MATERIAL SAFETY DATA SHEET

Product Name: Lidocaine Hydrochloride and Epinephrine Injection, USP

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Manufacturer Name: Hospira, Inc.
And Address: 275 North Field Drive
Lake Forest, Illinois 60045
USA

Note: Hospira, formerly the Hospital Products Division of Abbott Laboratories, was created as an independent company in May 2004.

Emergency Telephone CHEMTREC: 800 424-9300
Hospira, Inc.: 224 212-2055

Product Name: Lidocaine Hydrochloride and Epinephrine Injection, USP
Synonyms: None

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>Chemical Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidocaine Hydrochloride</td>
<td>C14H23ClN2O</td>
</tr>
<tr>
<td>Epinephrine</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Approximate Percent by Weight</th>
<th>CAS Number</th>
<th>RTECS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidocaine Hydrochloride</td>
<td>1.5</td>
<td>73-78-9</td>
<td>AN7600000</td>
</tr>
<tr>
<td>Epinephrine</td>
<td>0.0005</td>
<td>51-43-4</td>
<td>DO2625000</td>
</tr>
<tr>
<td>Water</td>
<td>98</td>
<td>7732-18-5</td>
<td>ZC0110000</td>
</tr>
</tbody>
</table>

3. HAZARD INFORMATION

Emergency Overview: In clinical use, this material is used to numb body tissues. Lidocaine is toxic by ingestion and besides its numbing effects, can affect the central nervous system, respiratory system, and cardiovascular system. Epinephrine is a material that stimulates the sympathetic nervous system and heart. It is a potent drug, is highly toxic by ingestion and skin absorption, and can produce adverse effects to the eyes, nervous system, cardiovascular system and respiratory system.

Occupational Exposure Potential: Information on the absorption of this compound via ingestion, inhalation or skin contact is not available. Avoid liquid aerosol generation and skin contact.

Signs and Symptoms: No signs or symptoms from occupational exposure are known. Clinical data suggest the following: nervousness, sweating, fearfulness, anxiety, palpitations, tenseness, restlessness, headache, tremor, dizziness, lightheadedness, tachycardia, nausea, vomiting, respiratory difficulty, fever, chills, dilated pupils, blurred vision and cyanosis. Can also cause electrocardiogram change, disturbed cardiac rhythm, hypertension, metabolic acidosis, and cardiac injury. Lidocaine
Product Name: Lidocaine Hydrochloride and Epinephrine Injection, USP

can produce numbness, lightheadedness, drowsiness, apprehension, euphoria, tinnitus, altered vision, vomiting, sensation of hot-cold-numbness, twitching, tremors, dizziness, restlessness, loss of hearing, breathing/swallowing difficulty, stupor, bradycardia, convulsions, unconsciousness, respiratory arrest, hypotension and cardiovascular collapse.

Medical Conditions Aggravated by Exposure: Old age, cardiovascular diseases, hypertension, diabetes, hyperthyroidism, respiratory disease, labor, central nervous system disease and ocular disease/glaucoma. Hypersensitivity to sympathomimetic amines and amide-type local anesthetics.

4. FIRST AID MEASURES

Eye Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Skin Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Inhalation: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic / supportive care as necessary.

Ingestion: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic / supportive care as necessary.

5. FIRE FIGHTING MEASURES

Flammability: Non-flammable.

Fire & Explosion Hazard:

Extinguishing Media: Use extinguishing media appropriate for primary cause of fire.

Special Fire Fighting Procedures: No special provisions required beyond normal fire fighting equipment such as flame and chemical resistant clothing and self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spill Cleanup and Disposal: Absorb with suitable material and clean affected area with soap and water. Dispose of materials according to the applicable federal, state, or local regulations.

7. HANDLING AND STORAGE

Handling: No special handling required.

Storage: No special storage required for hazard control. For product protection store at controlled room temperature of 15-30°C (59-86°F).

Special Precautions: Protect from freezing, light and extreme heat.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA-PEL</th>
<th>ACGIH-TLV</th>
<th>Hospira EEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidocaine Hydrochloride</td>
<td>8 hr TWA: Not</td>
<td>8 hr TWA: Not</td>
<td>8 hr TWA: 500 mcg/m³</td>
</tr>
<tr>
<td></td>
<td>Established</td>
<td>Established</td>
<td>STEL: 5 mg/m³</td>
</tr>
<tr>
<td>Epinephrine</td>
<td>8 hr TWA: Not</td>
<td>8 hr TWA: Not</td>
<td>8 hr TWA: 1 mcg/m³</td>
</tr>
<tr>
<td></td>
<td>Established</td>
<td>Established</td>
<td>STEL: 20 mcg/m³</td>
</tr>
</tbody>
</table>

Notes:  
OSHA PEL: US Occupational Safety and Health Administration – Permissible Exposure Limit  
ACGIH TLV: American Conference of Governmental Industrial Hygienists – Threshold Limit Value.  
EEL: Employee Exposure Limit.  
TWA: 8 hour Time Weighted Average.  
STEL: 15-minute Short Term Exposure Limit.

Respiratory Protection
Respiratory protection is not needed during normal product use.

Skin Protection
If solution contact with unprotected skin is likely, use of impervious gloves is a prudent practice.

Eye Protection
Eye protection is not required during expected product use conditions but may be warranted should a splash potential exist.

Engineering Controls
Engineering controls are not needed during normal product use conditions.

9. PHYSICAL/CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/Physical State</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Approximately that of water (100 °C, 212 °F).</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Approximately that of water (0 °C, 32 °F).</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.006-1.007</td>
</tr>
<tr>
<td>Solubility</td>
<td>Aqueous solution</td>
</tr>
<tr>
<td>pH</td>
<td>3.3 – 5.5</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Chemical Stability
Stable under standard use and storage conditions.

Incompatibilities
Not Determined

Hazardous Decomposition Products
Toxic fumes of nitrogen oxides and HCl

Hazardous Polymerization
Not Determined.
Product Name: Lidocaine Hydrochloride and Epinephrine Injection, USP

11. TOXICOLOGICAL INFORMATION:

Acute Toxicity – Oral:

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>Percent</th>
<th>Test Type</th>
<th>Value</th>
<th>Units</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidocaine Hydrochloride</td>
<td>100</td>
<td>LD50</td>
<td>317</td>
<td>mg/kg</td>
<td>Rats</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>220</td>
<td></td>
<td>Mice</td>
</tr>
<tr>
<td>Epinephrine</td>
<td>100</td>
<td>LD50</td>
<td>24-50</td>
<td>mg/kg</td>
<td>Mice</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rats</td>
</tr>
</tbody>
</table>

LD50 is the dosage producing 50% mortality.
Product contains approximately 1.5% Lidocaine Hydrochloride and less than 0.001% Epinephrine.

Acute Toxicity – Dermal:

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>Percent</th>
<th>Test Type</th>
<th>Value</th>
<th>Units</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epinephrine</td>
<td>100</td>
<td>LD50(sc)</td>
<td>62</td>
<td>mg/kg</td>
<td>Rats</td>
</tr>
</tbody>
</table>

LD50 (sc) is the value for skin contact

Mutagenicity: Not Determined
Target Organ Effects: In clinical use target organ effects include central nervous system, eyes, respiratory system, cardiovascular system.

12. ECOLOGICAL INFORMATION:

Aquatic Toxicity: Not Available

13. DISPOSAL CONSIDERATIONS:

Waste Disposal: Disposal should be performed in accordance with the federal, state or local regulatory requirements.
Container Handling and Disposal: Dispose of container and unused contents in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

DOT: Not Regulated
Notes: DOT - US Department of Transportation Regulations

15. REGULATORY INFORMATION

TSCA Status: Not Regulated
CERCLA Status: Not Regulated
SARA Status: Not Regulated
RCRA Status: Not Regulated
PROP 65 (Calif.): Not Regulated
Notes: TSCA Toxic Substance Control Act
CERCLA, US EPA law, Comprehensive Environmental Response, Compensation, and Liability Act
SARA Superfund Amendments and Reauthorization Act
RCRA US EPA, Resource Conservation and Recovery Act
Prop 65, California Proposition 65

16. OTHER INFORMATION:

MSDS Coordinator: T. Straits MPH, CIH
Date Prepared: September 15, 2005

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