### Section 1: SUBSTANCE IDENTIFICATION AND SUPPLIER

<table>
<thead>
<tr>
<th>Product name:</th>
<th>Potassium Ethyl Xanthate (PEX) 85% min</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Potassium Amyl Xanthate (PAX) 90%</td>
</tr>
<tr>
<td></td>
<td>Sodium Ethyl Xanthate (SEX) 90%</td>
</tr>
<tr>
<td></td>
<td>Sodium Isobutyl Xanthate (SIBX) &gt;90%</td>
</tr>
<tr>
<td></td>
<td>Sodium Isopropyl Xanthate (SIPX) &gt;=90%</td>
</tr>
<tr>
<td></td>
<td>Sodium n-butyl Xanthate SNBX 82 – 84.5%</td>
</tr>
<tr>
<td></td>
<td>Sodium Amyl Xanthate 82% MIN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Names:</th>
<th>Potassium Ethyl Xanthate (PEX) 85% min</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td>Sodium Amyl Xanthate 82% MIN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended Use:</th>
<th>Mineral floatation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gold processing agent, used in flotation of sulfide ores as a collector</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company Identification:</th>
<th>Kemcore International Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>133 CONNAUGHT RD</td>
</tr>
<tr>
<td></td>
<td>UNIT 703 ALLIANCE COMM BLDG,</td>
</tr>
<tr>
<td></td>
<td>HONGKONG</td>
</tr>
</tbody>
</table>

| Customer Centre:               | Kemcore International Limited         |

### Section 2: HAZARD IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

Classification of the substance or mixture:
- Self-heating substances and mixtures - Category 2
- Acute Oral Toxicity - Category 4
- Acute Dermal Toxicity - Category 4
- Skin Irritation - Category 2
- Eye Irritation - Category 2A
Hazard Statement(s):
H252 Self-heating in large quantities; may catch fire.
H302+H312 Harmful if swallowed or in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary Statement(s):

Prevention:
P235+P410 Keep cool. Protect from sunlight.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P102 Keep out of reach of children.

Response:
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P322 Specific measures (see First Aid Measures on Safety Data Sheet).
P363 Wash contaminated clothing before re-use.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).

Storage:
P407 Maintain air gap between stacks/pallets.
P420 Store away from other materials.
P413 Store bulk masses greater than ..kg <specify mass> at temperatures not exceeding ...... °C <specify temperature>.

Disposal:
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition Information
INGREDIENT | CAS No. | CONTENT
---|---|---
Sodium Amyl Xanthate | 7607-99-0 | 83 – 83.5%; 90 – 93%

Section 4: FIRST AID MEASURES

**Inhalation:**
Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

**Ingestion:**
Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek medical advice.

**Skin Contact:**
If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

**Eye Contact:**
Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre. Continue to wash with large amounts of water until medical help is available.

**Medical Attention & Special treatment**
Treat symptomatically.

Section 5: FIREFIGHTING MEASURES

**Hazards from combustion products:**
Combustible solid. On burning will emit toxic fumes, including those of oxides of carbon.

**Specific hazards arising from the substance or mixture:**
Substance liable to spontaneous combustion. Avoid all ignition sources. In common with many organic chemicals, may form flammable dust clouds in air. For precautions necessary refer to Safety Data Sheet "Dust Explosion Hazards".

**Suitable Extinguishing Media:**
Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

**Hazchem or Emergency Action**
1Y
### Code:

| Precautions for fire fighters and special protective equipment: | Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Decomposes on heating emitting toxic fumes, including those of carbon disulfide. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. |

<table>
<thead>
<tr>
<th>Section 6: ACCIDENTAL RELEASE MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency procedures/Environmental precautions:</strong></td>
</tr>
<tr>
<td><strong>Methods and materials for containment and cleaning up:</strong></td>
</tr>
</tbody>
</table>

### Section 7: HANDLING AND STORAGE

| Handling: | Avoid skin and eye contact and breathing in dust. Keep out of reach of children. |
| Storage: | 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, may lead to drum rupture. Keep containers closed when not in use - check regularly for spills. |

| Other Information: | |
### Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

| Exposure Limits: | No value assigned for this specific material by the National Occupational Health and Safety Commission. However, Exposure Standard(s) for particulates:
Dusts not otherwise classified: 8hr TWA = 10 mg/m³ |
|------------------|-------------------------------------------------------------------------------------------------------------|
| Protective Equipment: | The selection of PPE is dependant on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors. 
OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, DUST MASK. |
| Engineering Controls: | Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use |
| Hygiene Precautions: | Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. |

### Section 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state: Pellets
- Colour: Yellowish
- Odour: Unpleasant
- Solubility: Soluble in water.
- Specific Gravity: 0.75-0.80
- Relative Vapour Density (air=1): Not available
- Vapour Pressure (20 °C): Not available
- Flash Point (°C): Not available
- Flammability Limits (%): Not available
- Autoignition Temperature (°C): Not available
- Melting Point/Range (°C): >=200
- pH: Not available
**Section 10: STABILITY AND REACTIVITY**

**Chemical Stability:** Stable under normal conditions of use. Hygroscopic: absorbs moisture or water from surrounding air.

**Hazardous Decomposition Products:** Hazardous polymerisation will not occur. Can react with water producing carbon disulfide

**Conditions to Avoid:** Avoid dust generation. Avoid exposure to heat, sources of ignition, and open flame. Avoid exposure to moisture.

**Incompatible materials:** Incompatible with oxidising agents, combustible materials, acids, water, phosgene or sulphur chlorides

**Hazardous reactions:** Reacts exothermically on dilution with water.

**Section 11: TOXICOLOGICAL INFORMATION**

**ERMA Classification:**

**Ingestion:** Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain, convulsions and loss of consciousness. Death may occur if large amounts are ingested.

**Inhalation:** Contact with skin will result in irritation. Will liberate carbon disulfide upon contact with moist skin. Carbon disulfide can be absorbed through the skin with resultant adverse effects.

**Skin Contact:** Contact with skin will result in irritation. Will liberate carbon disulfide upon contact with moist skin. Carbon disulfide can be absorbed through the skin with resultant adverse effects.

**Eye Contact:** An eye irritant.

**Section 12: ECOLOGICAL INFORMATION**

**ERMA Classification:**

**Ecotoxicity:** Avoid contaminating waterways
### Section 13: DISPOSAL INFORMATION

**Disposal methods:** Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Dispose of material through a licensed waste contractor. Advise flammable nature.

### Section 14: TRANSPORT INFORMATION

**Road and Rail Transport**

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

- **UN No:** 3342
- **Transport Hazard Class:** 4.2 Spontaneously Combustible
- **Packing Group:** III
- **Proper Shipping Name or Technical Name:** XANTHATES
- **Hazchem or Emergency Action Code:** 1Y

**Marine Transport**

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

- **UN No:** 3342
- **Transport Hazard Class:** 4.2 Spontaneously Combustible
- **Packing Group:** III
- **Proper Shipping Name or Technical Name:** XANTHATES
- **Hazchem or Emergency Action Code:** 1Y

**IMDG EMS Fire:** F-A
**IMDG EMS Spill:** S-J

**Air Transport**
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 3342
Transport Hazard Class: 4.2 Spontaneously Combustible
Packing Group: III
Proper Shipping Name or Technical Name: XANTHATES

Section 15: REGULATORY INFORMATION
Classification: This material is hazardous according to criteria of Safe Work Australia; -HAZARDOUS SUBSTANCE.

Classification of the substance or mixture:

Self-heating substances and mixtures - Category 2
Acute Oral Toxicity - Category 4
Acute Dermal Toxicity - Category 4
Skin Irritation - Category 2
Eye Irritation - Category 2A

Hazard Statement(s):
H252 Self-heating in large quantities; may catch fire.
H302+H312 Harmful if swallowed or in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Poisons Schedule (SUSMP): None allocated.

Hazard Category: Xi: Irritant
Risk Phrase(s): R37/38: Irritating to respiratory system and skin.
R41: Risk of serious damage to eyes.
Safety Phrase(s): S24/25: Avoid contact with skin and eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

Poisons Schedule: None allocated

Section 16: OTHER INFORMATION
Supplier Safety Data Sheet; 08/2014.
This safety data sheet has been prepared by Kemcore.

Reason(s) for Issue: 1st issue

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Kemcore cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Kemcore at the contact details on page 1. Kemcore's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.