1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Number: 1091065
Product name: Morphine Sulfate Injection, USP
Synonyms: None
Chemical Family: Analgesic
Product Type: Regulated Prescription Drug
Container Information: 1 ml dosette® vials and ampuls or 10 ml multiple dose vials
Product Use: Pharmaceutical
Supplier: BAXTER HEALTHCARE CORPORATION
DEERFIELD, ILLINOIS 60015
(800) 422-9837 or (847) 948-4770
Emergency telephone number: PROSAR: USA (888) 990-0996    OUTSIDE USA (615)917-6114
CHEMTREC: USA (800) 424-9300      OUTSIDE USA (743)741-6089

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight %</th>
<th>UN Number:</th>
<th>Classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine Sulfate Pentahydrate 6211-15-0</td>
<td>0.5-1.5</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Monobasic Sodium Phosphate, Monohydrate 7558-80-7</td>
<td>1</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Phenol 108-95-2</td>
<td>&lt;0.5</td>
<td>UN2821</td>
<td>C;R34, T;R24/25</td>
</tr>
<tr>
<td>Sodium Phosphate, Dibasic 7558-79-4</td>
<td>&lt;1.0</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Sodium Formaldehydesulfoxylate 149-44-0</td>
<td>&lt;0.5</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Water 7732-18-5</td>
<td>&gt;96</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency overview: Harmful if swallowed. Central Nervous System depression. May cause eye and skin irritation.

Principle routes of exposure: Absorbed through skin. Eye contact. Ingestion.

Inhalation: Inhalation not likely under normal use conditions.
Ingestion: No specific hazards other than therapeutic effects.

Skin contact: May cause skin irritation.

Eye contact: May cause eye irritation.

4. FIRST AID MEASURES

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

Skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.

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.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops.

Notes to physician: See patient package insert in shipping carton for complete information.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Use foam or all purpose dry chemicals to extinguish.

Special protective equipment for firefighters: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Specific methods: No information available.

Flash point: Not determined

Autoignition temperature: Not applicable

Flammable limits in air-lower (%): Not applicable

Flammable limits in air-upper (%): Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).

Environmental precautions: No information available.

Methods for cleaning up: If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7. HANDLING AND STORAGE

Handling:
**Technical measures/precautions:**
Wash thoroughly after handling.

**Storage:**
**Technical measures/storage conditions:**
Keep containers tightly closed in a cool, well-ventilated place. Store between 15-30°C (59 to 86°F). Protect from light. Protect from freezing. Follow Schedule II controlled substance requirements.

**Incompatible products:**
No special restrictions on storage with other products.

---

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA- Time Weighted Average:</th>
<th>OSHA- Short Term Exposure Limit:</th>
<th>OSHA- Ceiling Limits</th>
<th>ACGIH- Time Weighted Average:</th>
<th>ACGIH- Short Term Exposure Limit:</th>
<th>ACGIH- Ceiling Limit Value:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine Sulfate Pentahydrate 6211-15-0</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Monobasic Sodium Phosphate, Monohydrate 7558-80-7</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Phenol 108-95-2</td>
<td>= 5 ppm TWA</td>
<td>None</td>
<td>= 5 ppm TWA</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Sodium Phosphate, Dibasic 7558-79-4</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Sodium Formaldehyde sulfoxylate 149-44-0</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Water 7732-18-5</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Engineering measures:**
No special containment is required. Good general ventilation should be sufficient to control airborne levels.

**Personal protective equipment:**

**Respiratory protection:** Perform exposure monitoring for this product and its components to ensure that employees are not exposed to levels greater than applicable regulatory limits. If exposure levels exceed regulatory limits, implement a respiratory protection program including respiratory protection that is in compliance with OSHA 29 CFR1910.134 (in the US) or equivalent regulation in other regions. Fire fighting requires the use of a self-contained breathing apparatus with full face piece and positive pressure mode.

**Hand protection:**
Use chemical resistant, impervious gloves.

**Skin and body protection:**
Work uniform or laboratory coat.

**Eye protection:**
Safety glasses.

---

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid

**Appearance:** Aqueous solution
10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Polymerization: Not applicable

Hazardous decomposition products: Not available.


11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50s and LC50s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine Sulfate Pentahydrate 6211-15-0</td>
<td>Oral LD50 Rat: 973 mg/kg; Oral LD50 Mouse: 1125 mg/kg</td>
</tr>
<tr>
<td>Monobasic Sodium Phosphate, Monohydrate 7558-80-7</td>
<td>Oral LD50 Rat = 8290 mg/kg</td>
</tr>
</tbody>
</table>
| Phenol 108-95-2                               | Inhalation LC50 Mouse = 177 mg/m³  
                                        | Oral LD50 Mouse = 270 mg/kg  
                                        | Inhalation LC50 Rat = 316 mg/m³  
                                        | Oral LD50 Rat = 317 mg/kg  
                                        | Dermal LD50 Rabbit = 630 mg/kg                                                    |
| Sodium Phosphate, Dibasic 7558-79-4          | Oral LD50 Rat = 17 g/kg                                                        |
| Sodium Formaldehydesulfoxylate 149-44-0      | Oral LD50 Rat >2 gm/kg                                                         |
| Water 7732-18-5                               | Oral LD50 Rat >50000 mg/kg                                                     |
Acute toxicity: Signs and symptoms of overexposure to narcotic analgesics may include respiratory depression, drowsiness progressing to stupor or coma, rash, itching, headache, nausea, vomiting, muscle relaxation, cold and clammy skin, slow heart rate, low blood pressure, apnea, circulatory collapse, cardiac arrest, and possibly death.

Chronic toxicity: Target organs: Nervous System, Gastrointestinal tract, kidney. Contains material which causes damage to the following organs: kidneys, lungs, liver, mucous membranes, spleen, skin, eye, lens or cornea, and pancreas.

Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. No data is available on the product itself.

Mutagenic effects: No data is available on the product itself.

Reproductive toxicity: Teratogenic at maternally toxic doses. See patient package insert for additional information.

FDA Pregnancy Catagory C

12. ECOLOGICAL INFORMATION

Environmental properties:

<table>
<thead>
<tr>
<th>Component</th>
<th>Ecotoxicity - Water Flea Data</th>
<th>Fish Species Ecotoxicity</th>
<th>Ecotoxicity - Freshwater Algae Data</th>
<th>Microtox Eotoxicity Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine Sulfate Pentahydrate 6211-15-0</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>Monobasic Sodium Phosphate, Monohydrate 7558-80-7</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>Phenol 108-95-2</td>
<td>= 23.0 mg/L LC50 water flea</td>
<td>LC50 (96 hr) fathead minnow:24 mg/L; LC50 (96 hr) rainbow trout:8.9 mg/L; Flow-through, 13-15 °C, pH 7.7-8.1, 565-700 mg/L CaCO3; LC50 (96 hr) bluegill:23.88 mg/L; Static, 25 °C, pH 7.5, 20.0 mg/L CaCO3.</td>
<td>None.</td>
<td>= 28.8 mg/L EC50 Photobacterium phosphoreum = 31.6 mg/L EC50 Photobacterium phosphoreum</td>
</tr>
<tr>
<td>Sodium Phosphate, Dibasic 7558-79-4</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>Sodium Formaldehydesulfoxylate 149-44-0</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>Water 7732-18-5</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
</tr>
</tbody>
</table>

Ecotoxicity effects: No data available
Bioaccumulation: No data available

13. DISPOSAL CONSIDERATIONS

Waste Classification: Follow schedule II controlled substance requirements.

Waste from residues / unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations.

14. TRANSPORT INFORMATION

DOT:
- DOT shipping name: None
- UN Number: None
- DOT Packing Group: None
- DOT Hazard class: None

TDG (Canada):
- TDG Proper shipping name: None
- TDG UN/NA Number: None
- TDG Packing Group: None
- TDG Hazard class: None

ADR/RID:
- ADR Official Transport Name: None
- ADR Proper shipping name: None
- ADR UN/NA number: None
- ADR Hazard Class: None

ICAO / IATA:
- IATA Proper shipping name: None
- IATA UN NUMBER: None
- IATA Primary Hazard: None
- IATA Packing group: None
- ICAO ERG Code: None

IMO / IMDG:
- IMDG Proper Shipping Name: None
- IMDG Hazard Class and Division: None
- IMDG Packing Group: None
- IMDG Subsidiary Risks: None

15. REGULATORY INFORMATION

U.S. Regulations:
TSCA Inventory List - The product is exempt from TSCA, it is FDA Regulated

OTHER REGULATIONS:
Japanese Inventory (ENCS) This product does not comply with JPENCS
<table>
<thead>
<tr>
<th>Component</th>
<th>Weight %</th>
<th>RCRA Status</th>
<th>CERCLA Reportable Quantity:</th>
<th>CERCLA/SARA - 302 Ext. haz. substances:</th>
<th>Listed as Sara 313 title III:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine Sulfate Pentahydrate</td>
<td>0.5-1.5</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Monobasic Sodium Phosphate, Monohydrate</td>
<td>1</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Phenol</td>
<td>&lt;0.5</td>
<td>waste number U188</td>
<td>= 454 kg final RQ = 1000 lb final RQ = 45.4 kg final RQ = 100 lb final RQ = 0.454 kg final RQ = 1 lb final RQ</td>
<td>= 10,000 lb TPO upper threshold = 500 lb TPQ lower threshold</td>
<td>form R reporting required for 1.0% de minimis concentration</td>
</tr>
<tr>
<td>Sodium Phosphate, Dibasic</td>
<td>&lt;1.0</td>
<td>Not Listed</td>
<td>= 2270 kg final RQ = 5000 lb final RQ</td>
<td>Not Listed</td>
<td>Not Listed</td>
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<tr>
<td>Sodium Formaldehydesulfoxylate</td>
<td>&lt;0.5</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Water</td>
<td>&gt;96</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

### STATE REGULATIONS:

<table>
<thead>
<tr>
<th>Component</th>
<th>California Prop 65:</th>
<th>Minnesota Right-To-Know:</th>
<th>Florida Right-to-Know Reporting List:</th>
<th>Rhode Island Right-to-Know List:</th>
<th>Massachusetts Right-to-Know List:</th>
<th>Pennsylvania Right-to-Know:</th>
<th>New Jersey Right-to-Know:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine Sulfate Pentahydrate</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Monobasic Sodium Phosphate, Monohydrate</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Phenol</td>
<td>Not Listed</td>
<td>Skin</td>
<td>Not Listed</td>
<td>Toxic, Flammable</td>
<td>Extraordinarily hazardous</td>
<td>Environmental hazard</td>
<td>sn 1487</td>
</tr>
<tr>
<td>Sodium Phosphate, Dibasic</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Present</td>
<td>Environmental hazard</td>
<td>sn 1723</td>
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<tr>
<td>Sodium Formaldehydesulfoxylate</td>
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<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Water</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

### CANADIAN REGULATIONS:

- **Canada DSL Inventory List**: This product does not comply with DSL
- **EU EINECS List**: This product does not comply with EINECS
- **Risk Phrases**: NONE
- **Safety Phrases**: NONE

### 16. OTHER INFORMATION

This data sheet contains changes from the previous version in section(s)?:
New MSDS format. Component Modifications. Change to product codes.

Additional information:
Not Available.
To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

End of safety data sheet: