

SAFETY DATA SHEET

Potassium Amyl Xanthate

SECTION 01 - IDENTIFICATION

Product identifier	Potassium Amyl Xanthate
Other means of identification	Carbonodithioic Acid, O-pentyl ester, potassium salt, potassium pentyl xanthate, Pot. Amyl Xanthogenate, Pot. O-Amyl Dithiorcarbonate
Recommended use of chemical	As a collector in the flotation of sulphide minerals. Especially for gold telluride, antimony and bismuth ores.
Supplier name	Ixom Operations Pty Limited trading as LogiChem
Supplier address	Lot 33 Bulong Road Parkeston-Kalgoorlie, Australia PO Box 878 Kalgoorlie WA 6433 Australia
Supplier phone	1800 033 111 / Int. +61 (0) 3 9663 2130
24 Hour emergency phone	1800 033 111

SECTION 02 - HAZARD(S) IDENTIFICATION

Classification	Acute Toxicity (Oral) – Category 4 Acute Toxicity (Dermal) – Category 4 Acute Toxicity (Inhalation) – Category 4 Skin Corrosion / Irritation – Category 2 Serious Eye Damage / Irritation – Category 2A
Signal word	Warning
Hazard statements	H302 – Harmful if swallowed. H312 – Harmful in contact with skin. H315 – Causes skin irritation. H319 – Causes serious eye irritation. H332 – Harmful if inhaled.
Precautionary statements	Prevention P261 – Avoid breathing dust / fume / gas / mist / vapours / spray. P264 – Wash contacted areas thoroughly after handling. P270 – Do not eat, drink or smoke when using this product. P271 – Use only outdoors or in a well-ventilated area. P280 – Wear protective gloves / clothing / eye protection / face protection Response P301 / P312 – IF SWALLOWED: Call a Poison Centre or doctor / physician if you feel unwell. P302 / P352 – IF ON SKIN: Wash with plenty of soap and water. P304 / P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 / P351 / P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 – Call a POISON CENTRE or doctor / physician if you feel unwell. P321 – Specific treatment (see First Aid Measures on Safety Data Sheet). P322 – Specific measures (see First Aid Measures on Safety Data Sheet). P330 – Rinse mouth. P332 / P313 – If skin irritation occurs: Get medical advice / attention. P337 / P313 – If eye irritation persists: Get medical advice / attention. P362 – Take off contaminated clothing and wash before reuse. Disposal P501 – Dispose of contents / container in accordance with local / regional / national / international regulations.



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SECTION 03 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Components	Cas No:	Proportion % w/w
Potassium Amyl Xanthate	2720-73-2	>90.0%

SECTION 04 – FIRST AID MEASURES

Description of necessary first aid measures	<p>Eye – Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to ensure thorough flushing of the entire area of the eye. Obtain immediate medical attention.</p> <p>Ingestion – Do NOT induce vomiting. Give plenty of water to drink and seek medical attention without delay.</p> <p>Inhalation – Remove victim from contaminated atmosphere. If breathing is laboured, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain medical attention.</p> <p>Skin – Immediately flush with large quantities of water and soap if available. Remove contaminated clothing under safety shower. Obtain medical attention if any irritation occurs. Wash clothing before reuse.</p>
Medical attention / special treatment	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Symptoms caused by exposure	Not available

SECTION 05 – FIRE FIGHTING MEASURES

Suitable extinguishing media	In case of fire, use DRY extinguishing media such as carbon dioxide and dry chemical powders. Do NOT use water or water-based extinguishers directing on solid xanthates since extremely flammable and very toxic carbon disulfide will be released. Water may be used to keep non-leaking, fire-exposed containers cool.
Specific hazards arising from the chemical	Substance liable to spontaneous combustion. Avoid all ignition sources. Xanthate decomposes on heating emitting toxic fumes including carbon disulphide, trithiocarbonate and amyl alcohol.
Special protective equipment & precautions for fire fighters	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or a chemical splash suit. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store contaminated fire fighting media for treatment.

SECTION 06 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Personnel involved in the cleanup should wear full protective clothing as listed in section 08. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Ensure that walking surfaces are not slippery before walking on them. Use spark proof equipment.
Environmental precautions	Do not allow product to reach drains, sewers or waterways. If the product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management Authority.
Methods and materials for containment and cleaning up.	Contain and sweep / shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled container and hold for disposal.

SECTION 07 – HANDLING AND STORAGE

Precautions for safe handling	Ensure an eye bath and safety shower are available and ready for use. Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Prevent buildup of electrostatic charges by bonding and grounding equipment.
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<p>Conditions for Safe Storage (Including Any Incompatibles)</p>	<p>Store in a cool, dry well ventilated place and out of direct sunlight. Store away from sources of heat or ignition. Store away from incompatible materials described in section 10. Keep dry – reacts with water. Keep containers closed while not in use – check regularly for spills. Store in original packaging as approved by manufacturer. Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid and / or vapour) and can be dangerous. Do not pressurise, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity or some other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed and promptly disposed of properly.</p>
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SECTION 08 – EXPOSURE CONTROLS / PERSONAL PROTECTION

<p>Control parameters – exposure standards, biological monitoring</p>	<p>No value assigned for this specific material by Safe Work Australia. However, Exposure Standard(s) for decomposition product(s): Carbon disulphide: 8hr TWA = 31mg/m³ (10 ppm) Sk As published by Safe Work Australia. TWA – Time weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.</p>
<p>Appropriate engineering controls</p>	<p>Ensure ventilation is adequate and that air concentration of decomposition product(s) is / are controlled by below quoted exposure standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or suitable respiratory protection. Keep containers closed when not in use.</p>
<p>Personal protective equipment (PPE)</p>	<p>Clothing – Wear impervious protective clothing to prevent skin contact (AS3765/2210). Eyes – Wear chemical goggles and face shield. (AS1336/1337). Footwear – Wear safety footwear (AS3765/2210). Gloves – Wear neoprene or nitrile rubber gloves (AS2161). Other – RESPIRATOR: If user operations generate harmful levels of airborne material that is not adequately controlled by ventilation, wear a NIOSH approved respirator that provides adequate protection. Use the following elements for air-purifying respirators: Air-Purifying Respirator for Dusts and Mists (AS1715/1716).</p>

SECTION 09 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Grey / yellow hygroscopic pellets
Odour	Unpleasant sulphurous odour
Odour threshold	Not available
pH	Not available
Melting point/freezing point	255-288°C
Specific gravity (water = 1)	0.94
Boiling point and boiling range	Not available
Flash point	Closed cup 12-13°C
Evaporation rate	Not available
Flammability	Not available
Upper/lower flammability or explosive limits	Not available
Vapour pressure (hPa @ 20°C)	Not available
Vapour density	Not available
Relative density	Not available
Solubility(ies) (water)	Appreciable
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available

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Decomposition temperature	Not available
Viscosity	Not available
Specific heat value	Not available
Particle size	Not available
Volatile organic compounds content	Not available
% volatile	Not available
Saturated vapour concentration	Not available
Release of invisible flammable vapours and gases	Not available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity	Xanthates upon aging, heating or exposure to moisture will generate carbon disulphide vapours and spontaneous combustion can occur.
Chemical stability	Product is stable under normal conditions for use and storage.
Conditions to avoid	Avoid excessive heat, dusty conditions, static discharges, direct sunlight, exposure to moisture and high temperatures.
Incompatible materials	Avoid strong oxidisers (can cause fire ore explosions), acids (will accelerate the hydrolysis of xanthates), copper and its alloys (bronze, brass etc.) and sources of ignition.
Hazardous decomposition products	Product may emit carbon disulphide, trithiocarbonate and amyl alcohol.

SECTION 11- TOXICOLOGICAL INFORMATION

Information on routes of exposure	<p>Eyes – Causes burns. Risk of serious eye damage. Contact with the eyes causes permanent damage, including blindness. Symptoms may include pain, tearing, reddening, swelling and impaired vision. Material is dusty and may scratch the surface of the eye.</p> <p>Ingestion - Harmful if swallowed. Causes burns. May be severely irritating and cause permanent damage to the mouth, throat and stomach. Symptoms of severe irritation or ulceration of the digestive tract may include nausea, vomiting, diarrhea and in severe cases, collapse, shock and death.</p> <p>Inhalation – Harmful. Danger of serious damage to health by prolonged exposure through inhalation. The dust from this material. May cause respiratory irritation.</p> <p>Skin – Causes burns. Irritating to the skin. Contact with the skin causes permanent damage, including burns and scarring. Symptoms may include pain, itching, discolouration, swelling and blistering. Not expected to be harmful to internal organs if absorbed through the skin.</p>
Symptoms related to exposure	Overexposure may result in serious illness or death. Skin contact may result in inflammation, characterized by itching, scaling, reddening, or occasionally blistering. Skin contact may result in redness, pain or dry skin. Eye contact may result in redness or pain.
Numerical measures of toxicity	LD50 = 1000-2000 mg/kg (rat) LD50 = 99 mg/kg (mouse)
Immediate, delayed and chronic health effects from exposure	Not available
Exposure levels	Not available
Interactive effects	Not available
Data limitations	Not available

SECTION 12- ECOLOGICAL INFORMATION

Ecotoxicity	96 hours(s) / LC50 / rainbow trout (<i>Salmo gairdneri</i>) / 217 mg/l 24 hours(s) / EC50 / water flea (<i>Daphnia magna</i>) / 3.7 mg/l 96 hours(s) / LC50 / bluegill sunfish (<i>Lepomis macrochirus</i>) / 10 mg/l
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	96 hours(s) / LC50 / channel catfish (Letalurus punctatus) / 10 mg/l
Persistence and degradability	Not available
Bioaccumulative potential	Not available
Mobility in soil	Not available
Other adverse effects	This material is toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

SECTION 13 – DISPOSAL CONSIDERATIONS

Safe handling and disposal methods	Dispose of in accordance with all local, state and federal regulations.
Disposal of any contaminated packaging	All empty packaging should be disposed of in accordance with local, state and federal regulations or recycled / reconditioned at an approved facility.
Environmental regulations	Not available

SECTION 14 – TRANSPORT INFORMATION

UN number	3342
Proper shipping name	Xanthates
Transport hazard class(es)	4.2 Flammable Solids – Substances liable to spontaneous combustion
Subsidiary risk	Not applicable
Packaging group	II
Environmental hazards	Not available
Special precautions during transport	Not available
Hazchem code	1Y



SECTION 15 – REGULATORY INFORMATION

AICS name	Not available
Poisons Schedule number	Not scheduled

SECTION 16 – OTHER INFORMATION

SDS creations date	15 January 2009
Most recent revision date	01 February 2018
Revision number	010 THIS ISSUE NUMBER REPLACES ALL ISSUES
Reason for revision	Annual Update
Contact person	Ixom 1800 033 111

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

END OF SDS