Section 1. Product and Company Identification

Product Name: Bleomycin Sulfate
Product ID: B4518
Chemical Name (Synonyms): Blenoxane; Blexane

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
- Germ cell mutagenicity (Category 1B), H340
- Carcinogenicity (Category 2), H351
- Reproductive toxicity (Category 2), H361

GHS Label elements including precautionary statements

Pictogram
Signal word: Danger

Hazard and precautionary statements
- Hazard statements
  - H340 - May cause genetic defects.
  - H351 - Suspected of causing cancer.
  - H361 - Suspected of damaging fertility or the unborn child.
- Precautionary statements
  - P201 - Obtain special instructions before use.
  - P202 - Do not handle until all safety precautions have been read and understood.
  - P281 - Use personal protective equipment as required.
  - P308 + P313 - IF exposed or concerned: Get medical advice/attention.
  - P405 - Store locked up.
  - P501 - Dispose of contents/container to an approved waste disposal plant.

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

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

Potential Health Effects
- Inhalation - May be harmful if inhaled. May cause respiratory irritation.
- Skin - May be harmful if absorbed through skin. May cause skin irritation.
- Eyes - May cause eye irritation.
- Ingestion - May be harmful if swallowed.
### Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Formula Wt.</th>
<th>EC No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C_{55}H_{84}N_{17}O_{21}S_{3} \cdot H_{2}SO_{4}</td>
<td>1512.63</td>
</tr>
<tr>
<td>CAS No.</td>
<td>9041-93-4</td>
<td>232-925-2</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 off 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 fire fighting if necessary.

**Unusual Fire Hazards**
Not known.

### 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**
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. This product ships ambient. Recommended short storage: +4°C. Strongly hygroscopic.

**Hazardous Decomposition Products**
Not available.

**Other Remarks**
Section 8. Exposure Controls/Personal Protection

Personal protective equipment

EXPOSURE CONTROLS

Contains no substances with occupational exposure limit values. Wash hands before breaks and at the end of workday.

PERSONAL PROTECTION

Eye/face 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: 0.11 mm, Break through time: 480 min., Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M).

Body protection: Impermeable clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. 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>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting Point</td>
<td>71°C</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water to 20 mg/mL. DMSO to 100 mg/mL. Methanol.</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not available.</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not available.</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Soluble in water to 20 mg/mL.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

Stability

Stable under recommended storage conditions.

Materials To Avoid

Strong oxidizing agents.

Hazardous Decomposition Products

Not available.
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** In vivo tests showed mutagenic effects.

**Reproductive Toxicity** Suspected human reproductive toxicant.

**Aspiration Hazard** Not available.

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

**Synergistic effects** Not available.

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

**Additional Information** RTECS: EC5991990

**Teratogenicity**

**Potential Health Effects**
- Inhalaion: may be harmful if inhaled. May cause respiratory irritation.
- Skin: May be harmful if absorbed through skin. May cause skin irritation.
- Ingestion: May be harmful if swallowed.

**Carcinogenicity** This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.
- 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 assessment** 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. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. 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** Chronic health hazard

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

**Pennsylvania Right To Know Components** Bleomycin, sulfate CAS No. 9041-93-4 Revision Date:

**New Jersey Right To Know Components** Bleomycin, sulfate CAS No. 9041-93-4 Revision Date:

**California Prop 65 Components** This product does not contain any chemicals known to 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.