



>>Entry Name: Dichloroethylaluminium, 9Cl

Synonym(s): Dichloroethylalane. Ethylaluminium dichloride

CAS Registry Number: 563-43-9

As Dibromomethylaluminium, JKQ47-F with
R = Et, X = Cl

Molecular Formula: C₂H₅AlCl₂

Molecular Weight: 126.948

Accurate Mass: 125.958368

Percentage Composition: C 18.92%; H 3.97%; Al 21.25%; Cl 55.85%

General Statement: Dimeric

Use/Importance: Commercially available

Other Data: Both Lewis acid and Brønsted base. Compds. with R = Bu, octyl, decyl or Bu^t also descr.

Hazard & Toxicity: Powerful irritant. Ignites in air. Reacts violently with a range of materials

Aldrich: 25693-5

Fluka: 46075

>>Derivative: Dimer

Synonym(s): Di-μ-chlorodichlorodiethyldialuminium. Tetrachlorodiethyldialuminium

Molecular Formula: C₄H₁₀Al₂Cl₄

Molecular Weight: 253.897

Accurate Mass: 251.916736

Percentage Composition: C 18.92%; H 3.97%; Al 21.25%; Cl 55.85%

Source/Synthesis: Synth. from Et₃Al₂Cl₃ and AlCl₃

Physical Description: Transparent plates (pentane)

Boiling Point: Bp₅₀ 113°. Bp₅ 60°

Solubility: Sol. C₆H₆, Et₂O, pentane

>>Derivative: Et₂O complex

Molecular Formula: C₆H₁₅AlCl₂O

Molecular Weight: 201.071

Accurate Mass: 200.031533

Percentage Composition: C 35.84%; H 7.52%; Al 13.42%; Cl 35.26%; O 7.96%

Boiling Point: Bp_{5.5} 122-130°

>>Derivative: 1,4-Dioxan complex (2:1)

Synonym(s): Tetrachloro[μ-(1,4-dioxane-*O*¹:*O*⁴)]diethyldialuminium

CAS Registry Number: 31724-15-9

Molecular Formula: C₈H₁₈Al₂Cl₄O₂

Molecular Weight: 342.003

Accurate Mass: 339.969166

Percentage Composition: C 28.10%; H 5.30%; Al 15.78%; Cl 41.46%; O 9.36%

Melting Point: Mp 118-120°

Boiling Point: Bp₂ 135-137°

>>Derivative: Triphenylphosphine complex (1:1)

Synonym(s): Dichloroethyl(triphenylphosphine)aluminium

CAS Registry Number: 24507-92-4

Molecular Formula: C₂₀H₂₀AlCl₂P

Molecular Weight: 389.239

Accurate Mass: 388.049505

Percentage Composition: C 61.72%; H 5.18%; Al 6.93%; Cl 18.22%; P 7.96%

Use/Importance: Homogeneous catalyst for dimerisation, codimerisation, polym. and copolymerisation of C₂-C₁₅ monoolefins