq.

Melting Point: Mp 5°