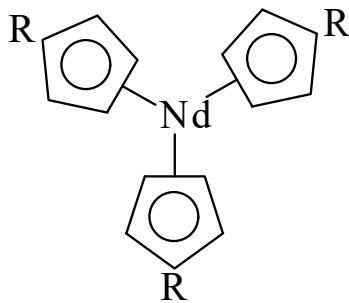




>>Entry Name: Tris(η^5 -2,4-cyclopentadien-1-yl)neodymium, 9Cl

Synonym(s): Tri- π -cyclopentadienylneodymium, 8Cl



R = H

CAS Registry Number: 1273-98-9

Molecular Formula: C₁₅H₁₅Nd

Molecular Weight: 339.524

Accurate Mass: 337.025094

Percentage Composition: C 53.06%; H 4.45%; Nd 42.48%

Source/Synthesis: Synth. from NdCl₃ and NaCp in THF

Use/Importance: With NaH, reagent for redn. of alkenes via hydrometallation. Cleaved with RLi to afford bis(cyclopentadienyl)alkyl compds. With BuLi forms cyclopentadienylneodymium hydrides

Physical Description: Reddish-blue cryst. (by subl.)

Melting Point: Mp 380°

Boiling Point: Subl._{0.0001} 220°

Solubility: Sol. THF

Other Data: Hydrol. by H₂O. μ_{eff} = 3.63 μ_{B} (295K)

>>Derivative: MeCN complex

CAS Registry Number: 114269-15-7

Molecular Formula: C₁₇H₁₈NNd

Molecular Weight: 380.576

Accurate Mass: 378.051643

Percentage Composition: C 53.65%; H 4.77%; N 3.68%; Nd 37.90%

Source/Synthesis: Synth. from TiCp, Nd and MeCN at 25°

Physical Description: Pale blue cryst.

Solubility: Sol. THF, MeCN

>>Derivative: THF complex

CAS Registry Number: 84270-65-5

Molecular Formula: C₁₉H₂₃NdO

Molecular Weight: 411.63

Accurate Mass: 409.082609

Percentage Composition: C 55.44%; H 5.63%; Nd 35.04%; O 3.89%

Source/Synthesis: Synth. from BuLi and NdCp₃ in THF

Physical Description: Air- and moisture-sensitive pale violet cryst.

Solubility: Sol. THF

>>Derivative: Py complex

CAS Registry Number: 114269-12-4

Molecular Formula: C₂₀H₂₀NNd

Molecular Weight: 418.625

Accurate Mass: 416.067293

Percentage Composition: C 57.38%; H 4.82%; N 3.35%; Nd 34.46%

Source/Synthesis: Synth. from TiCp, Nd/Py and 0.1g Hg at 90°

Physical Description: Light blue cryst.

Solubility: Sol. Py