MATERIAL SAFETY DATA SHEET

Product Name: Fentanyl Citrate 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  Fentanyl Citrate Injection, USP

Synonyms  None

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name  Fentanyl Citrate
Chemical Formula  C_{28}H_{36}N_{2}O_{8}

<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>Fentanyl Citrate</td>
<td>0.005</td>
<td>990-73-8</td>
<td>UE5550000</td>
</tr>
<tr>
<td>Water</td>
<td>99</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 relieve pain and produce sedation.
                     Possible target organs include the skin, ears, fetus, eyes, lungs, central nervous
                     system and cardiovascular 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: respiratory depression, slow heart rate, muscle weakness,
                    altered blood pressure, dizziness, nausea, vomiting, sweating, euphoria, pinpoint
                    pupils, breathing difficulty.

Medical Conditions Aggravated by Exposure  Hypersensitivity to the material and/or similar materials. Pre-existing ailments
                                          in the following organs: respiratory system, liver, kidney, heart.
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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: None

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: Protect from light by retaining in carton until contents have been used.

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

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA-PEL</th>
<th>ACGIH-TLV</th>
<th>Hospira EEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fentanyl Citrate</td>
<td>8 hr TWA: Not Established</td>
<td>8 hr TWA: Not Established</td>
<td>8 hr TWA: 0.1 mcg/m3 STEL: Not Established</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.
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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 Determined</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>Approximately that of water (17.5 mm Hg at 20 °C).</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>Approximately that of water (1.0)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Aqueous solution</td>
</tr>
<tr>
<td>pH</td>
<td>4.0 – 7.5</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under standard use and storage conditions.

Incompatibilities

None

Hazardous

Toxic fumes of nitrogen oxides.

Decomposition Products

Not Determined.

Polymerization

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>Fentanyl Citrate</td>
<td>100</td>
<td>LD50</td>
<td>18-136</td>
<td>mg/kg</td>
<td>Rats, Mice</td>
</tr>
</tbody>
</table>

LD50 is the dosage producing 50% mortality. Product contains less than 0.01% Fentanyl Citrate.

Mutagenicity

Not Determined

Target Organ Effects

In clinical use target organ effects include nervous system, respiratory system, muscle, cardiovascular system, gastrointestinal tract, female reproductive 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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