1. **IDENTIFICATION**

Product Identifier: Magainin II
Product Number: M074
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: [108433-95-0]
EC/REACH Number: No Data Available
Recommended Use: Natural product antimicrobial research drug.
Restrictions of Use: Not for human or animal use

2. **HAZARD(S) IDENTIFICATION**

GHS Classification: Not classified. Toxicology information unavailable.
GHS Label Elements, Including: None
Hazard Statements: None
Precautionary Statements: None
Hazardous Components: No Data Available

3. **COMPOSITION/INFORMATION ON INGREDIENTS**

Synonym(s): Magainin 2
Formula: \( \text{C}_{114}\text{H}_{180}\text{N}_{30}\text{O}_{29}\text{S} \)
Molecular Weight: 2466.9
CAS-Number: [108433-95-0]
EC/REACH Number: No Data Available

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
Specific Treatment
anything by mouth to an unconscious person.
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 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: <30°C

Incompatibilities
Avoid strong acids and strong bases.

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
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
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
No Data Available
Absorbance (290nm, 5% in H₂O)
No Data Available
Water Content (Loss on Drying)
No Data Available

10. STABILITY AND REACTIVITY
Chemical Stability
Stable under recommended storage conditions
Possibility of Hazardous Reactions
No Data Available
Conditions to Avoid
Materials to Avoid
Hazardous Decomposition Products

No Data Available
Strong oxidizing agents, strong acids, strong bases
Formed under fire conditions: carbon and nitrogen oxides, carbon monoxide, sulfur dioxide, hydrogen peroxide

11. TOXICOLOGICAL INFORMATION

Oral LD$_{50}$
Inhalation LC$_{50}$
Dermal LD$_{50}$
Intraperitoneal LD$_{50}$
Intravenous LD$_{50}$
Subcutaneous LD$_{50}$
Skin Corrosion/Irritation
Serious Eye Damage/ Eye Irritation
Respiratory or Skin Sensitization
Germ Cell Mutagenicity
Carcinogenicity

No Data Available
No Data Available
No Data Available
No Data Available
No Data Available
No Data Available
No Data Available
No Data Available
No Data Available
No Data Available
No Data Available
No Data Available

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
Specific Target Organ Toxicity: Single Exposure (GHS)
Specific Target Organ Toxicity: Repeated Exposure (GHS)
Aspiration Hazard
Potential Health Effects
Signs and Symptoms of Exposure
Synergistic Effects
Additional Information

No Data Available
No Data Available
No Data Available
No Data Available
See Section 2, Hazard(s) Identification
To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been thoroughly investigated
No Data Available
No Data Available
No Data Available

12. ECOLOGICAL INFORMATION

Toxicity
Persistence and Degradability
Bio accumulative Potential
Mobility in Soil
PBT and vPvB Assessment

No Data Available
No Data Available
No Data Available
No Data Available
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.

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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 No Data Available
CAS-Number [108433-95-0] Name: Magainin II
Envisaged Registration Deadline: No Data Available
See GHS Information under Section 2, Hazard Identification

16. OTHER INFORMATION
Revision Date: 2017-04-20

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.