

Safety Data Sheet: Sodium Ethyl Xanthate

1. Identification

Product	Sodium Ethyl Xanthate; CAS 140-90-9; EC 205-440-9
Use	Professional mineral processing and controlled industrial chemical use.
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 Sodium Ethyl Xanthate. 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	Flammable solid 2; oral toxicity 4; dermal toxicity 3; skin corrosion 1A; skin sensitization 1; aquatic acute and chronic 1.
Signal word / symbols	Danger; GHS02, GHS05, GHS06, GHS09
Hazard statements	H228, H302, H311, H314, H317 and H410: combustible solid, ingestion and skin toxicity, burns, sensitization and persistent aquatic toxicity.
Prevention	Use adequate ventilation; avoid inhaling dust. 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: sodium O-ethyl dithiocarbonate >98.5–100%, unidentified decomposition impurities <1.5%.
Supply grade	Xanthate purity ≥90%
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 rescuers and obtain medical advice after significant exposure. Show this sheet to medical personnel.
Inhalation	Move to fresh air without entering a contaminated area unprotected. Obtain urgent medical help for gas exposure or breathing difficulty; trained personnel should assist respiration when needed.
Skin	Remove contaminated clothing and rinse thoroughly with water. Obtain immediate medical attention for burns, significant contact or persistent symptoms.
Eyes	Rinse gently with water for at least 15 minutes, remove lenses if easy, and obtain medical attention.
Ingestion	Rinse mouth; do not induce vomiting. Seek urgent medical advice. Give nothing by mouth to an unconscious person.

5. Fire-Fighting Measures

Extinguishing media	Use alcohol-resistant foam, dry chemical or CO ₂ . Do not apply water jet or spray to burning bulk product; water spray may cool exposed containers remotely. Use SCBA and prevent contaminated runoff.
Hazards	Carbon disulfide, sulfur-containing gases, carbon oxides and metal oxides can form during decomposition or fire.
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 dust exposure.
Environment	Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority.
Cleanup	Collect spilled solid without raising dust into closed labelled containers.

7. Handling and Storage

Handling	Use controlled transfer and effective ventilation. Avoid generating dust and prevent contamination of the work area.
Storage	Keep sealed in a cool, dry, well-ventilated segregated area away from acids, strong oxidizers, moisture and ignition sources. Maintain air gaps between pallets and protect packages from direct sunlight.
Incompatibilities	Acids, strong oxidizers and incompatible metals; avoid uncontrolled moisture contamination.
Specific use	Evaluate compatibility and appropriate operating conditions in the complete formulation before industrial use.

8. Exposure Controls / Personal Protection

Exposure limits	No active-specific workplace limit is assigned here. Assess dust and decomposition gases against current local occupational limits; monitor H2S and CS2 where relevant.
Engineering controls	Use local extraction where dust 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	Pale yellow to yellow powder or pellets
Formula / molecular weight	C3H5NaOS2 / 144.19 g/mol
Bulk density, reference	0.82 g/cm ³ at 20°C
Water solubility, reference	505 g/L at 20°C
pH, reference	12.2 at 25% solution
Thermal behaviour	Decomposition; no solid flash point assigned
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	Keep sealed, dry and cool. Bulk self-heating and gas release require controlled storage.
Conditions to avoid	Heat, ignition, dust dispersal, acids and uncontrolled moisture contamination.
Incompatibilities	Acids, strong oxidizers and incompatible metals; avoid uncontrolled moisture contamination.
Hazardous decomposition	Carbon disulfide, sulfur-containing gases, carbon oxides and metal oxides can form during decomposition or fire.

11. Toxicological Information

Exposure effects	Direct contact and dust or gas exposure require prompt assessment. Acid contamination can generate toxic gases; do not rely on smell to judge exposure.
Reference classification	Flammable solid 2; oral toxicity 4; dermal toxicity 3; skin corrosion 1A; skin sensitization 1; aquatic acute and chronic 1.
Toxicological data	Reference oral mouse LD50 730 mg/kg; dermal rat LD50 <1,000 mg/kg. Corrosion and sensitization require control.

12. Ecological Information

Environmental effects	The reference classifies acute and chronic aquatic hazard Category 1. Prevent release; decomposition changes environmental behaviour.
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 4.2 — Spontaneously combustible
UN number	UN 3342
Shipping name	Xanthates
Class / packing group	ADR / IMDG / IATA: Class 4.2, packing group III; environmental hazard: yes.
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	Sodium Ethyl Xanthate; CAS 140-90-9; EC 205-440-9
HS reference	293020; 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 disinfectant or biocidal product.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H228, H302, H311, H314, H317 and H410: combustible solid, ingestion and skin toxicity, burns, sensitization and persistent aquatic toxicity.
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	2026.2; prepared 2026-10-06. 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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