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>>Entry Name: Zinc silicate (Zn<sub>2</sub>SiO<sub>4</sub>)

Synonym(s): Zinc orthosilicate

CAS Registry Number: 13597-65-4

Zn<sub>2</sub>SiO<sub>4</sub>

Molecular Formula: O<sub>4</sub>SiZn<sub>2</sub>

Molecular Weight: 222.863

Accurate Mass: 219.814877

Percentage Composition: O 28.72%; Si 12.60%; Zn 58.68%

Source/Synthesis: Synth. by heating ZnO with SiO<sub>2</sub> at 1200°

Physical Description: Cryst.

Melting Point: Mp 1509°

Solubility: Insol. H<sub>2</sub>O; sol. AcOH

>>Variant: Mineral-form

Synonym(s): Willemite

CAS Registry Number: 14374-77-7

Molecular Formula: O<sub>4</sub>SiZn<sub>2</sub>

Molecular Weight: 222.863

Accurate Mass: 219.814877

Percentage Composition: O 28.72%; Si 12.60%; Zn 58.68%

Use/Importance: An ore of zinc phosphor. Used in television screens

Physical Description: Colourless white, various shades of green, yellow, red, brown, grey trigonal cryst.

Other Data: Fluoresces under u.v. light

#### References:

- Esquevin, J., *C. R. Hebd. Seances Acad. Sci.*, 1956, **243**, 1334, (*synth*)  
Ringwood, A.E. *et al.*, *Nature (London)*, 1967, **215**, 1367, (*polymorphs*)  
Griffith, W.P., *J.C.S.(A)*, 1969, 1372, (*Raman*)  
Morumo, F. *et al.*, *Acta Cryst. B*, 1971, **27**, 1868, (*cryst struct*)  
Metcalf-Johansen, J., *Mineral. Mag.*, 1977, **41**, 71, (*mineral*)  
Klaska, K.H. *et al.*, *Acta Cryst. B*, 1978, **34**, 3324, (*cryst struct*)