SAFETY DATA SHEET

STRYCHNINE ALKALOID PASTE

SECTION 1: Identification of the Substance, Preparation and Company Undertaking

Product Name
Strychnine Alkaloid Paste

CAS Number (Strychnine Alkaloid)
57-24-9

EC Number (Strychnine Alkaloid)
200-319-7

Intended Use
For formulating poisonous baits to control Ground squirrels, Pocket gophers and Yellow-bellied marmots.

Details of the Supplier
Nevada Department of Agriculture
405 S. 21st Street
Sparks, NV 89431
Tel: (775) 353-3601
Fax: (775) 353-3661

Emergency Telephone Numbers
Pesticide Accident Hotline: 1-800-424-9300
National Poison Center Hotline: 1-800-222-1222
Nevada Department of Environmental Protection Spill Hotline: 1-888-331-6337

SECTION 2: Hazards Identification

Emergency Overview
Convulsive Poison! Fatal if swallowed or inhaled. Harmful if absorbed through skin. Do not get in eyes or clothing. Avoid contact with skin. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Do not apply baits made from this product in a way that will contact workers, other persons, pets or domestic animals.
**Protective Equipment**
Long-sleeved shirt and long pants, chemical resistant gloves, shoes plus socks, goggles or face shield and dust mask/mist mask.

**Potential Health Effects**
**Ingestion:** Extremely toxic. Convulsive poison! Fatal if swallowed or inhaled. Rapidly absorbed from the gastrointestinal and respiratory tracts. Principal symptom is violent convulsions sometimes beginning within a few minutes of ingestion. Any sound or movement may elicit seizure activity. Other symptoms include: nausea, vomiting, diarrhea, muscular cramps and stiffness.

**Skin Contact:** Mild, acidic irritant. Inflammation and soreness can result from contact with the salt.

**Eye Contact:** Irritant to the eyes due to the acid salt characteristics. Absorption through the tissue may occur if eyes are not promptly treated.

**Chronic Exposure:** No information found.

**Aggravation of pre-existing condition:** No information found.

Hazard Pictogram Symbols:
1) Skull and crossbones: Acute toxicity
2) Dead tree and fish: Hazardous to the environment

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**SECTION 3: Composition/Information of Ingredients**

**Chemical Name and Formula**
Strychnine Alkaloid C₂₁H₂₂O₂N₂

**Chemical Family**
Strychnous Nux Vomica

**Signal Word**
Danger
<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Percent</th>
<th>Hazardous</th>
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</thead>
<tbody>
<tr>
<td>Strychnine Alkaloid</td>
<td>57-24-9</td>
<td>3.2%</td>
<td>Yes</td>
</tr>
<tr>
<td>Water</td>
<td>NA</td>
<td>91.7%</td>
<td>No</td>
</tr>
<tr>
<td>Corn starch</td>
<td>NA</td>
<td>5%</td>
<td>No</td>
</tr>
<tr>
<td>Dye</td>
<td>NA</td>
<td>0.1%</td>
<td>No</td>
</tr>
</tbody>
</table>

**SECTION 4: First Aid measures**

If Swallowed: Call a physician or poison control center immediately. If less than ten (10) minutes have passed since the poison was taken, give 1 or 2 glasses of water and induce vomiting by touching the back of throat with finger. Repeat until vomit fluid is clear. Have patient lie down in a quiet, darkened room and keep him warm and quiet. If person is unconscious, do not give anything by mouth and do not induct vomiting.

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration; preferably mouth-to-mouth. Get medical attention.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get Medical attention. Wash clothing before reuse.

Eye Contact: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention immediately.

**Note to Physician**

1) Administer 100% oxygen by positive pressure to provide as much pulmonary gas exchange as possible, despite seizures.

2) Administer anticonvulsant drugs intravenously to control convulsions. **Notice:** It may be difficult or impossible to stop seizure activity without stopping respiration. Be prepared to maintain pulmonary ventilation mechanically. Tracheotomy may be necessary if seizures are prolonged.

**SECTION 5: Fire Fighting Measures**

**Explosion**

Not considered to be an explosion hazard. Sealed containers may rupture when heated.

**Fire Extinguishing Media**

Water spray, dry chemical, alcohol foam, or carbon dioxide. Do not allow water runoff to enter sewers or waterways.
Special Information
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Irritating and toxic vapors may be emitted by thermal decomposition of the solid ingredients (strychnine, corn starch and dye).

SECTION 6: Accidental Release Measures

Leaks or Spills
Contain and clean all spilled material immediately and place in original or similar type container that is properly labeled and resealed for reuse or disposal. Use long-sleeved shirt and long pants, chemical resistant gloves, goggles and dust mask when cleaning up spills. Scatter absorbent material over the spilled pesticide. Sweep up the material, scatter lime over the contaminated area, and wash the area thoroughly with detergent and water. Dispose of the contaminated absorbent, lime and wash water in a proper disposal site. Clean up thoroughly and change into clean clothing after handling or disposing of pesticides.

SECTION 7: Handling and Storage

Keep in a tightly closed, original container, stored in a cool, dry, ventilated area inaccessible to children, pets and domestic animals. Protect from physical damage. Separate from oxidizing materials. Containers of this material may be hazardous when empty due to product residues; observe all warnings and precautions listed for the product.

Lock all chemicals in a building or cabinet. The lock should keep everyone away from the chemicals except those who are qualified to use them. Identify the storage facility with a sign that clearly indicates that pesticides are stored in the structure.

SECTION 8: Exposure Controls and Personal Protection

Do not apply baits made from this product in a way that will contact workers, other persons, pest or domestic animals. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

NIOSH Documentation and Surveillance
The National Institute for Occupational Safety and Health (NIOSH) recommended air exposure level: 10H time-weighted average 0.15 mg/m³
Ventilation
Using this product outdoors recommended to keep employee exposures below the Airborne Exposure Limits. If you must use indoors, local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Respirators
The N95 respirator is the most common of the seven types of particulate filtering face piece respirators. The N95 filters at least 95% of airborne particles but is not resistant to oil. The N95 is recommended by US Centers for Disease Control and Prevention (CDC) for most cases of air contamination. The seal fits tightly around the mouth and nose and is made of material certified to block 95% of particles 0.3 μm or larger in diameter, roughly the size of a single virus. Strict protocol must be taken to ensure the masks are properly worn; facial hair is enough to break the seal and let particles in.

Skin Protection
Wear impervious protective clothing, including boots, gloves, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection
Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>Green-blue semi-viscous fluid</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight odor and bitter taste</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not applicable – a water based solution</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>$0^\circ$C (avoid freezing)</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Approximately $100^\circ$C</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density (Air=1):</td>
<td>No information found</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1):</td>
<td>No information found</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and Reactivity

Stability
Stable under ordinary conditions of use and storage. Effloresces in dry air.

Hazardous Decomposition Products
Irritating and toxic vapors may be emitted by thermal decomposition of the solid ingredients (Strychnine Alkaloid, Corn starch, Dye) after water has evaporated.
Hazardous Polymerization
Will not occur.

Incompatibilities
None anticipated.

Conditions to Avoid
Heat, flame, sources of ignition and freezing temperatures.

SECTION 11: Toxicological Information

Strychnine Alkaloid
ORL Rat LD 50: 16 mg kg\(^{-1}\)
IPR Rat LD 50: 2.5 mg kg\(^{-1}\)
SCU Rat LD 50: 1.2 mg kg\(^{-1}\)

Acute Effects
Convulsive poison; fatal if swallowed.
Harmful if absorbed through skin.

Water: 91.7%
Corn Starch: 5%
Dye: 0.1%

Cancer Lists (NTP Carcinogen)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Known</th>
<th>Anticipated</th>
<th>IARC Category</th>
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<tbody>
<tr>
<td>Strychnine Alkaloid</td>
<td>No</td>
<td>No</td>
<td>None</td>
</tr>
<tr>
<td>Water</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Corn Starch</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Dye</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological Information

Toxicity to fish invertebrates
Extremely Toxic

Toxicity to birds
Extremely toxic

Toxicity to mammals and aquatic organisms
Extremely toxic
SECTION 13: Disposal Considerations

Pesticide Disposal
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spilled bait, or rinsate, is a violation of federal law. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14: Transportation Information

Proper shipping name
Strychnine Alkaloid Paste

U.S. Department of Transportation
Not regulated

Nevada Department of Agriculture
During transport, individuals are required to obtain a shipping document which includes the following components: Strychnine Alkaloid Paste label, SDS, driver’s name, amount of Strychnine Alkaloid Paste in vehicle, address and phone number of driver.

SECTION 15: Regulatory Information

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
United States federal law that regulates pesticides to protect applicators, consumers, and the environment. It is administered and regulated by the United States Environmental Protection Agency (EPA) and the appropriate environmental agencies of the respective states.

EPA EST. No.
35981-NV-1

NV REG. No.
N825-6

Restricted Use Pesticide
Those that could cause harm to humans or the environment if not applied properly. Applications of these pesticides must be done by a certified applicator, or persons under the direct supervision of a certified applicator, or a licensed applicator.
SECTION 16: Other Information

Date of Preparation
June 25, 2016

Heat Stress
According to NIOSH and the Occupational Safety and Health Administration (OSHA): Workers who are exposed to extreme heat or work in hot environments may be at risk of heat stress. Exposure to extreme heat can result in occupational illnesses and injuries. Heat stress can result in heat stroke, heat exhaustion, heat cramps, or heat rashes. Heat can also increase the risk of injuries in workers as it may result in sweaty palms, fogged-up safety glasses, and dizziness. Burns may also occur as a result of accidental contact with hot surfaces or steam.

Workers at risk of heat stress include outdoor workers and workers in hot environments such as firefighters, bakery workers, farmers, construction workers, miners, boiler room workers, factory workers, and others. Workers at greater risk of heat stress include those who are 65 years of age or older, are overweight, have heart disease or high blood pressure, or take medications that may be affected by extreme heat.

Prevention of heat stress in workers is important. Employers should provide training to workers so they understand what heat stress is, how it affects their health and safety, and how it can be prevented. Additionally, provide cool water to workers close to the work areas; at least one pint of water per hour is needed.

National Pesticide Information Center (NPIC)
1-800-858-7378
npic@ace.orst.edu