Material Safety Data Sheet
Amantadine Hydrochloride MSDS

Section 1: Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name: Amantadine Hydrochloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Information:</td>
</tr>
<tr>
<td>Sciencelab.com, Inc.</td>
</tr>
<tr>
<td>14025 Smith Rd.</td>
</tr>
<tr>
<td>Houston, Texas 77396</td>
</tr>
<tr>
<td>US Sales: 1-800-901-7247</td>
</tr>
<tr>
<td>International Sales: 1-281-441-4400</td>
</tr>
<tr>
<td>Order Online: ScienceLab.com</td>
</tr>
<tr>
<td>CHEMTREC (24HR Emergency Telephone), call:</td>
</tr>
<tr>
<td>1-800-424-9300</td>
</tr>
<tr>
<td>International CHEMTREC, call: 1-703-527-3887</td>
</tr>
<tr>
<td>For non-emergency assistance, call: 1-281-441-4400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Catalog Codes: SLA3430</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS#: 665-66-7</td>
</tr>
<tr>
<td>RTECS: AU4375000</td>
</tr>
<tr>
<td>TSCA: TSCA 8(b) inventory: Amantadine Hydrochloride</td>
</tr>
<tr>
<td>CI#: Not available.</td>
</tr>
<tr>
<td>Synonym: Midantane, Mydantane, Symmetrel, Virasol, Virofral; 1-Adamantanamine hydrochloride; 1-Adamantylamine hydrochloride; 1-Aminoadamantene hydrochloride; Adamantanamine hydrochloride; Adamantylamine hydrochloride; Aminoadamantane hydrochloride</td>
</tr>
<tr>
<td>Chemical Name: 1-Adamantanamine, hydrochloride</td>
</tr>
<tr>
<td>Chemical Formula: C10-H17-N.HCl</td>
</tr>
</tbody>
</table>

Section 2: Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Composition:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Amantadine Hydrochloride</td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients: Amantadine Hydrochloride: ORAL (LD50): Acute: 800 mg/kg [Rat]. 700 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
Carcinogenic Effects: Not available.
Mutagenic Effects: Not available.
Teratogenic Effects: Not available.
Developmental Toxicity: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.
Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).


Fire Fighting Media and Instructions: SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: As with most organic solids, fire is possible at elevated temperatures

Special Remarks on Explosion Hazards: Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 187.71 g/mole

Color: Not available.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.
**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** Not available.

**Solubility:** Not available.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Excess heat, dust generation, incompatible materials

**Incompatibility with various substances:** Not available.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 700 mg/kg [Mouse].

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on Humans:** Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** May cause adverse reproductive effects and birth defects (teratogenic)

**Special Remarks on other Toxic Effects on Humans:**
- **Acute Potential Health Effects:**
- **Skin Contact:** May cause skin irritation.
- **Eye Contact:** May cause eye irritation.
- **Inhalation:** May cause respiratory tract irritation.

- **Ingestion:** May cause nausea, constipation or diarrhea, dry mouth, and loss of appetite. May affect behavior/central nervous system, cardiovascular system, respiration, skin. Other symptoms may include: Skin rash, confusion, seizures, hallucinations, disorientation, depression, personality changes, agitation, somnolence, insomnia, dizziness, irritability, distractability, thinking abnormality, slurred speech, amnesia, difficulty sleeping, weakness, depression, fatigue, anxiety, headache, lightheadedness, euphoria, excitement, coma, increased pulse rate, hypotension or hypertension, difficulty breathing (dyspnea), visual disturbances, sensitivity to light, optic nerve palsy, swollen feet, corneal opacity, corneal edema, swelling of the eyes, loss of libido, urinary retention. The effects of Amantadine can be altered by alcohol, amphetamines, diet pills, asthma, and medicines, methylphenidate, nabilone, and pemoline. Anticholinergic drugs can increase the side effects of Amantadine.

## Section 12: Ecological Information
Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Amantadine Hydrochloride
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Amantadine Hydrochloride
TSCA 8(b) inventory: Amantadine Hydrochloride

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):
R22- Harmful if swallowed.
S2- Keep out of the reach of children.
S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 1
Fire Hazard: 1
Reactivity: 0
Personal Protection: E
National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent.
Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 03:41 PM

Last Updated: 10/09/2005 03:41 PM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.