



>>Entry Name: Tin(II) chloride (SnCl₂), 9CI

ENTRY UNDER REVIEW

Synonym(s): Stannous chloride. Stannochlor

CAS Registry Number: 7772-99-8

SnCl₂

Molecular Formula: Cl₂Sn

Molecular Weight: 189.615

Accurate Mass: 187.839904

Percentage Composition: Cl 37.39%; Sn 62.61%

Source/Synthesis: The anhyd. form is obt. by dehydration of the dihydrate or by passing HCl or Cl₂ gas over molten Sn

Use/Importance: Used in tin plating, as a reducing agent and as a food additive (antioxidant) eg. for colour retention in canned vegetables such as asparagus

Physical Description: White cryst.

Melting Point: Mp 246°

Boiling Point: Bp 623°

Solubility: Sol. H₂O, EtOH, Et₂O, Me₂CO, EtOAc, MeOAc, Py

Aldrich: 20472-2

Fluka: 96529

Sigma: S2752

>>Derivative: Dihydrate

CAS Registry Number: 10025-69-1

Molecular Formula: Cl₂H₄O₂Sn

Molecular Weight: 225.646

Accurate Mass: 223.861034

Percentage Composition: Cl 31.42%; H 1.79%; O 14.18%; Sn 52.61%

Physical Description: White monoclinic cryst.

Melting Point: Mp 37.7°

Solubility: Sol. EtOH, Et₂O, Me₂CO; dec. in H₂O

Other Data: Struct. comprises discrete SnCl₂(OH₂) groups and isolated H₂O molecules. Absorbs aerial O₂ forming the oxychloride

Aldrich: 43150-8

Fluka: 96527

Sigma: S9262

References:

Stephen, H., *J.C.S.*, 1930, 2786, (*synth*)

Lister, M.W. *et al.*, *Trans. Faraday Soc.*, 1941, **37**, 406, (*struct*)

Williams, J.W., *Org. Synth.*, 1943, **23**, 63, (*synth*)

Van den Berg, J.M., *Acta Cryst.*, 1961, **14**, 1002; 1962, **15**, 1051, (*cryst struct*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1967, **1**, 1112, (*use*)

Buchanan, A.S. *et al.*, *J. Phys. Chem.*, 1969, **73**, 4394, (*ms*)

Drobut, N.F. *et al.*, *Zh. Neorg. Khim.*, 1972, **17**, 1199, (*synth*)

Kiriyama, H. *et al.*, *Bull. Chem. Soc. Jpn.*, 1973, **46**, 1389, (*cryst struct, dihydrate*)

Wang, C.H. *et al.*, *J. Chem. Phys.*, 1977, **67**, 3097, (*Raman*)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, **23**, 45, (*rev*)

Deans, R.A. *et al.*, *Synth. React. Inorg. Met.-Org. Chem.*, 1978, **8**, 345, (*synth*)

Harrison, P.G. *et al.*, *Inorg. Chim. Acta*, 1983, **75**, 265, (*Mössbauer*)

Encyclopedia of Food and Color Additives, (ed. Burdock, G.A.), CRC Press, 1997, 2642-2643; 2825, (*use*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, TGC000; TGC275