



>>Entry Name: **Zinc(II) hexafluorosilicate**, 9CI

Synonym(s): Zinc fluosilicate. Zinc silicofluoride

CAS Registry Number: 16871-71-9

ZnSiF_6

Molecular Formula: F_6SiZn

Molecular Weight: 207.466

Accurate Mass: 205.89649

Percentage Composition: F 54.94%; Si 13.54%; Zn 31.52%

>>Derivative: Hexahydrate

CAS Registry Number: 18433-42-6

Molecular Formula: $\text{F}_6\text{H}_{12}\text{O}_6\text{SiZn}$

Molecular Weight: 315.557

Accurate Mass: 313.95988

Percentage Composition: F 36.12%; H 3.83%; O 30.42%; Si 8.90%; Zn 20.72%

Source/Synthesis: Synth. from ZnCO_3 + aq. H_2SiF_6

Use/Importance: Used to harden concrete

Physical Description: Cryst. (H_2O)

Other Data: Struct. consists of stacks of $[\text{Zn}(\text{OH}_2)_6]^{2(+)}$ and $[\text{SiF}_6]^{2(-)}$ octahedra in CsCl-type lattice

References:

- Badachhope, R.B. *et al.*, *Inorg. Chem.*, 1966, **5**, 929-931, (*ir, Raman*)
Clark, M.J.R. *et al.*, *Can. J. Chem.*, 1969, **47**, 2943-2946, (*synth, ir*)
Ray, S. *et al.*, *Acta Cryst. C*, 1973, **29**, 2741-2747, (*cryst struct*)
Joergensen, G.K. *et al.*, *CA*, 1973, **79**, 11782, (*pe*)
Jannek, H.D. *et al.*, *Z. Naturforsch., A*, 1975, **36**, 1615, (*pmr, F-19 nmr*)
Heilbron, M.A. *et al.*, *Thermochim. Acta*, 1976, **17**, 97, (*thermal anal*)
Cella, J.M. *et al.*, *J. Organomet. Chem.*, 1980, **186**, 13-17, (*Si-29 nmr*)