1. **IDENTIFICATION**
   - **Product Identifier**: Midecamycin
   - **Product Number**: M007
   - **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**: [35457-80-8]
   - **EC/REACH Number**: [252-578-0]
   - **Recommended Use**: *In vitro* research of midecamycin showed immunosuppressive properties by inhibiting T-cell responses by suppressing IL-2. These results suggest potential treatment for post-transplant complications and inflammatory diseases.
   - **Restrictions of Use**: Not for human or animal use

2. **HAZARD(S) IDENTIFICATION**
   - **GHS Classification**: Not a GHS hazardous substance.
   - **GHS Label Elements, Including**: N/A
   - **Hazard Statements**: N/A
   - **Precautionary Statements**: N/A
   - **Hazards not otherwise classified (HNOC)**: No Data Available by GHS

3. **COMPOSITION/INFORMATION ON INGREDIENTS**
   - **Synonym(s)**: Aboren, Espinomycin A, Leucomycin V, Medemycin, Midecamycin A1, Midecin, Momicine, Myoxam, Normicina, Rubimycin
   - **Formula**: C_{41}H_{67}NO_{15}
   - **Molecular Weight**: 813.97
   - **CAS-Number**: [35457-80-8]
   - **EC/REACH Number**: [252-578-0]
   - **Hazardous Components**: Midecamycin

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, 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 closed container for licensed disposal. Prevent spillage - do not let product enter drains.

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 workplace. When deemed needed according to the concentration and amount of this product, use a complete body suit.

9. PHYSICAL/CHEMICAL PROPERTIES
Appearance
White or off-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
No Data Available
Relative Density
No Data Available
Melting Point/Freezing Point
153-158°C
Water Solubility
No Data Available
Solubility in Other Solvents
Soluble in methanol, ethanol, and acidic solutions.
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
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, hydrogen peroxide

11. TOXICOLOGICAL INFORMATION

Oral LD$_{50}$
Rat- 9,600 mg/kg
Inhalation LC$_{50}$
No Data Available
Dermal LD$_{50}$
No Data Available
Intraperitoneal LD$_{50}$
Rat - 11,300 mg/kg
Intravenous LD$_{50}$
No Data Available
Subcutaneous LD$_{50}$
Rat > 10,000 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 Agency for Research on Cancer Monograph.

Reproductive Toxicity
Fetal toxicity, including reduced growth statistics and increased fetal mortality, was observed within offspring of rats exposed to large dosages of Midecamycin during gestation (TDLo: 18,000 mg/kg, 3,000 mg/kg, and 6,000 mg/kg).

Specific Target Organ Toxicity: Single Exposure (Globally Harmonized System)
No Data Available
Specific Target Organ Toxicity: Repeated Exposure (Globally Harmonized System)
No Data Available
Aspiration Hazard
No Data Available
Potential Heath 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
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: This product does not contain any chemicals known to the State of California to cause birth defects, cancer, or any other reproductive harm

16. OTHER INFORMATION
   Revision Date: 2016-07-11

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.