Section 1. Product and Company Identification

Product Name: Netilmicin Sulfate
Product ID: N1976
Chemical Name (Synonyms): Certomycin; Netilyn; Netromycin; Nettacin; Zetamicin
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, Skin (Category 4), H312
Acute toxicity, Inhalation (Category 4), H332
Reproductive Toxicity (Category 1B), H360

GHS Label elements including precautionary statements

Pictogram
Signal word: Danger
Hazard and precautionary statements
H312 - H332 - Harmful in contact with skin or if inhaled.
H360 - May damage 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.
P261 - Avoid breathing dust, fumes, gas, mist, vapors and spray.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves and protective clothing.
P302 - P352 - IF ON SKIN: 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.
P308 + P313 - IF exposed or concerned: Get medical advice/ attention.
P322 - Specific measures (see supplemental first aid instructions on this label).
P363 - Wash contaminated clothing before reuse.
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 - Acute toxicity. Harmful if inhaled. May cause respiratory tract irritation.
Skin - Acute toxicity. Harmful if in contact with skin. May cause skin irritation.
Eyes - May cause eye irritation.
Section 3. Composition/Information on Ingredients

Substances

<table>
<thead>
<tr>
<th>Formula</th>
<th>Formula Wt.</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>((C_{21}H_{41}N_5O_7)_{2} \cdot 5H_2SO_4)</td>
<td>1441.56</td>
<td>56391-57-2</td>
</tr>
</tbody>
</table>

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 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
367.7°C

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

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

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

Section 6. Accidental Release Measures

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

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
Avoid raising 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 if formed. Normal measures for preventive fire protection.

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

Hazardous Decomposition Products
Carbon monoxide, carbon dioxide, nitrogen oxides and sulfur oxides.

Other Remarks
None.
Section 8. Exposure Controls/Personal Protection

**Personal protective equipment**

**EXPOSURE CONTROLS**

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/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.

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: 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 to yellowish-white crystalline powder.</td>
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</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Volatility</th>
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</thead>
<tbody>
<tr>
<td>684.3°C</td>
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<table>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
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</thead>
<tbody>
<tr>
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<td>Not available.</td>
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</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soluble in water.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Ignition temperature</th>
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</thead>
<tbody>
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<td>367.7°C</td>
<td>Not available.</td>
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</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Water solubility</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soluble in water.</td>
<td>Not available.</td>
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</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>
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</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 recommended storage conditions.

**Materials To Avoid**

Not available.

**Hazardous Decomposition Products**

Carbon monoxide, carbon dioxide, nitrogen oxides and sulfur oxides.
Section 11. Toxicological Information

**Oral LD50**  Rat - 10,000 mg/kg  
**Skin corrosion/irritation**  Not available.

**Inhalation LC50**  Not available.  
**Serious eye damage/irritation**  Not available.

**Dermal LD50**  Not available.  
**Respiratory or skin sensitization**  Not available.

**Other information on acute toxicity**  Not available.  
**Germ cell mutagenicity**  Not available.

**Reproductive Toxicity**  Rat - Intramuscular Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day 4). Behavioral.  
**Aspiration Hazard**  Not available.

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

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

**Teratogenicity**  Not available.  

**Potential Health Effects**  Inhalation - Acute toxicity. Harmful if inhaled. May cause respiratory tract irritation.  
Skin - Acute toxicity. Harmful if in contact with skin. May cause skin irritation.  
Eyes - May cause eye irritation.  
Ingestion - Acute toxicity. Harmful if swallowed.  
Reproductive Toxicity - May damage fertility or the unborn child.

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

Bioaccumulative potential: 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

SARA 302 Components No chemical 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 D-Streptamine, o-3-deoxy-4-c-methyl-3-(methylamino)-ß-L-arabinopyranosyl-(16)-o-[2,6-diamino-2,3,4,6-tetradeoxy-α-D-glycero-hex-4-e CAS No. 56391-57-2 Revision Date:

New Jersey Right To Know Components D-Streptamine, o-3-deoxy-4-c-methyl-3-(methylamino)-ß-L-arabinopyranosyl-(16)-o-[2,6-diamino-2,3,4,6-tetradeoxy-α-D-glycero-hex-4-e CAS No. 56391-57-2 Revision Date:

California Prop 65 Components WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. D-Streptamine, o-3-deoxy-4-c-methyl-3-(methylamino)-ß-L-arabinopyranosyl-(16)-o-[2,6-diamino-2,3,4,6-tetradeoxy-α-D-glycero-hex-4-e CAS No. 56391-57-2 Revision Date:

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.