

Safety Data Sheet: Potassium Amyl Xanthate

1. Identification

Product	Potassium Amyl Xanthate; CAS 2720-73-2; EC 220-329-5
Use	Industrial sulfide and sulfidized oxide mineral flotation; professional 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 Potassium Amyl 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	Reference mixture: self-heating Category 2; acute oral, dermal and inhalation toxicity Category 4; skin corrosion Category 1; serious eye damage Category 1; reproductive toxicity Category 1; additional corrosive respiratory and digestive hazards.
Signal word / symbols	Danger; GHS02, GHS05, GHS07, GHS08
Hazard statements	H252: self-heating in large quantities; may catch fire. H302 + H312 + H332: harmful if swallowed, in contact with skin or inhaled. H314 / H318: severe skin burns and serious eye damage. H360: may damage fertility or the unborn child. Water contact can release toxic gases.
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 MIXTURE ONLY: potassium O-pentyl dithiocarbonate (PAX), CAS 2720-73-2, 80–100%; 3-methylbutan-1-ol, CAS 123-51-3, 1–5%; potassium hydroxide, CAS 1310-58-3, 0.1–1%; carbon disulfide, CAS 75-15-0, 0.1–1%. Supply TDS: xanthate purity ≥90.0%, free alkali ≤0.2%, moisture/volatile matter ≤4.0%; it does not quantify all impurities.
Supply grade	Xanthate purity ≥90.0%
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 dust.
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	Reference mixture causes skin, eye and respiratory burns and is harmful by ingestion, skin contact or inhalation. The reference lists a reproductive hazard associated with its composition; avoid exposure during pregnancy and obtain medical advice after exposure. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	The selected KAX 51 SDS specifies dry chemical powder or carbon dioxide and excludes water or foam. Isolate the area and use positive-pressure SCBA. Other supplier formulations can give different fire instructions; do not mix their response procedures with this reference.
Hazards	Decomposition may release carbon disulfide, carbonyl sulfide, sulfur oxides, carbon oxides, potassium compounds and amyl alcohol. Decomposition vapours can be toxic and flammable.
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, suitable PPE and adequate ventilation. Approach from upwind; protect from moisture and ignition.
Environment	Keep material and runoff out of drains, waterways and soil. Report significant environmental contamination.
Recovery	Avoid dust and dry sweeping. Use suitably rated collection equipment and compatible labelled waste containers. Do not wet bulk spills or residues; arrange licensed disposal.
Response scope	Only trained personnel should address self-heating, vapour release or contaminated bulk material.

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, ventilated area away from heat, ignition sources, moisture, acids and oxidizers. Maintain air gaps between stacks; keep bulk quantities above 450 kg below 40°C, as specified in the selected reference SDS.
Incompatibilities	Acids, oxidizing materials and moisture. Extended air contact in bulk storage can promote self-heating.
Specific use	Evaluate compatibility and appropriate operating conditions in the complete formulation before industrial use.

8. Exposure Controls / Personal Protection

Exposure limits	The reference lists carbon disulfide ACGIH TWA 1 ppm (skin notation) and potassium hydroxide ceiling 2 mg/m³. These are dated reference values; apply current local workplace requirements.
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 rodlike pellets
Formula / molecular weight	C6H11KOS2 / 202.38 g/mol
Physical state, reference	Yellow to yellow-green solid
Water behaviour, reference	Soluble; moisture can promote decomposition
pH, reference	12–14 at 10% aqueous concentration
Thermal behaviour, reference	Decomposes; reported range 150–250°C
Solid flash point, reference	Not applicable
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	Dry, cool storage is necessary; extended air exposure in large bulk masses can produce self-heating.
Hazardous reactions	Moisture and decomposition can release toxic and flammable vapours. Avoid uncontrolled solution preparation and wetting of bulk stocks.
Conditions to avoid	Heat, ignition, moist air, acid contact and tightly packed bulk stacks without adequate air gaps.
Incompatibilities	Acids, oxidizing materials and moisture.
Decomposition	Carbon disulfide, carbonyl sulfide, sulfur oxides, carbon oxides and potassium compounds may be released.

11. Toxicological Information

Exposure effects	Reference mixture causes skin, eye and respiratory burns and is harmful by ingestion, skin contact or inhalation. The reference lists a reproductive hazard associated with its composition; avoid exposure during pregnancy and obtain medical advice after exposure.
Reference classification	Reference mixture: self-heating Category 2; acute oral, dermal and inhalation toxicity Category 4; skin corrosion Category 1; serious eye damage Category 1; reproductive toxicity Category 1; additional corrosive respiratory and digestive hazards.
Toxicological data	Reference active-component oral rat LD50 is 1,000 mg/kg. Reference-mixture estimated oral and dermal ATE values are about 1,030 and 1,177 mg/kg. Reproductive classification and corrosive effects apply to the referenced commercial mixture; no ZXCHEM batch-specific toxicity test is asserted.

12. Ecological Information

Environmental effects	Reference active-component fish LC50 is 18 mg/L over 96 h. Carbon disulfide impurity adds aquatic hazards. Quantitative persistence and mobility data are not provided; prevent discharge to soil, drains and waterways.
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 — Self-heating substances
UN number	UN 3342
Shipping name	Xanthates
Class / packing group	Selected commercial reference: TDG Class 4.2, packing group III. Bulk xanthate transport is described by the UN 3342 entry; use the carrier's applicable ADR, IMDG or IATA requirements for the shipment.
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	Potassium Amyl Xanthate; CAS 2720-73-2; EC 220-329-5
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	H252: self-heating in large quantities; may catch fire. H302 + H312 + H332: harmful if swallowed, in contact with skin or inhaled. H314 / H318: severe skin burns and serious eye damage. H360: may damage fertility or the unborn child. Water contact can release toxic gases.
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.

Revision: 2026.2 | Revision date: 2026-10-06