

Safety Data Sheet: Stannous Methanesulfonate

1. Identification

Product	Stannous Methanesulfonate; CAS 53408-94-9; EC 401-640-7
Use	Professional tin electroplating and metal-finishing development.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Stannous Methanesulfonate. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Acute oral toxicity Category 4; skin corrosion Category 1B; serious eye damage Category 1; skin sensitization Category 1; chronic aquatic toxicity Category 2.
Signal word / symbols	Danger; GHS05, GHS07, GHS09
Hazard statements	H302: harmful if swallowed. H314: causes severe skin burns and eye damage. H317: may cause an allergic skin reaction. H318: causes serious eye damage. H411: toxic to aquatic life with long lasting effects.
Prevention	Use adequate ventilation; avoid inhaling mist. Prevent skin and eye contact. Wear suitable chemical-resistant gloves and eye protection. Wash after handling; keep food and drink out of the work area.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Reference mixture: tin(II) methanesulfonate, CAS 53408-94-9, EC 401-640-7, 50% w/w; water, CAS 7732-18-5, 50% w/w. These fractions describe the selected reference only. Commercial Sn(II) >300 g/L with approximately 10% free acid is a different supply specification; its complete recipe is not established by this reference.
Supply grade	Sn(II) >300 g/L
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant.
Inhalation	Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to mist. Obtain immediate medical attention after exposure.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Obtain urgent treatment for chemical burns. Obtain immediate medical attention after exposure.
Eyes	Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Obtain urgent medical care. Obtain immediate medical attention after exposure.
Ingestion	Rinse the mouth. Do not induce vomiting. Give nothing by mouth to an unconscious person. Obtain emergency medical attention. Obtain immediate medical attention after exposure.
Effects / treatment	Severe corrosive injury and possible allergic skin reaction. Ingestion can injure the mouth, oesophagus and stomach. Exposure requires immediate medical attention. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Use carbon dioxide, dry chemical, water spray or alcohol-resistant foam appropriate to the surroundings. Firefighters need full protective equipment and self-contained breathing apparatus; contain contaminated runoff.
Hazards	Fire or thermal decomposition can release sulfur oxides and metal oxides.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personnel	Isolate the spill and provide ventilation. Use chemical-resistant gloves and eye protection; avoid contact and mist exposure.
Environment	Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority.
Cleanup	Stop the leak if safe. Absorb liquid with a compatible inert material and collect in closed labelled containers. Do not wash into drains.

7. Handling and Storage

Handling	Use controlled liquid transfer with effective local exhaust. Wear acid-resistant gloves, splash goggles, face protection and protective clothing. Avoid all contact and mist; keep eyewash and emergency washing facilities accessible.
Storage	Store tightly closed in a cool, dry, ventilated corrosives area with compatible secondary containment. Keep away from oxidizers and incompatible metals; prevent leakage and excessive heat.
Incompatibilities	Oxidizing substances and incompatible metals. Prevent excess heat and uncontrolled mixing.

8. Exposure Controls / Personal Protection

Exposure limits	The selected reference lists UK 8-hour TWA 0.1 mg/m ³ and 15-minute STEL 0.2 mg/m ³ for the tin-salt component, with skin notation. Jurisdictional values differ; apply actual workplace requirements.
Engineering controls	Use local extraction where mist can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	Clear, colourless to pale-yellow liquid
Formula / molecular weight	C ₂ H ₆ O ₆ S ₂ Sn / 308.91 g/mol
Reference physical state	Colourless liquid
Density, selected reference at 20°C	1.55 g/cm ³
Formula of active salt	C ₂ H ₆ O ₆ S ₂ Sn
Other properties	Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred.

10. Stability and Reactivity

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	Oxidizing substances and incompatible metals. Prevent excess heat and uncontrolled mixing.
Decomposition	Fire or thermal decomposition can release sulfur oxides and metal oxides.

11. Toxicological Information

Exposure effects	Severe corrosive injury and possible allergic skin reaction. Ingestion can injure the mouth, oesophagus and stomach. Exposure requires immediate medical attention.
Reference classification	Acute oral toxicity Category 4; skin corrosion Category 1B; serious eye damage Category 1; skin sensitization Category 1; chronic aquatic toxicity Category 2.
Data limits	The selected reference identifies acute oral toxicity Category 4, corrosive injury and skin sensitization. No numerical acute toxicity endpoint is supplied; no delivered-batch chronic or reproductive assessment is asserted.

12. Ecological Information

Environmental effects	Toxic to aquatic life with long lasting effects. Contains tin and must not be released to water systems. Quantitative persistence and bioaccumulation data for the delivered grade are not established.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Class 8 — Corrosive
UN number	UN 3265
Shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (tin(II) methanesulfonate)
Class / packing group	Selected 50% aqueous reference: ADR / IMDG / IATA UN 3265, Class 8, packing group III; marine pollutant. Matching 300 g/L commercial-grade information identifies Class 8, packing group II. The reference packing group must not be treated as a consignment declaration for the concentrated supply grade.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Stannous Methanesulfonate; CAS 53408-94-9; EC 401-640-7
HS reference	290410; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished formulation.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H302: harmful if swallowed. H314: causes severe skin burns and eye damage. H317: may cause an allergic skin reaction. H318: causes serious eye damage. H411: toxic to aquatic life with long lasting effects.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.1; prepared 2026-10-07. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

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