



**>>Entry Name: Tin chloride (SnCl<sub>4</sub>)**

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

**CAS Registry Number:** 7646-78-8

SnCl<sub>4</sub>

**Molecular Formula:** Cl<sub>4</sub>Sn

**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. H<sub>2</sub>O, CCl<sub>4</sub>, C<sub>6</sub>H<sub>6</sub>

**Density:** d<sub>4</sub><sup>20</sup> 2.23

**Hazard & Toxicity:** Caustic

**Aldrich:** 24995-5

**Fluka:** 96559

**>>Derivative: Monohydrate**

**CAS Registry Number:** 16523-10-7

**Molecular Formula:** Cl<sub>4</sub>H<sub>2</sub>OSn

**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:** Cl<sub>4</sub>H<sub>6</sub>O<sub>3</sub>Sn

**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. H<sub>2</sub>O

**>>Derivative: Tetrahydrate**

**Molecular Formula:** Cl<sub>4</sub>H<sub>8</sub>O<sub>4</sub>Sn

**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. H<sub>2</sub>O

**>>Derivative: Pentahydrate**

**CAS Registry Number:** 10026-06-9

**Molecular Formula:** Cl<sub>4</sub>H<sub>10</sub>O<sub>5</sub>Sn

**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. H<sub>2</sub>O, MeOH

**Aldrich:** 24467-8