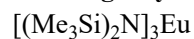




>>Entry Name: Tris[bis(trimethylsilyl)amido]europium(III)

CAS Registry Number: 35789-02-7



Molecular Formula: $\text{C}_{18}\text{H}_{54}\text{EuN}_3\text{Si}_6$

Molecular Weight: 633.123

Accurate Mass: 633.214559

Percentage Composition: C 34.15%; H 8.60%; Eu 24.00%; N 6.64%; Si 26.62%

Source/Synthesis: Synth. from EuCl_3 and $\text{LiN}(\text{SiMe}_3)_2$ in THF

Physical Description: V. air- and moisture-sensitive orange cryst.

Melting Point: Mp 159-162°

Boiling Point: $\text{Bp}_{0.0001}$ 82-83°

Solubility: Sol. pentane, THF

>>Derivative: Me_3PO complex

Molecular Formula: $\text{C}_{21}\text{H}_{63}\text{EuN}_3\text{OPSi}_6$

Molecular Weight: 725.2

Accurate Mass: 725.253661

Percentage Composition: C 34.78%; H 8.76%; Eu 20.95%; N 5.79%; O 2.21%; P 4.27%; Si 23.24%

Source/Synthesis: Synth. from parent compd. and Me_3PO in C_6H_6

Physical Description: Moisture-sensitive yellow-orange cryst.

Melting Point: Mp 158-162°

Solubility: Sol. pentane, toluene

Other Data: Loses Me_3PO on heating *in vacuo*. Nmr evidence of restricted rotation of ligands below -50°

>>Derivative: Bis- Me_3PO complex

Molecular Formula: $\text{C}_{24}\text{H}_{72}\text{EuN}_3\text{O}_2\text{P}_2\text{Si}_6$

Molecular Weight: 817.277

Accurate Mass: 817.292763

Percentage Composition: C 35.27%; H 8.88%; Eu 18.59%; N 5.14%; O 3.92%; P 7.58%; Si 20.62%

Physical Description: Moisture-sensitive red-orange cryst.

Solubility: Sol. toluene

Other Data: Dec. at 115°

>>Derivative: Ph_3PO complex

CAS Registry Number: 64459-88-7

Molecular Formula: $\text{C}_{36}\text{H}_{69}\text{EuN}_3\text{OPSi}_6$

Molecular Weight: 911.412

Accurate Mass: 911.300611

Percentage Composition: C 47.44%; H 7.63%; Eu 16.67%; N 4.61%; O 1.76%; P 3.40%; Si 18.49%

Physical Description: Moisture-sensitive orange-yellow cryst.

Melting Point: Mp 141-144°

Solubility: Sol. C_6H_6 , pentane

Other Data: Loses Ph_3PO at 85-100°/ 10^{-4} mm

References:

Ghotra, J.S. *et al.*, *Chem. Comm.*, 1973, 669, (*cryst struct*)

Bradley, D.C. *et al.*, *J.C.S. Dalton*, 1973, 1021; 1977, 1166, (*synth, ms, pmr, uv, Ph₃PO deriv*)

Bradley, D.C. *et al.*, *Polyhedron*, 1982, **1**, 307, (*synth, derivs, pmr, ir*)