



>>Entry Name: Terbium(III) perchlorate

Synonym(s): Terbium triperchlorate

CAS Registry Number: 14014-09-6

Related CAS Registry Numbers(s): 80446-65-7

$\text{Tb}(\text{ClO}_4)_3$

Molecular Formula: $\text{Cl}_3\text{O}_{12}\text{Tb}$

Molecular Weight: 457.276

Accurate Mass: 455.770878

Percentage Composition: Cl 23.26%; O 41.99%; Tb 34.75%

Source/Synthesis: Synth. from hydrates at 200-250° in Ar

Physical Description: Solid

Solubility: Sol. H_2O

Other Data: Several hydrates reported

Hazard & Toxicity: Potentially explosive

Aldrich: 44392-1

>>Derivative: Hexahydrate

Synonym(s): Hexaaquaterbium(3+) triperchlorate

CAS Registry Number: 80398-56-7

Molecular Formula: $\text{Cl}_3\text{H}_{12}\text{O}_{18}\text{Tb}$

Molecular Weight: 565.367

Percentage Composition: Cl 18.81%; H 2.14%; O 50.94%; Tb 28.11%

Physical Description: Pale pink cryst.

Solubility: Sol. H_2O

Other Data: Contains 6-coord. octahedral $[\text{Tb}(\text{OH}_2)_6^{3(+)}]$ ions

References:

Moeller, T. *et al.*, *J. Inorg. Nucl. Chem.*, 1965, **27**, 1477, (*synth*)

Forsberg, J.H. *et al.*, *Inorg. Chem.*, 1969, **8**, 883, (*synth*)

Gmelin Handbook Inorg. Chem., Syst. No. 39, 1972, **C5**, 83, (*rev*)

Glaser, J. *et al.*, *Acta Chem. Scand., Ser. A*, 1981, **35**, 639, (*synth, cryst struct*)

Wickleder, M.S. *et al.*, *Z. Anorg. Allg. Chem.*, 1999, **625**, 309-312, (*synth, xrd, anhyd*)