Section 1. Product and Company Identification

Product Name: Bleomycin A5 Hydrochloride
Product ID: B4517
Chemical Name (Synonyms): Pingyangmycin hydrochloride
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
Acute toxicity, Skin (Category 4), H312
Skin corrosion/irritation (Category 2), H315
Serious eye damage/eye irritation (Category 2A), H319
Acute toxicity, Inhalation (Category 4), H332
Specific target organ toxicity, single exposure, (Category 3) Respiratory, H335
Carcinogenicity (Category 2), H351

GHS Label elements including precautionary statements

Pictogram
Signal word: Warning
Hazard and precautionary statements
H302 - Harmful if swallowed.  
H312 - Harmful in contact with skin. 
H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
H332 - Harmful if inhaled.  
H335 - May cause respiratory irritation. 
H351 - Suspected of causing cancer.

Precautionary statements
P201 - Obtain special instructions before use. 
P202 - Do not handle until all safety precautions have been read and understood. 
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P281 - User personal protective equipment as required. 
P284 - Wear respiratory protection.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician IF you feel unwell.
P302 + P352 - IF ON SKIN: Gently wash with plenty of soap and water.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 
P308 + P313 - IF exposed or concerned: Get medical advice/attention. 
P311 - Call a POISON CENTER or doctor/physician. 
P321 - Specific treatment (see supplemental first aid instructions on this label). 
P322 - Specific measures (see supplemental first aid instructions on this label).
P330 - Rinse mouth. 
P332 + P313 - IF SKIN irritation occurs: Get medical advice/attention. 
P337 + P313 - IF eye irritation persists: Get medical advice/attention. 
P362 - Take off contaminated clothing and wash before reuse. 
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. 
P405 - Store locked up. 
P501 - Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification: Not classified.

NFPA Rating: Not classified.

Potential Health Effects
Inhalation - Acute toxicity. Harmful if inhaled. May cause respiratory tract irritation. 
Skin - Acute toxicity. Harmful in contact with skin. Causes skin irritation. 
Eyes - Causes serious eye irritation.
Ingestion - Acute toxicity. Harmful if swallowed.
Carcinogenicity - Suspected of causing cancer.

Section 3. Composition/Information on Ingredients

Substances

<table>
<thead>
<tr>
<th>Ingredient: Title Compound</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>C₅₇H₈₉N₁₉O₂₁S₂ • HCl</td>
<td>100</td>
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Formula Weight

<table>
<thead>
<tr>
<th>Formula Wt.</th>
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<tbody>
<tr>
<td>1477.02</td>
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CAS No.

<table>
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<tr>
<th>EC No.</th>
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Section 4. First Aid Measures

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

Eye Contact
Flush eyes with plenty of water for at least 15 minutes. Consult with a physician.

Skin Contact
Wash off with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Consult with 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. Do NOT induce vomiting unless directed by a physician. 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 if necessary.

Unusual Fire Hazards
Carbon oxides, nitrogen oxides (NOx).

Section 6. Accidental Release Measures

Personal Precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. 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 containers 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.

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: +4°C

Hazardous Decomposition Products
Hydrogen sulfide, carbon oxides, nitrogen oxides (NOx), phosgene.
Section 8. Exposure Controls/Personal Protection

Personal protective equipment
EXPOSURE CONTROLS
Contains no substances with occupational exposure limit values.
General industrial hygiene practice.

PERSONAL PROTECTION
Eye/face protection: 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.

Body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. 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>
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<tbody>
<tr>
<td>Solid</td>
<td>White crystal powder.</td>
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<table>
<thead>
<tr>
<th>Boiling Point</th>
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<tbody>
<tr>
<td>Melting Point</td>
<td>Not available.</td>
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</table>

Solubility: Freely soluble in water.

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<tr>
<th>Flash Point</th>
<th>Ignition temperature</th>
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<tr>
<td>Not available.</td>
<td>Not available.</td>
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Lower explosion limit: Not available.

Upper explosion limit: Not available.

Water solubility: Freely soluble in water.

Partition coefficient: n-octanol/water: Not available.

Relative vapor density: Not available.

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<thead>
<tr>
<th>Odor</th>
<th>Odor Threshold</th>
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<tr>
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<table>
<thead>
<tr>
<th>Evaporation rate</th>
<th>Not available.</th>
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Section 10. Stability and Reactivity

Stability
Stable under recommended storage conditions.

Materials To Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hydrogen sulfide, carbon oxides, nitrogen oxides (NOx), phosgene.
Section 11. Toxicological Information

Oral LD50 Not available.  
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 Not available.  
Aspiration Hazard Not available.  
Specific organ toxicity single exposure (GHS) Not available.  
Specific organ toxicity repeated exposure (GHS) Not available.  
Teratogenicity Not available.  
Synergistic effects Not available.  
Additional Information RTECS: EC5990700

Potential Health Effects
- Inhalation - Acute toxicity. Harmful if inhaled. May cause respiratory tract irritation.
- Skin - Acute toxicity. Harmful in contact with skin. Causes skin irritation.
- Eyes - Causes serious eye irritation.
- Ingestion - Acute toxicity. Harmful if swallowed.
- Carcinogenicity - Suspected of causing cancer.

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 Not available.  
Mobility in soil Not available.  
PBT and vPvB PBT/vPvB assessment not available as chemical safety assessment not required/not
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.

Section 15. Regulatory Information
Reach No.

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

SARA 313 Components SARA 313: 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 No SARA hazards.

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

Pennsylvania Right To Know Components Bleomycin A5 Hydrochloride CAS #: 55658-47-4 Revision Date:

New Jersey Right To Know Components Bleomycin A5 Hydrochloride CAS #: 55658-47-4 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.