



>>Entry Name: Tris(2,2,6,6-tetramethyl-3,5-heptanedionato-*O,O'*)thulium(*III*)

Synonym(s): Tris(dipivaloylmethanido)thulium

CAS Registry Number: 15631-58-0

As Tris(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-*O,O'*)thulium(*III*), [HQZ53-R](#) with
 $R^1 = R^2 = C(CH_3)_3$

Molecular Formula: $C_{33}H_{57}O_6Tm$

Molecular Weight: 718.744

Accurate Mass: 718.349727

Percentage Composition: C 55.15%; H 7.99%; O 13.36%; Tm 23.50%

Physical Description: White cryst.

Melting Point: Mp 171.5-173.5° (170-173°)

Solubility: Sol. C_6H_6 , $CHCl_3$, CCl_4 , hexane, EtOH, MeOH, EtOAc

Other Data: Paramagnetic; $\mu_{eff} = 7.2\mu_B$

Aldrich: 43628-3

Other: Gelest AKT840.5

>>Derivative: Py complex

Synonym(s): (Pyridine)tris(2,2,6,6-tetramethyl-3,5-heptanedionato-*O,O'*)thulium(*III*)

CAS Registry Number: 33135-16-9

Molecular Formula: $C_{38}H_{62}NO_6Tm$

Molecular Weight: 797.845

Accurate Mass: 797.391926

Percentage Composition: C 57.21%; H 7.83%; N 1.76%; O 12.03%; Tm 21.17%

Physical Description: White cryst.

Melting Point: Mp 134-136°

Solubility: Sol. Py, C_6H_6

>>Derivative: Bipy complex

Synonym(s): (2,2'-Bipyridine)tris(2,2,6,6-tetramethyl-3,5-heptanedionato-*O,O'*)thulium(*III*)

CAS Registry Number: 33135-17-0

Molecular Formula: $C_{43}H_{65}N_2O_6Tm$

Molecular Weight: 874.93

Accurate Mass: 874.418475

Percentage Composition: C 59.03%; H 7.49%; N 3.20%; O 10.97%; Tm 19.31%

Physical Description: Light yellow cryst.

Melting Point: Mp 189-193°

Solubility: Sol. CCl_4 , hexane

>>Derivative: Phen complex

Synonym(s): (1,10-Phenanthroline- $N^1,N^{10'}$)tris(2,2,6,6-tetramethyl-3,5-heptanedionato-*O,O'*)thulium(*III*)

CAS Registry Number: 33135-18-1

Molecular Formula: $C_{45}H_{65}N_2O_6Tm$

Molecular Weight: 898.952

Accurate Mass: 898.418475

Percentage Composition: C 60.12%; H 7.29%; N 3.12%; O 10.68%; Tm 18.79%

Physical Description: Light yellow cryst.

Melting Point: Mp 235-239°

Solubility: Sol. CCl_4 , hexane

Other Data: $\mu_{eff} = 7.2\mu_B$

References:

Eisentraut, K.J. *et al.*, *J.A.C.S.*, 1965, **87**, 5254, (*synth, ir*)

Inorg. Synth., 1968, **11**, 94, (*synth, ir*)

Selbin, J. *et al.*, *Inorg. Chem.*, 1971, **10**, 1383, (*synth, derivs, magnetism*)