1. IDENTIFICATION
   
   **Product Identifier** | Enrofloxacin
   **Product Number**     | E016
   **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) 323-3500
   **Emergency Phone Number (US only)**       | 1 (800) 535-5053
   **Safety Data Sheet Issued by**             | TOKU-E USA
   **CAS-Number**           | [93106-60-6]
   **EC/REACH List Number** | [618-911-2]
   **Recommended Use**      | Fluoroquinolone antibiotic which targets bacterial DNA gyrase
   **Restrictions on Use**  | Not for human or animal use

2. HAZARD(S) IDENTIFICATION
   
   **GHS Classification**
   - Acute Toxicity - Oral (Category 4)
   - Skin Sensitization (Category 1)
   - Respiratory Sensitization (Category 1)

   **GHS Label Elements, Including Precautionary statements**
   - Signal word: Danger

   **Hazard Statements**
   - H302: Harmful if swallowed.
   - H317: May cause an allergic skin reaction.
   - H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

   **Precautionary Statements**
   - P264: Wash hands/skin thoroughly after handling
   - P270: Do not eat, drink, or smoke when using this product
   - P272: Contaminated work clothing should not be allowed out of the workplace.
   - P280: Wear protective gloves/protective clothing/eye protection/face protection
   - P285: In case of inadequate ventilation wear respiratory protection
P301 + P312: IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell
P302 + P352: IF ON SKIN: Wash with plenty of soap and water
P304 + P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P321: Specific treatment, see applicable response statements on this label
P330: Rinse mouth
P333 + P313: If skin irritation or rash occurs: Get medical advice/attention
P342 + P311: IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician
P363: Wash contaminated clothing before reuse
P501: Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC) by GHS
None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym(s)
3-Quinolinecarboxylic acid, 1-cyclopropyl-7-(4-ethyl-1-piperazinyl)-6-fluoro-1,4-dihydro-4-oxo-; Baytril

Formula
C_{19}H_{22}FN_{3}O_{3}

Molecular Weight
359.39 g/mol

CAS-Number
[93106-60-6]

EC-List Number
[618-911-2]

Index-Number
Not available

Hazardous components
Enrofloxacin
Acute Tox. 4; Skin Sens. 1; Resp. Sens. 1; H302, H317, H334

4. FIRST-AID MEASURES

General Advice
Consult a physician. Show this Safety Data Sheet to the medical provider

If Inhaled
If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a doctor

In Case of Skin Contact
Wash thoroughly with plenty of soap and water

In Case of Eye Contact
Rinse thoroughly with plenty of water for at least 15 minutes, consult a doctor

If Swallowed
Never give anything by mouth to an unconscious person. Consult a doctor. Rinse mouth with water.
Most important symptoms and effects, both acute and delayed
Indication of any immediate medical attention and special treatment needed

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 and Hydrogen fluoride gas

6. ACCIDENTAL RELEASE MEASURES
General
- Evacuate personnel to safe location
Personal Precautions
- Wear respiratory protection. Avoid dust formation and breathing vapors/mist/dust/gas. Ensure adequate ventilation
Environmental Precautions
- Prevent spillage, do not let product enter drains
Methods of Containment and Cleanup
- Place in suitable, closed containers for licensed disposal. Avoid dust formation

7. HANDLING AND STORAGE
Precautions for Safe Handling
- Avoid contact with skin and eyes. Provide exhaust ventilation in areas where dust if formed
Precautions for Safe Storage
- Keep container tightly closed and in a dry, well-ventilated place. Recommended storage temperature: 2-8°C
Incompatibilities
- None known

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION
Contains no substances with occupational exposure limit values
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**: Light yellow or yellow-orange powder
- **pH**: No data available
- **Melting Point/Freezing Point**: 221-226°C
- **Boiling Point**: No data available
- **Flash Point**: No data available
- **Ignition Temperature**: No data available
- **Autoignition Temperature**: No data available
- **Lower Explosion Limit**: No data available
- **Upper Explosion Limit**: No data available
- **Vapor Pressure**: No data available
- **Density**: No data available
- **Water Solubility**: Slightly soluble
- **Solubility in Other Solvents**: No data available
- **Partition Coefficient: n-octanol/water**: No data available
- **Optical Rotation**: No data available
- **Absorbance (290nm, 5% in H₂O)**: No data available
- **Loss on Drying**: ≤3.0%

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**: Carbon and Nitrogen oxides and Hydrogen fluoride gas formed under fire conditions

11. TOXICOLOGICAL INFORMATION

- **Oral LD₅₀**: Rat: 5,000 mg/kg
- **Inhalation LC₅₀**: No data available
- **Dermal LD₅₀**: No data available
- **Intraperitoneal LD₅₀**: No data available
### Intravenous LD\textsubscript{50}
Mouse: 200 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
Mutation in microorganisms: Bacteria (Salmonella typhimurium): 60 ng/plate

### 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

### Reproductive Toxicity
No data available

### 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 Health Effects
See Section 2, Hazard(s) Identification

### Signs and Symptoms of Exposure
Giddiness, slowed reaction time, slurred speech, headache, dizziness, drowsiness, unconsciousness. Stomach irregularities, based on human evidence.
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
RTECS: VB1993650

### 12. ECOLOGICAL INFORMATION

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### 13. DISPOSAL CONSIDERATIONS
14. TRANSPORTATION INFORMATION
DOT (US) Not Dangerous Goods
IMDG Not Dangerous Goods
IATA Not Dangerous Goods

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 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 Hazards Chronic Health Hazard
Massachusetts Right to Know Components No components are subject to the Massachusetts Right to Know Act
Pennsylvania Right to Know Components Enrofloxacin
CAS-Number [93106-60-6]
Revision Date: Not available
New Jersey Right to Know Components Enrofloxacin
CAS-Number [93106-60-6]
Revision Date: Not available
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
EU Information SDS in accordance with REACH 1907/2006
EC List Number [618-911-2]
CAS-Number [93106-60-6]
Name: 3-Quinolinicarboxylic acid, 1-cyclopropyl-7-(4-ethyl-1-piperazinyl)-6-fluoro-1,4-dihydro-4-oxo-3-oxo-
Synonyms: Enrofloxacin
Envisaged Registration Deadline: 30/11/2010
See GHS Information under Section 2, Hazard Identification

16. OTHER INFORMATION
Date of last revision: 2016-03-03

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. TOKU-E...
Company shall not be held liable for any damage resulting from handling or from contact with the above product. Please see reverse side of invoice or packing slip for additional terms and conditions of sale.