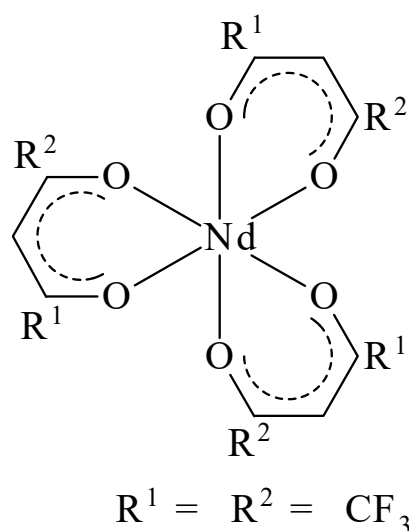




>>Entry Name: Tris(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-*O,O'*)neodymium(III), 9Cl

Synonym(s): Tris(hexafluoroacetylacetonato)neodymium(III). Neodymium(III) hexafluoroacetylacetonate. Nd(hfac)₃



CAS Registry Number: 47814-18-6

Molecular Formula: C₁₅H₃F₁₈NdO₆

Molecular Weight: 765.396

Accurate Mass: 762.871938

Percentage Composition: C 23.54%; H 0.40%; F 44.68%; Nd 18.85%; O 12.54%

Physical Description: V. hygroscopic lavender-coloured cryst.

Melting Point: Mp 141-142°

Solubility: Sol. Et₂O, MeOH

Other Data: Uncertain whether anhyd. Forms adducts with Lewis bases

Other: Gelest AKN554

>>Derivative: Trihydrate

CAS Registry Number: 18911-48-3

Molecular Formula: C₁₅H₉F₁₈NdO₉

Molecular Weight: 819.442

Percentage Composition: C 21.99%; H 1.11%; F 41.73%; Nd 17.60%; O 17.57%

Physical Description: Lavender cryst.

Melting Point: Mp 115-121 dec.°

>>Derivative: Bis-tributylphosphine oxide complex

CAS Registry Number: 98645-55-7

Molecular Formula: C₃₉H₅₇F₁₈NdO₈P₂

Molecular Weight: 1202.033

Accurate Mass: 1199.231842

Percentage Composition: C 38.97%; H 4.78%; F 28.45%; Nd 12.00%; O 10.65%; P 5.15%

Use/Importance: Volatility allows separation from other lanthanides by g.c.

Physical Description: Cryst.

Melting Point: Mp 224-229°

References:

Morris, M.L. *et al.*, *Inorg. Chem.*, 1962, **2**, 410, (*synth, ir*)

Berg, E.W. *et al.*, *Anal. Chim. Acta*, 1968, **40**, 101, (*synth*)

Richardson, M.F. *et al.*, *Inorg. Chem.*, 1971, **10**, 1298, (*synth*)

Gmelin Handbook Inorg. Chem., Syst. No. 39, 1981, **D3**, 105, (*rev*)

Hellmuth, K.H. *et al.*, *Fresenius' Z. Anal. Chem.*, 1985, **321**, 123, (*complex*)