Section 1. Product and Company Identification

Product Name: Alendronate Monosodium Trihydrate
Product ID: A4515
Chemical Name (Synonyms): Alendronic acid; ABDP
Supplier: LKT Laboratories, Inc
545 Phalen Blvd.
St. Paul, MN 55130 USA
Ph: 651-644-8424 Fax: 651-644-8357
www.lktlabs.com - getinfo@lktlabs.com
Emergency Phone #: 1-800-424-9300

Section 2. Hazards Identification

GHS Classification: Acute toxicity, Oral (Category 4), H302

GHS Label elements including precautionary statements

Pictogram: !
Signal word: Warning
Hazard and precautionary statements

Hazard Statement
H302 - Harmful if swallowed.

Precautionary statement
P264 - Wash skin thoroughly after handling.
P270 - Do not eat, drink, or smoke when using this product.
P301+ 312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 - Rinse mouth.
P501 - Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification
Health hazard: 2
Chronic health hazard: *
Flammability: 0
Physical hazard: 0

NFPA Rating
Health hazard: 2
Fire hazard: 0
Reactivity hazard: 0

Potential Health Effects
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: Acute toxicity. Harmful if swallowed.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Formula</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula Wt.</td>
<td>325.08</td>
<td>121268-17-5</td>
</tr>
<tr>
<td>Formula</td>
<td>C₄H₁₂NNaO₇P₂ • 3H₂O</td>
<td></td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

General advice
Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye Contact
Flush eyes with water as a precaution.

Skin Contact
Wash with soap and plenty of water. Consult a physician.

Inhalation
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Firefighting Measures

Flash Point
Not available.

Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Firefighting Procedures
Wear self-contained breathing apparatus for firefighting and protective clothing if necessary.

Unusual Fire Hazards
Carbon oxides, nitrogen oxides (NOx), oxides of phosphorus, sodium oxides.

Section 6. Accidental Release Measures

Personal Precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions
Do not let product enter drains.

Methods and materials for containment and cleanup
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed container for disposal.

Section 7. Handling and Storage

Handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage Conditions
Store in a cool, dry place in a tightly closed container. Recommended storage temperature: Ambient

Hazardous Decomposition Products
Carbon oxides, nitrogen oxides (NOx), oxides of phosphorus, sodium oxides.

Other Remarks
None
Section 8. Exposure Controls/Personal Protection

Personal protective equipment
EXPOSURE CONTROL
Contains no substances with occupational exposure limit values. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

PERSONAL PROTECTION
Eye Protection: Safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full and Splash contact - Material: Nitrile rubber. Minimum layer thickness: 0.11mm, Break through time: 480 min., Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M).

Body Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid.</td>
<td>White crystal powder.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>233°C - 235°C (dec)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soluble in water (10 mg/mL). Relatively insoluble in PBS (0.25 mg/mL) and DMSO (&lt;1 mg/mL).</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Ignition temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower explosion limit</th>
<th>Autoignition temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper explosion limit</th>
<th>Vapor pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water solubility</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soluble in water (10 mg/mL).</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water</th>
<th>Odor Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative vapor density</th>
<th>Evaporation rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

Stability
Stable under proper storage conditions.

Materials To Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon oxides, nitrogen oxides (NOx), oxides of phosphorus, sodium oxides.
Section 11. Toxicological Information

**Oral LD50**  
Rat - 552 mg/kg  

**Inhalation LC50**  
Not available.

**Dermal LD50**  
Not available.

**Other information on acute toxicity**  
Not available.

**Skin corrosion/irritation**  
Not available.

**Serious eye damage/irritation**  
Not available.

**Respiratory or skin sensitization**  
Not available.

**Germ cell mutagenicity**  
Not available.

**Reproductive Toxicity**  
Rat - Oral - Maternal Effects: Parturition. Maternal Effects: Other effects. Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive).

**Aspiration Hazard**  
Not available.

**Synergistic effects**  
Not available.

**Specific organ toxicity single exposure (GHS)**  
Not available.

**Specific organ toxicity repeated exposure (GHS)**  
Not available.

**Teratogenicity**  
Not available.

**Additional Information**  
RTECS: SZ6523500  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Potential Health Effects**  
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.  
Skin: May be harmful if absorbed through skin. May cause skin irritation.  
Eyes: May cause eye irritation.  
Ingestion: Acute toxicity. Harmful if swallowed.

**Carcinogenicity**  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.  
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

---

Section 12. Ecological Information

**Toxicity**  
Avoid release into the environment.

**Mobility in soil**  
Not available.

**PBT and vPvB assessment**  
PBT/vPvB assessment not available as chemical safety assessment not required/not
Persistence and degradability Not available. Bioaccumulative potential Not available.

Other adverse effects Not available.

Section 13. Disposal Considerations

Waste Disposal Dispose of material according to all federal, state, and local regulations. Offer material to a licensed, professional waste disposal company to dispose of as unused product.

Section 14. Transport Information

DOT (US) Not dangerous goods. IATA Not dangerous goods. IMDG Not dangerous goods.

Further Information

Section 15. Regulatory Information

Reach No.

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Components Acute health hazard.

Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components Alendronate Monosodium Trihydrate CAS #: 121268-17-5 Revision Date:

New Jersey Right To Know Components Alendronate Monosodium Trihydrate CAS #: 121268-17-5 Revision Date:

California Prop 65 Components This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16. Other Information

Other information The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.