



>>Entry Name: Tin chloride (SnCl₄)

Synonym(s): Tin tetrachloride. Tetrachlorostannane, 9Cl. Stannic chloride

CAS Registry Number: 7646-78-8

SnCl₄

Molecular Formula: Cl₄Sn

Molecular Weight: 260.521

Accurate Mass: 257.777608

Percentage Composition: Cl 54.43%; Sn 45.57%

Source/Synthesis: Synth. by direct chlorination of Sn at 110-115°

Use/Importance: Used in the manuf. of organotins, in the surface treatment of glass, and as a catalyst

Physical Description: Fuming liq.

Melting Point: Mp -33°

Boiling Point: Bp 114°

Solubility: Sol. H₂O, CCl₄, C₆H₆

Density: d₄²⁰ 2.23

Hazard & Toxicity: Caustic

Aldrich: 24995-5

Fluka: 96559

>>Derivative: Monohydrate

CAS Registry Number: 16523-10-7

Molecular Formula: Cl₄H₂OSn

Molecular Weight: 278.536

Accurate Mass: 275.788173

Percentage Composition: Cl 50.91%; H 0.72%; O 5.74%; Sn 42.62%

>>Derivative: Trihydrate

Molecular Formula: Cl₄H₆O₃Sn

Molecular Weight: 314.566

Accurate Mass: 311.809303

Percentage Composition: Cl 45.08%; H 1.92%; O 15.26%; Sn 37.74%

Physical Description: Colourless monoclinic cryst.

Melting Point: Mp 80°

Solubility: Sol. H₂O

>>Derivative: Tetrahydrate

Molecular Formula: Cl₄H₈O₄Sn

Molecular Weight: 332.582

Accurate Mass: 329.819868

Percentage Composition: Cl 42.64%; H 2.42%; O 19.24%; Sn 35.69%

Physical Description: Opaque solid

Solubility: Sol. H₂O

>>Derivative: Pentahydrate

CAS Registry Number: 10026-06-9

Molecular Formula: Cl₄H₁₀O₅Sn

Molecular Weight: 350.597

Accurate Mass: 347.830433

Percentage Composition: Cl 40.45%; H 2.87%; O 22.82%; Sn 33.86%

Physical Description: Deliquescent solid, stable at 19-56°

Solubility: Sol. H₂O, MeOH

Aldrich: 24467-8