1. Product and Company Identification

Product Code: 16860
Product Name: Swainsonine
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335
Synonyms: (1S,2R,8aR)-octahydro-indolizinetriol; Tridolgosir;

2. Hazards Identification

Emergency Overview: Harmful.
Avoid contact and inhalation.

Route(s) of Entry:
Inhalation? Yes   Skin? Yes   Eyes? Yes   Ingestion? Yes   Other: Injection

Health Hazards (Acute and Chronic):
Harmful by inhalation, ingestion, or skin absorption.
Material may be irritating to the mucous membranes and upper respiratory tract.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this product have not been fully evaluated.

Signs and Symptoms Of Exposure:
No data available.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 1,2,8-Indolizinetriol, octahydro-,(1S,2R,8aR)-</td>
<td>72741-87-8</td>
<td>100.0 %</td>
<td>615-797-6</td>
</tr>
</tbody>
</table>

4. First Aid Measures

Emergency and First Aid Procedures:
If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: No data.
Explosive Limits:
LEL: No data.
UEL: No data.
Special Fire Fighting Procedures:
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Unusual Fire and Explosion Hazards: No data available.
Hazardous Combustion Products: No data available.
Suitable Extinguishing Media:
Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:
A solid water stream may be inefficient.
6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:
- Avoid release into the environment.
- Avoid raising and breathing dust, and provide adequate ventilation.
- As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- Transfer to a proper chemical waste container for disposal.

7. Handling and Storage

Hazard Label Information:
- Avoid contact with skin and eyes.
- Do not reuse this container.
- Use with adequate ventilation.
- Wash thoroughly after handling.

Precautions To Be Taken in Handling:
- Avoid breathing (dust, vapor, mist, gas).
- Avoid prolonged or repeated exposure.

Precautions To Be Taken in Storing:
- Keep tightly closed.
- Store at correct temperature.

8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 1,2,8-Indolizinetriol, octahydro-, (1S,2R,8R,8aR)-</td>
<td>72741-87-8</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

Protective Equipment Summary - Hazard Label Information:
- Compatible chemical-resistant gloves
- Eye wash station in work area
- Lab coat
- Safety glasses
- Safety shower in work area
- Vent Hood

Respiratory Equipment (Specify Type):
- NIOSH approved respirator, as conditions warrant.

Eye Protection:
- Safety glasses

Protective Gloves:
- Compatible chemical-resistant gloves

Other Protective Clothing:
- Lab coat

Ventilation:
- Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices:
- Do not take internally.
- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- Wash thoroughly after handling.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>[ ] Gas</td>
<td>[ ] Liquid</td>
<td>[ X ] Solid</td>
<td></td>
<td></td>
<td>LEL: No data.</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
<td>~0.25 mg/ml in PBS (pH 7.2); ~10 mg/ml in EtOH, DMF, &amp; DMSO;</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>
MATERIAL SAFETY DATA SHEET
Swainsonine

Molecular Weight: 173.20
pH: No data.
Appearance and Odor: A crystalline solid

10. Stability and Reactivity

Stability: Unstable [ ] Stable [ X ]
Conditions To Avoid - Instability: No data available.
Incompatibility - Materials To Avoid: strong oxidizing agents
Hazardous Decomposition Or Byproducts: carbon dioxide
carbon monoxide
nitrogen oxides
Possibility of Hazardous Reactions: Will occur [ ] Will not occur [ X ]
Conditions To Avoid - Hazardous Reactions: No data available.

11. Toxicological Information

Carcinogenicity/Other Information: No data available.
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT) Not dangerous goods.
DOT Proper Shipping Name
LAND TRANSPORT (European ADR/RID) Not dangerous goods.
ADR/RID Shipping Name
AIR TRANSPORT (ICAO/IATA) Not dangerous goods.
ICAO/IATA Shipping Name
Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes Xn: Harmful
European Community Risk and Safety Phrases
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
S24/25 - Avoid contact with skin and eyes.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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US EPA CAA, CWA, TSCA

<table>
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<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>EPA CAA</th>
<th>EPA CWA NPDES</th>
<th>EPA TSCA</th>
<th>HPV/LPV</th>
</tr>
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<td>72741-87-8</td>
<td>HAP, ODC ()</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

16. Other Information

For research use only, not for human or veterinary clinical use.

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