

# Enrofloxacin Antibacterial Injectable Solution

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations  
Revision Date: 02/26/2015 Date of issue: 02/26/2015

Version: 1.0

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Enrofloxacin Antibacterial Injectable Solution

**Synonyms:** Enrofloxacin Injectable

#### 1.2. Intended Use of the Product

**Use of the substance/mixture:** Antibacterial.

#### 1.3. Name, Address, and Telephone of the Responsible Party

##### Company

Putney, Inc.

One Monument Square, Suite 400

Portland, ME 04101

1-866-683-0660

[www.putneyvet.com](http://www.putneyvet.com)

#### 1.4. Emergency Telephone Number

**Emergency Number** : 1-866-683-0660 (Monday-Friday: 9:00 AM–4:00PM EST)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### Classification (GHS-US)

Flam. Liq. 3 H226

Eye Dam. 1 H318

Full text of H-phrases: see section 16

#### 2.2. Label Elements

##### GHS-US Labeling

##### Hazard Pictograms (GHS-US)



##### Signal Word (GHS-US)

: Danger

##### Hazard Statements (GHS-US)

: H226 - Flammable liquid and vapor.

H318 - Causes serious eye damage.

##### Precautionary Statements (GHS-US)

: P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.

P233 - Keep container tightly closed.

P240 - Ground/bond container and receiving equipment.

P241 - Use explosion-proof electrical, ventilating, and lighting equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P280 - Wear protective gloves, protective clothing, and eye protection.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a poison center or doctor.

P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.

P403+P235 - Store in a well-ventilated place. Keep cool.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

#### 2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

#### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

| Name  | Product Identifier  | %     | Classification (GHS-US)  |
|---|---------------------|-------|--|
| Water   | (CAS No) 7732-18-5  | > 90  | Not classified   |
| 1-Butanol   | (CAS No) 71-36-3    | < 5   | Flam. Liq. 3, H226<br>Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H336<br>STOT SE 3, H335 |
| 1-Cyclopropyl-7-(4-ethyl-1-piperazinyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid | (CAS No) 93106-60-6 | < 5   | Not classified   |
| Potassium hydroxide   | (CAS No) 1310-58-3  | < 0.5 | Met. Corr. 1, H290<br>Acute Tox. 4 (Oral), H302<br>Skin Corr. 1A, H314<br>Eye Dam. 1, H318                                       |

The exact percentage of composition has been withheld as a trade secret [29 CFR 1910.1200].

Full text of H-phrases: see section 16

### SECTION 4: FIRST AID MEASURES

#### 4.1. Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

**First-aid Measures After Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Rinse immediately with plenty of water. Remove contaminated clothing. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**First-aid Measures After Ingestion:** Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

#### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms/Injuries:** Causes serious eye damage.

**Symptoms/Injuries After Inhalation:** May cause respiratory irritation.

**Symptoms/Injuries After Skin Contact:** May cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Redness, pain, swelling, itching, burning, tearing, and blurred vision.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

#### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Dry chemical powder, alcohol foam, carbon dioxide, water spray, fog.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Heavy water stream may spread fire.

#### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Flammable liquid and vapor.

**Explosion Hazard:** May form flammable/explosive vapor-air mixture.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

#### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Other Information:** Refer to Section 9 for flammability properties.

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid all contact with skin, eyes, or clothing. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Use special care to avoid static electric charges.

##### 6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

##### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area.

#### 6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and Material for Containment and Cleaning Up

**Methods for Cleaning Up:** Absorb and/or contain spill with inert material, then place in suitable container. Clear up spills immediately and dispose of waste safely. Use only non-sparking tools.

#### 6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: HANDLING AND STORAGE

#### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Handle empty containers with care because residual vapors are flammable.

**Precautions for Safe Handling:** Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Provide good ventilation in process area to prevent formation of vapor. Take precautionary measures against static discharge. Use only non-sparking tools.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

#### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Proper grounding procedures to avoid static electricity should be followed.

**Storage Conditions:** Keep in fireproof place. Keep only in the original container in a cool, well ventilated place away from : Sparks, heat, open flame and other sources of ignition. Keep container tightly closed.

**Incompatible Products:** Strong acids, strong bases, strong oxidizers.

**Incompatible Materials:** Sources of ignition. Direct sunlight. Heat sources.

**Storage Temperature:** < 40 °C (<104°F)

#### 7.3. Specific End Use(s)

For professional use only.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

| Potassium hydroxide (1310-58-3) |  |                       |
|---------------------------------|--|-----------------------|
| USA ACGIH                       | ACGIH Ceiling (mg/m <sup>3</sup> )       | 2 mg/m <sup>3</sup>   |
| USA NIOSH                       | NIOSH REL (ceiling) (mg/m <sup>3</sup> ) | 2 mg/m <sup>3</sup>   |
| 1-Butanol (71-36-3)             |  |                       |
| USA ACGIH                       | ACGIH TWA (ppm)                          | 20 ppm                |
| USA NIOSH                       | NIOSH REL (ceiling) (mg/m <sup>3</sup> ) | 150 mg/m <sup>3</sup> |
| USA NIOSH                       | NIOSH REL (ceiling) (ppm)                | 50 ppm                |
| USA IDLH                        | US IDLH (ppm)                            | 1400 ppm (10% LEL)    |
| USA OSHA                        | OSHA PEL (TWA) (mg/m <sup>3</sup> )      | 300 mg/m <sup>3</sup> |
| USA OSHA                        | OSHA PEL (TWA) (ppm)                     | 100 ppm               |

#### 8.2. Exposure Controls

##### Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Gas detectors should be used when flammable gases/vapors may be released. Proper grounding procedures to avoid static electricity should be followed.

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### Personal Protective Equipment

: Avoid all unnecessary exposure. Gloves. Safety glasses. Protective clothing.  
Insufficient ventilation: wear respiratory protection.



### Hand Protection

: Wear protective gloves.

### Eye Protection

: Chemical goggles or safety glasses.

### Skin and Body Protection

: Wear suitable protective clothing. Wash contaminated clothing before reuse.

### Respiratory Protection

: In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

|  |                            |
|--|----------------------------|
| Physical State                         | : Liquid                   |
| Appearance                             | : Clear colorless solution |
| Odor                                   | : No data available        |
| Odor Threshold                         | : No data available        |
| pH                                     | : 10.5 - 11.5              |
| Evaporation Rate                       | : No data available        |
| Melting Point                          | : No data available        |
| Freezing Point                         | : No data available        |
| Boiling Point                          | : No data available        |
| Flash Point                            | : 127.04 °F (52.8 °C)      |
| Auto-ignition Temperature              | : No data available        |
| Decomposition Temperature              | : No data available        |
| Flammability (solid, gas)              | : No data available        |
| Vapor Pressure                         | : No data available        |
| Relative Vapor Density at 20 °C        | : No data available        |
| Relative Density                       | : No data available        |
| Solubility                             | : No data available        |
| Partition Coefficient: N-Octanol/Water | : No data available        |
| Viscosity                              | : No data available        |

### 9.2. Other Information

No additional information available

## SECTION 10: STABILITY AND REACTIVITY

- 10.1. **Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. **Chemical Stability:** Stable at standard temperature and pressure.
- 10.3. **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. **Conditions to Avoid:** Ignition sources. Direct sunlight. Extremely high or low temperatures. Open flame. Sparks.
- 10.5. **Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6. **Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>). May release flammable gases.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

|   |               |
|---|---------------|
| <b>1-Cyclopropyl-7-(4-ethyl-1-piperazinyl)-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid (93106-60-6)</b> |               |
| LD50 Oral Rat   | 5000 mg/kg    |
| <b>Potassium hydroxide (1310-58-3)</b>  |               |
| LD50 Oral Rat   | 333 mg/kg     |
| <b>1-Butanol (71-36-3)</b>  |               |
| LD50 Oral Rat   | 700 mg/kg     |
| LD50 Dermal Rabbit  | 3402 mg/kg    |
| LC50 Inhalation Rat   | > 8000 ppm/4h |

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**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Causes serious eye damage.

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** May cause respiratory irritation.

**Symptoms/Injuries After Skin Contact:** May cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Redness, pain, swelling, itching, burning, tearing, and blurred vision.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

|                            |  |
|----------------------------|--|
| <b>1-Butanol (71-36-3)</b> |  |
| LC50 Fish 1                | 1730 - 1910 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) |
| EC50 Daphnia 1             | 1983 mg/l (Exposure time: 48 h - Species: Daphnia magna)                       |
| LC 50 Fish 2               | 1740 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])  |
| EC50 Daphnia 2             | 1897 - 2072 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])       |

**12.2. Persistence and Degradability** No additional information available

### 12.3. Bioaccumulative Potential

|  |                  |
|--|------------------|
| <b>Potassium hydroxide (1310-58-3)</b> |                  |
| Log Pow                                | 0.65             |
| <b>1-Butanol (71-36-3)</b>             |                  |
| BCF fish 1                             | 0.64             |
| Log Pow                                | 0.785 (at 25 °C) |

**12.4. Mobility in Soil** No additional information available

### 12.5. Other Adverse Effects

No additional information available

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste Treatment Methods:** Dispose of waste material in accordance with all local, regional, national, and international regulations.

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations.

**Additional Information:** Handle empty containers with care because residual vapors are flammable.

**Ecology – Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

**14.1. In Accordance with DOT** Not regulated for transport

**14.2. In Accordance with IMDG** Not regulated for transport

**14.3. In Accordance with IATA** Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### 15.1 US Federal Regulations

|   |  |
|---|--|
| <b>Enrofloxacin Antibacterial Injectable Solution</b>                     |  |
| SARA Section 311/312 Hazard Classes                                       | Fire hazard<br>Immediate (acute) health hazard |
| <b>Water (7732-18-5)</b>  |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |  |
| <b>Potassium hydroxide (1310-58-3)</b>                                    |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |  |

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|   |  |
|---|--|
| <b>1-Butanol (71-36-3)</b>  |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory<br>Listed on United States SARA Section 313 |  |
| <b>EPA TSCA Regulatory Flag</b>   | T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.<br>Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule. |
| <b>SARA Section 313 - Emission Reporting</b>  | 1.0 %  |

## 15.2 US State Regulations

|  |
|--|
| <b>Potassium hydroxide (1310-58-3)</b>   |
| U.S. - Massachusetts - Right To Know List<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List<br>U.S. - Pennsylvania - RTK (Right to Know) List |
| <b>1-Butanol (71-36-3)</b>   |
| U.S. - Massachusetts - Right To Know List<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Pennsylvania - RTK (Right to Know) List  |

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

|                      |   |
|----------------------|---|
| <b>Revision Date</b> | : 02/26/2015  |
| <b>Data Sources</b>  | : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200. |

### GHS Full Text Phrases:

|                     |   |
|---------------------|---|
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4                            |
| Eye Dam. 1          | Serious eye damage/eye irritation Category 1                |
| Flam. Liq. 3        | Flammable liquids Category 3                                |
| Met. Corr. 1        | Corrosive to metals Category 1                              |
| Skin Corr. 1A       | Skin corrosion/irritation Category 1A                       |
| Skin Irrit. 2       | Skin corrosion/irritation Category 2                        |
| STOT SE 3           | Specific target organ toxicity (single exposure) Category 3 |
| STOT SE 3           | Specific target organ toxicity (single exposure) Category 3 |
| H226                | Flammable liquid and vapor                                  |
| H290                | May be corrosive to metals                                  |
| H302                | Harmful if swallowed  |
| H314                | Causes severe skin burns and eye damage                     |
| H315                | Causes skin irritation                                      |
| H318                | Causes serious eye damage                                   |
| H335                | May cause respiratory irritation                            |
| H336                | May cause drowsiness or dizziness                           |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

SDS US (GHS HazCom)