

Sodium Isobutyl Xanthate - MSDS

1. Product Name and Identification

Product Name: [Sodium Isobutyl Xanthate](#)

Chemical Formula: C₅H₉NaOS₂

Synonyms: SIBX, Sodium 2-Methylpropyl Xanthate

CAS Number: 25306-75-6

Manufacturer/Supplier: [Insert Manufacturer Name]

Emergency Contact Information: [Insert Emergency Contact Details]

2. Composition/Ingredients

Substance: Sodium Isobutyl Xanthate

Chemical Name: Sodium Isobutyl Xanthate

CAS Number: 25306-75-6

Percent by Weight: ≥ 90%

3. Hazards Identification

GHS Classification:

- Flammable solid (Category 2)
- Acute toxicity - Oral (Category 4)
- Skin irritation (Category 2)
- Eye irritation (Category 2A)
- Specific target organ toxicity - Single exposure (Category 3, Respiratory system)

Signal Word: Warning

Hazard Statements:

- H228: Flammable solid.
- H302: Harmful if swallowed.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.

Precautionary Statements:

- P210: Keep away from heat, sparks, open flames, and hot surfaces.
- P280: Wear suitable protective clothing, gloves, and eye/face protection.
- P301+P312: If swallowed, call a doctor if you feel unwell.
- P304+P340: If inhaled, remove person to fresh air and keep 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.

Potential Health Effects:

- **Eye Contact:** May lead to irritation, redness, or tearing.
- **Skin Contact:** Prolonged exposure can result in irritation or dermatitis.
- **Inhalation:** Dust or fumes may irritate the respiratory tract. Overexposure may cause dizziness or headache.
- **Ingestion:** Can lead to gastrointestinal distress, including nausea or vomiting.

4. First Aid Measures

General Advice: Obtain medical attention if symptoms persist or any significant exposure occurs.

- **Eye Contact:** Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if applicable, and seek medical advice.
- **Skin Contact:** Wash affected areas thoroughly with soap and water. Remove contaminated clothing. If irritation persists, consult a physician.
- **Inhalation:** Move the individual to fresh air. Seek medical attention if symptoms such as coughing, shortness of breath, or dizziness occur.
- **Ingestion:** Rinse the mouth with water. Do *not* induce vomiting. Contact a poison control center or physician immediately.

5. Handling and Storage

Handling:

- Minimize dust generation and accumulation.
- Use only in well-ventilated areas.
- Keep away from sources of ignition and avoid direct contact with the product.

Storage:

- Store in a cool, dry, and well-ventilated area.
- Keep container tightly closed when not in use.
- Avoid exposure to high heat, sparks, and open flames.
- Store away from incompatible materials, such as acids and oxidizers.

6. Exposure Controls/Personal Protection

Exposure Limits: No established occupational exposure limits.

Engineering Controls:

- Ensure proper ventilation, including local exhaust, to maintain airborne levels below recommended exposure limits.

Personal Protective Equipment (PPE):

- **Eye Protection:** Safety goggles or face shield.
- **Skin Protection:** Chemical-resistant gloves such as nitrile or neoprene.
- **Respiratory Protection:** Use a NIOSH-approved respirator if exposure limits are exceeded or if adequate ventilation is unavailable.
- **Clothing:** Long-sleeved protective clothing to prevent skin contact.

7. Physical and Chemical Properties

- **Appearance:** Yellowish powder or pellets
- **Odor:** Faintly sulfurous
- **Boiling Point:** Decomposes before boiling
- **Melting Point:** Decomposes at high heat
- **Flash Point:** Not applicable
- **Density:** 1.3–1.4 g/cm³
- **Vapor Pressure:** Negligible
- **Solubility:** Freely soluble in water
- **pH:** 9–11 (aqueous solution)

8. Stability and Reactivity

Chemical Stability: Stable under normal handling and storage conditions.

Conditions to Avoid:

- Heat, sparks, open flames, and other sources of ignition.
- Moisture and prolonged exposure to air.

Materials to Avoid:

- Strong acids, oxidizing agents, and reactive metals.

Hazardous Decomposition Products:

- Decomposes when heated to release toxic fumes of carbon disulfide and sulfur oxides.

9. Toxicological Information

Acute Toxicity:

- **Oral LD50 (Rat):** Approximately 500 mg/kg

- **Dermal LD50 (Rabbit):** > 1,000 mg/kg

Chronic Exposure: Prolonged exposure may lead to skin sensitization or respiratory tract irritation.

Irritation:

- Causes irritation to eyes, skin, and respiratory system.

Symptoms of Exposure:

- Dizziness, headache, coughing, and nausea due to inhalation of dust or vapors.
- Skin redness or dryness upon prolonged contact.

10. Disposal Considerations

Waste Disposal Methods:

Dispose of contents and container in accordance with local, state, and national regulations. Avoid discharge into drains, soil, or water bodies. Contact a certified hazardous waste disposal organization for assistance.

Container Handling:

Do not reuse empty containers. Ensure they are clean and free of residue before recycling or disposal. Handle all waste materials as potentially hazardous.