



>>Entry Name: Zirconium nitrate, 9CI

CAS Registry Number: 13746-89-9

Related CAS Registry Numbers(s): 19512-19-7

$\text{Zr}(\text{NO}_3)_4$

Molecular Formula: $\text{N}_4\text{O}_{12}\text{Zr}$

Molecular Weight: 339.244

Accurate Mass: 337.855979

Percentage Composition: N 16.52%; O 56.59%; Zr 26.89%

Source/Synthesis: Anhyd. salt synth. from $\text{ZrCl}_2 + \text{N}_2\text{O}_5$

Physical Description: V. hygroscopic cryst.

>>Derivative: Pentahydrate

CAS Registry Number: 13986-27-1

Molecular Formula: $\text{H}_{10}\text{N}_4\text{O}_{17}\text{Zr}$

Molecular Weight: 429.32

Accurate Mass: 427.908804

Percentage Composition: H 2.35%; N 13.05%; O 63.35%; Zr 21.25%

Source/Synthesis: Synth. from $\text{Zr}(\text{OH})_4 + \text{HNO}_3$

Physical Description: Cryst.

Solubility: V. sol. H_2O

Other Data: Dec. at 100°. A hexahydrate is also known

References:

Falinski, M. *et al.*, *Ann. Chim. (Paris)*, 1941, **16**, 237-325, (*synth, hydrates*)

Field, B.O. *et al.*, *Proc. Chem. Soc., London*, 1962, 76-77, (*synth, ir*)

Plyushchev, V.E. *et al.*, *Zh. Neorg. Khim.*, 1968, **13**, 959-964; *CA*, **68**, 118896d, (*cryst struct, hydrates*)

Nekrasov, Yu.S. *et al.*, *J. Inorg. Nucl. Chem.*, 1980, **42**, 1677-1680, (*ms*)