SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier
Product form : Substance
Trade name : ALUMINUM PHOSPHATE

Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture : Pharmaceutical ingredient.

Details of the supplier of the safety data sheet
SPI Pharma Inc.
Rockwood Office Park
503 Carr Road
Wilmington, Delaware 19809
(302) 360-7200

Emergency telephone number
Emergency number : Chemtrec (800) 424-9300; Chemtrec (Outside USA) +1 703-527-3887 (24 hours; 7 days/week)

SECTION 2: Hazards identification

Classification of the substance or mixture
GHS-US classification
Not classified

Label elements
GHS-US labelling
No labelling applicable

Other hazards
No additional information available

Unknown acute toxicity (GHS-US)
No data available

SECTION 3: Composition/information on ingredients

Name : ALUMINUM PHOSPHATE

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum phosphate</td>
<td>(CAS No) 7784-30-7</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

This substance does not contain any substances to be mentioned according to the criteria of Appendix D to Regulations 29 CFR 1910.1200.

SECTION 4: First aid measures

Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest. Get medical attention.
First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash clothing before re-using. Obtain medical attention if irritation persists.
First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after inhalation : Acute exposure may cause respiratory irritation. Chronic exposure to dust may result in delayed lung injury.
Symptoms/injuries after skin contact : May cause mechanical irritation.
Symptoms/injuries after eye contact : May cause mechanical irritation.
Symptoms/injuries after ingestion : May cause irritation to the digestive tract.

Indication of any immediate medical attention and special treatment needed
Treat symptomatically.
SECTION 5: Firefighting measures

**Extinguishing media**


Unsuitable extinguishing media: Do not use a heavy water stream.

**Special hazards arising from the substance or mixture**

Fire hazard: None known.

Explosion hazard: None known.

Reactivity: Stable under normal conditions.

**Advice for firefighters**

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protective equipment for firefighters: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

General measures: If spilled, may cause the floor to be slippery.

For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

**Environmental precautions**

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

**Methods and material for containment and cleaning up**

Methods for cleaning up: On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials. Flush residue with large amounts of water. Dispose of contents/container to comply with applicable local, national and international regulations.

**Reference to other sections**

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

**Precautions for safe handling**

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

**Conditions for safe storage, including any incompatibilities**

Storage conditions: Keep only in the original container in a cool well ventilated place. Keep container closed when not in use.


Incompatible materials: Sources of ignition. Direct sunlight.

**Specific end use(s)**

No additional information available

SECTION 8: Exposure controls/personal protection

**Control parameters**

**Exposure Guidelines**

A: General Product Information

Follow all applicable exposure limits. Safe work practices should always be followed to keep exposures as low as possible.
B: Component Exposure Limits

**Aluminum phosphate (7784-30-7)**

- **ACGIH:** 10 mg/m³ TWA (inhalable particles, recommended); 3 mg/m³ TWA (respirable particles, recommended) (related to Particulates (insoluble or poorly soluble) not otherwise specified (PNOS))
- **OSHA (Final):** 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction) (related to Particulates not otherwise regulated)
- **OSHA (Vacated):** 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction) (related to Particulates not otherwise regulated)
- **Alberta:** 10 mg/m³ TWA (total particulate); 3 mg/m³ TWA (respirable particulate) (related to Particulates not otherwise regulated)
- **British Columbia:** 10 mg/m³ TWA (inhalable); 3 mg/m³ TWA (respirable) (related to Particles (insoluble or poorly soluble) not otherwise specified)
- **Manitoba:** 10 mg/m³ TWA (total dust containing no asbestos and <1% free silica) (related to Nuisance particulates)
- **New Brunswick:** 10 mg/m³ TWA (particulate matter containing no asbestos and < 1% crystalline silica, inhalable fraction); 3 mg/m³ TWA (particulate matter containing no asbestos and < 1% crystalline silica, respirable fraction) (related to Particulates not otherwise classified (PNOC))
- **NW Territories:** 5 mg/m³ TWA (respirable mass); 10 mg/m³ TWA (total mass) (related to Nuisance particulate)
- **Nova Scotia:** 10 mg/m³ TWA (inhalable particulate, recommended); 3 mg/m³ TWA (respirable particulate, recommended) (related to Particulates (insoluble or poorly soluble) not otherwise specified (PNOS))
- **Ontario:** 10 mg/m³ TWA (inhalable); 3 mg/m³ TWA (respirable) (related to Particulates (insoluble or poorly soluble) Not Otherwise Classified (PNOC))
- **Quebec:** 10 mg/m³ TWA (total dust, containing no asbestos and less than 1% crystalline silica) (related to Particulates not otherwise classified (PNOC))
- **Saskatchewan:** 10 mg/m³ TWA; 3 mg/m³ TWA (respirable size) (related to Particulates, n.o.c.)
  20 mg/m³ STEL; 6 mg/m³ STEL (respirable size) (related to Particulates, n.o.c.)

**Exposure controls**
- Provide adequate ventilation to minimize dust concentrations.
- Wear protective gloves.
- Chemical goggles or safety glasses.
- Wear suitable protective clothing.
- Appropriate dust or mist respirator should be used if airborne particles are generated when handling this material. NIOSH mask with filter for organic gases and vapors.
- Do not eat, drink or smoke during use.

**SECTION 9: Physical and chemical properties**

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Colorless to white rhombic plates or powder</td>
</tr>
<tr>
<td>Colour</td>
<td>Colorless to white rhombic plates or powder</td>
</tr>
<tr>
<td>Odour</td>
<td>Very slight odor</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>6.3 @ 10% suspension</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt;2732°F (&gt;1500°C)</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Unknown</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: Insoluble</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
</tbody>
</table>
ALUMINUM PHOSPHATE

Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Other information
No additional information available

SECTION 10: Stability and reactivity

Reactivity
Stable under normal conditions.

Chemical stability
Stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

Incompatible materials

Hazardous decomposition products
Upon decomposition, aluminum oxide may be formed. Irritating and toxic gases or fumes may be released during a fire. Decomposition of this product may yield oxides of phosphorus.

SECTION 11: Toxicological information

Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aluminum phosphate (7784-30-7) Dermal LD50 Rabbit</td>
<td>&gt; 4640 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Potential Adverse human health effects and symptoms</td>
<td>None known.</td>
</tr>
<tr>
<td>Symptoms/injuries after inhalation</td>
<td>Acute exposure may cause respiratory irritation. Chronic exposure to dust may result in delayed lung injury.</td>
</tr>
<tr>
<td>Symptoms/injuries after skin contact</td>
<td>May cause mechanical irritation.</td>
</tr>
</tbody>
</table>
ALUMINUM PHOSPHATE
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Symptoms/injuries after eye contact: May cause mechanical irritation.
Symptoms/injuries after ingestion: May cause irritation to the digestive tract.

SECTION 12: Ecological information

Toxicity
No additional information available

Persistence and degradability

Aluminum phosphate
Persistence and degradability: Not established.

Bioaccumulative potential

Aluminum phosphate
Bioaccumulative potential: Not established.

Mobility in soil
No additional information available

Other adverse effects
Effect on ozone layer: No additional information available
Effect on the global warming: No known ecological damage caused by this product.
Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

Waste treatment methods
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
Not regulated for transport

Additional information
Other information: No supplementary information available.

ADR
No additional information available

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations
No additional information available

15.2. International regulations
CANADA
No additional information available

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
No additional information available

15.2. National regulations
No additional information available
15.3. US State regulations

No supplementary information available

SECTION 16: Other information

Abbreviations and acronyms:
- ATE - acute toxicity estimate
- CAS - Chemical Abstracts Service
- HCS - Hazard Communication Standard
- HMIS - Hazardous Materials Identification System
- OSHA - Occupational Safety and Health Administration
- SDS - Safety Data Sheet

Date of SDS preparation:
- 05/01/2015

Other information:
- None.

NFPA health hazard:
- 1 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard:
- 1 - Must be preheated before ignition can occur.

NFPA reactivity:
- 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating

Health:
- 1 Slight Hazard - No significant risk to health

Flammability:
- 1 Slight Hazard

Physical:
- 0 Minimal Hazard

Personal Protection:
- Safety glasses with side shields

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.