



>>Entry Name: Diethylmagnesium, 10Cl, 9Cl, 8Cl

Synonym(s): Magnesium diethyl

CAS Registry Number: 557-18-6

MgEt₂

Molecular Formula: C₄H₁₀Mg

Molecular Weight: 82.428

Accurate Mass: 82.063292

Percentage Composition: C 58.29%; H 12.23%; Mg 29.49%

General Statement: Polymeric

Source/Synthesis: Synth. by dioxan pptn. from EtMgBr or from HgEt₂ + Mg

Physical Description: Solid

Melting Point: Mp 176 dec.°

Hazard & Toxicity: Pyrophoric. Ethereal soln. or solid ignited by H₂O

>>Derivative: TMED complex

CAS Registry Number: 94485-42-4

Molecular Formula: C₁₀H₂₆MgN₂

Molecular Weight: 198.634

Accurate Mass: 198.19464

Percentage Composition: C 60.47%; H 13.19%; Mg 12.24%; N 14.10%

Physical Description: Colourless platelets (Et₂O or dioxan)

>>Derivative: PMDET complex

CAS Registry Number: 154798-20-6

Molecular Formula: C₁₃H₃₃MgN₃

Molecular Weight: 255.729

Accurate Mass: 255.252489

Percentage Composition: C 61.06%; H 13.01%; Mg 9.50%; N 16.43%

Physical Description: Colourless cryst. (Et₂O)

>>Derivative: 18-Crown-6 complex

CAS Registry Number: 114692-56-7

Molecular Formula: C₁₆H₃₄MgO₆

Molecular Weight: 346.746

Accurate Mass: 346.220582

Percentage Composition: C 55.42%; H 9.88%; Mg 7.01%; O 27.68%

Physical Description: Rectangular monoclinic cryst. (toluene)

Melting Point: Mp 114°

Solubility: Spar. sol. C₆H₆

Other Data: Has threaded struct.

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

CAS Registry Number: 93842-25-2

Molecular Formula: C₄₈H₁₀₄Mg₄N₄O₁₀

Molecular Weight: 994.59

Accurate Mass: 992.715414

Percentage Composition: C 57.97%; H 10.54%; Mg 9.77%; N 5.63%; O 16.09%

Physical Description: Cryst. (THF/pentane)

Other Data: Formulated as [EtMg(2,2,1-cryptand)⁽⁺⁾]₂[Et₆Mg₂]²⁽⁻⁾ salt

>>Derivative: 1,3-Dimesitylimidazol-2-ylidene complex

CAS Registry Number: 153711-59-2

Molecular Formula: C₂₅H₃₄MgN₂

Molecular Weight: 386.862

Accurate Mass: 386.25724

Percentage Composition: C 77.62%; H 8.86%; Mg 6.28%; N 7.24%

Source/Synthesis: Synth. from the parent compd. and 1,3-dimesitylimidazol-2-ylidene

Use/Importance: Exemplifies complex with nucleophilic carbene

Physical Description: Colourless monoclinic cryst. (C₆H₆)

Melting Point: Mp 360-363°

Other Data: Forms a dimer in the solid state through bridging of one Et substit. from each Mg centre. A monomeric 1,3-di-1-adamantyl analogue also descr.