1. IDENTIFICATION
   - Product Identifier: Sisomicin sulfate
   - Product Number: S004
   - Distributor Name: TOKU-E Company
   - Distributor Address: 715 W Orchard Dr. Suite 3
     Bellingham, WA 98225
   - Phone Number: (360)734-1789
   - Emergency Phone Number (International): +1 (352) 353-3500
   - Emergency Phone Number (US Only): 1 (800) 535-5053
   - Safety Data Sheet Issued by: TOKU-E USA
   - CAS-Number: [53179-09-2]
   - EC/REACH Number: [258-414-4]
   - Recommended Use: Commonly used in clinical in vitro microbiological antimicrobial susceptibility tests
   - Restrictions of Use: Not for human or animal use

2. HAZARD(S) IDENTIFICATION
   - GHS Classification:
     - Acute toxicity, dermal (Category 4)
     - Acute toxicity, inhalation (Category 4)
     - Reproductive toxicity (Category 1B)
   - GHS Label Elements, Including:
     - Signal Word: Danger
     - Hazard Statements:
       - H312+H332: Harmful in contact with skin or if inhaled
       - H360: May damage fertility or the unborn child
     - Precautionary Statements:
       - P261: Avoid breathing dust/fumes/gas/mist/vapors/spray.
       - P271: Use only outdoors or in a well-ventilated area.
       - P280: Wear protective gloves/protective clothing/eye protection/face protection.
       - P302+P352: IF ON SKIN: Wash with plenty of water/soap
       - P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
       - P312: Call a POISON CENTER/doctor if you feel unwell.
       - P321: Specific treatment, see applicable response statements on this label
       - P363: Wash contaminated clothing before reuse.
       - P501: Dispose of contents/container in accordance with governmental regulation
       - P201: Obtain special instructions before use
       - P202: Do not handle until all safety precautions have been read and understood
       - P308+P313: IF exposed or concerned: Get medical advice/attention.
       - P405: Store locked up.
3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym(s)  D-Streptamine, Extramycin, Pathomycin
Formula  \( C_{19}H_{37}N_{5}O_{7}.2.5 \text{H}_2\text{SO}_4 \)
Molecular Weight  692.72
CAS-Number  [53179-09-2]
EC/REACH Number  [258-414-4]
Hazardous Components  Sisomicin sulfate
  Acute toxicity, dermal (Category 4)
  Acute toxicity, inhalation (Category 4)
  Reproductive toxicity (Category 1B)

4. FIRST-AID MEASURES

General Advice  Consult a doctor/physician if exposed - additional medical care may be required. Show this Safety Data Sheet to the medical provider.

If Inhaled  If inhaled, move to fresh air. If not breathing, give artificial respiration and immediately call local emergency telephone number.

In Case of Skin Contact  Wash skin thoroughly with soap and water.

In Case of Eye Contact  Flush eye with water. After initial flush, remove any contact lenses and continue flushing for at least 15 minutes.

If Swallowed  Rinse mouth with water. Immediately call a doctor, physician, or poison control center. Never give anything by mouth to an unconscious person.

Specific Treatment  Please see Section 2 precautionary statements and/or Section 11.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media  Water spray, alcohol-resistant foam, dry chemical, carbon dioxide

Special Protective Equipment for Firefighters  Wear self-contained breathing apparatus

Hazardous Combustion Products  Formed under fire conditions: carbon and nitrogen oxides, carbon monoxide, sulfur dioxide, hydrogen peroxide

6. ACCIDENTAL RELEASE MEASURES

General  Evacuate personnel to a safe location. Use appropriate personal protective equipment while in contact with product. Avoid dust formation. Ensure adequate ventilation.

Personal Precautions  Prevent contamination of skin, eyes and clothing with appropriate protective equipment (Section 8). Wear respiratory protection.

Environmental Precautions  Recover waste, if possible, and place in suitable
7. **HANDLING AND STORAGE**

   **Precautions for Safe Handling**
   Wear appropriate protective clothing/gear to prevent contact with skin and eyes. Provide exhaust ventilation or respiratory protection in areas where dust is formed.

   **Precautions for Safe Storage**
   Store in a tightly closed container. Protect from humidity.
   Recommended storage temperature: 2-8°C

   **Incompatibilities**
   No Data Available

8. **EXPOSURE CONTROLS/ PERSONAL PROTECTION**

   **Contains no substance/substances with occupational exposure limit values**

   **OSHA Permissible Exposure Limits**
   No Data Available

   **NIOSH Recommended Exposure Limits**
   No Data Available

   **ACGIH Threshold Limit Values**
   No Data Available

   **PPE: 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)

   **PPE: Hand Protection**
   Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal techniques to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices, and wash and dry hands

   **PPE: Eye Protection**
   Use a face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)

   **PPE: Skin and Body Protection**
   Handle with gloves. Wear protective clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place. When deemed needed according to the concentration and amount of this product, use a complete body suit

9. **PHYSICAL/CHEMICAL PROPERTIES**

   **Appearance**
   White or almost white crystalline powder

   **Lower Flammability/Explosion Limit**
   No Data Available
### Upper Flammability/Explosion Limit
No Data Available

### Odor
No Data Available

### Vapor Pressure
No Data Available

### Odor Threshold
No Data Available

### Vapor Density
No Data Available

### pH
3.5 – 5.5

### Relative Density
No Data Available

### Melting Point/Freezing Point
No Data Available

### Water Solubility
No Data Available

### Solubility in Other Solvents
No Data Available

### Boiling Point and Range
No Data Available

### Flash Point
No Data Available

### Evaporation rate
No Data Available

### Flammability (solid, gas)
No Data Available

### Partition Coefficient: n-octanol/water
No Data Available

### Ignition Temperature
No Data Available

### Auto-Ignition Temperature
No Data Available

### Decomposition Temperature
No Data Available

### Viscosity
No Data Available

### Density
No Data Available

### Optical Rotation
+100° - +110°

### Absorbance (290nm, 5% in H2O)
No Data Available

### Water Content (Loss on Drying)
Not more than 15.0%

## 10. STABILITY AND REACTIVITY

### Chemical Stability
Stable under recommended storage conditions

### Possibility of Hazardous Reactions
No Data Available

### Conditions to Avoid
No Data Available

### Materials to Avoid
Strong oxidizing agents

### Hazardous Decomposition Products
Formed under fire conditions: carbon and nitrogen oxides, carbon monoxide, sulfur dioxide, hydrogen peroxide

## 11. TOXICOLOGICAL INFORMATION

### Oral LD50
Rat: >5 gm/kg

### Inhalation LC50
No Data Available

### Dermal LD50
No Data Available

### Intraperitoneal LD50
Mouse: 221 mg/kg

### Intravenous LD50
Rat: 49 mg/kg

### Subcutaneous LD50
Rat: 500 mg/kg

### Skin Corrosion/Irritation
No Data Available

### Serious Eye Damage/ Eye Irritation
No Data Available

### Respiratory or Skin Sensitization
No Data Available

### Germ Cell Mutagenicity
No Data Available

### Carcinogenicity
This substance has not been identified as a potential carcinogen within the National Toxicology Program Report on Carcinogens or within the International
Reproductive Toxicity: No Data Available
Specific Target Organ Toxicity: Single Exposure (GHS): No Data Available
Specific Target Organ Toxicity: Repeated Exposure (GHS): No Data Available
Aspiration Hazard: No Data Available
Potential Health Effects: See Section 2, Hazard(s) Identification
Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been thoroughly investigated
Synergistic Effects: No Data Available
Additional Information: No Data Available

12. ECOLOGICAL INFORMATION
Toxicity: No Data Available
Persistence and Degradability: No Data Available
Bio accumulative Potential: No Data Available
Mobility in Soil: No Data Available
PBT and vPvB Assessment: No Data Available

In the absence of complete ecological information, treat product as environmentally hazardous. Use proper storage, handling, and disposal to prevent unintentional release into the environment.

13. DISPOSAL CONCENTRATIONS
Product: Dispose of product through a licensed disposal company.
Contaminated Packaging: Dispose of as unused product.

14. TRANSPORTATION INFORMATION
DOT (US): Not a Dangerous Good
IMDG: Not a Dangerous Good
IATA: Not a Dangerous Good

15. REGULATORY INFORMATION
SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.
SARA 311/312 Hazards: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 311/312.
Massachusetts Right to Know: No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right to Know
No components are subject to the Pennsylvania Right to Know Act

New Jersey Right to Know
No components are subject to the New Jersey Right to Know Act

California Prop. 65 Components
No
This product does not contain any chemicals known to the State of California to cause birth defects, cancer, or any other reproductive harm

EU Information
SDS in accordance with REACH 1907/2006
EC/REACH Number [258-414-4]
CAS-Number [53179-09-2]
Name: Sisomicin sulfate
Envisaged Registration Deadline: 31/05/2013
See GHS Information under Section 2, Hazard Identification

16. OTHER INFORMATION
Revision Date: 2016-10-05

HMIS Rating
Health Hazard 0
Chronic Health Hazard N
Flammability 0
Physical Hazard 0

NFPA Rating
Health Hazard 0
Fire Hazard 0
Reactivity Hazard 0

This safety data sheet represents TOKU-E Company's current understanding of the hazards associated with this product. The stated hazard information is based on existing experimental data and is not guaranteed to be all-inclusive. TOKU-E Company strives to maintain current and comprehensive safety information but recognizes that this safety data sheet may require revision as new information becomes available. TOKU-E Company shall not be held liable for damage or injury resulting from contact, handling, or storage of this product.