

Safety Data Sheet: Methanesulfonyl Chloride

1. Identification

Product	Methanesulfonyl Chloride; CAS 124-63-0; EC 204-706-1
Use	Professional, controlled organic-intermediate synthesis.
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 Methanesulfonyl Chloride. 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	Metal corrosion Category 1; acute oral and dermal toxicity Category 3; acute inhalation toxicity Category 1; skin corrosion Category 1B; serious eye damage Category 1; skin sensitization Category 1; respiratory irritation, single exposure Category 3.
Signal word / symbols	Danger; GHS05, GHS06
Hazard statements	H290: may be corrosive to metals. H301 + H311: toxic if swallowed or in contact with skin. H314: causes severe skin burns and eye damage. H317: may cause an allergic skin reaction. H330: fatal if inhaled. H335: may cause respiratory irritation.
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	Methanesulfonyl chloride, CAS 124-63-0, EC 204-706-1. Selected substance reference up to 100%; supply assay >99.5% is not a complete impurity profile.
Supply grade	Assay >99.5%
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	Remove from exposure without endangering rescuers. Obtain emergency medical assistance immediately. Do not use direct mouth-to-mouth resuscitation; assisted breathing requires trained personnel and suitable medical equipment.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Obtain urgent treatment for chemical burns.
Eyes	Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Obtain urgent medical care.
Ingestion	Rinse the mouth. Do not induce vomiting. Give nothing by mouth to an unconscious person. Obtain emergency medical attention.
Effects / treatment	Inhalation can be fatal. Toxic exposure and corrosive injury require emergency medical assistance; prevent rescuer exposure. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Use water spray, foam, dry chemical or carbon dioxide suited to the surrounding fire.
Hazards	Reaction or fire may release hydrogen chloride, carbon oxides, sulfur oxides and irritating fumes.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personal precautions	Isolate the spill and use trained responders with appropriate respiratory and chemical protection. Prevent inhalation and contact.
Environmental precautions	Contain the release; prevent entry to drains, soil and water.
Cleanup	Use compatible dry inert absorbent and suitable sealed waste containers. Exclude water and moisture; do not add water to spilled material.

7. Handling and Storage

Handling	Use a closed, dry transfer system with effective local extraction. Prevent inhalation and all skin or eye exposure; use chemical-resistant gloves, protective clothing and eye/face protection. Establish respiratory and emergency controls through a qualified exposure assessment.
Storage	Store locked and tightly sealed in dry, compatible original containers in a cool, ventilated area. Exclude water and moisture; segregate from bases, alcohols, oxidizing agents and incompatible reactants.

8. Exposure Controls / Personal Protection

Exposure limits	No substance-specific occupational exposure limit is identified in the selected reference. Apply local workplace dust controls.
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	Colourless to light-yellow transparent oily liquid
Formula / molecular weight	CH ₃ ClO ₂ S / 114.55 g/mol
Water interaction	Reacts with water
Density, reference	1.48 g/cm ³ at 25°C
Flash point, reference	102°C, closed cup
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	Water and moisture; strong bases, alcohols, acids and strong oxidizing agents.
Decomposition	Reaction or fire may release hydrogen chloride, carbon oxides, sulfur oxides and irritating fumes.

11. Toxicological Information

Exposure effects	Inhalation can be fatal. Toxic exposure and corrosive injury require emergency medical assistance; prevent rescuer exposure.
Reference classification	Metal corrosion Category 1; acute oral and dermal toxicity Category 3; acute inhalation toxicity Category 1; skin corrosion Category 1B; serious eye damage Category 1; skin sensitization Category 1; respiratory irritation, single exposure Category 3.
Data limits	The selected reference identifies severe inhalation toxicity, oral and dermal toxicity, corrosion and skin sensitization. No supplied-batch chronic or reproductive endpoint is assigned.

12. Ecological Information

Environmental effects	Prevent release to water, drains or soil. No supplied-batch persistence, mobility or bioaccumulation endpoint is assigned.
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 6.1 — Toxic; subsidiary risk 8
UN number	UN 3246
Shipping name	METHANESULFONYL CHLORIDE
Class / packing group	DOT / road-rail / IMDG: Class 6.1, subsidiary risk 8, packing group I. IATA: forbidden for air transport.
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	Methanesulfonyl Chloride; CAS 124-63-0; EC 204-706-1
HS reference	290499; 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	H290: may be corrosive to metals. H301 + H311: toxic if swallowed or in contact with skin. H314: causes severe skin burns and eye damage. H317: may cause an allergic skin reaction. H330: fatal if inhaled. H335: may cause respiratory irritation.
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.

Revision: 2026.1 | Revision date: 2026-10-07