

## **Flunixin Injection/ Flunixin Injection-S – At-A-Glance**

**ANADA 200-308 / ANADA 200-476**

**Caution:** Federal law restricts this drug to use by or on the order of a licensed veterinarian.

**Active Ingredients** – flunixin meglumine – a COX (cyclooxygenase) inhibiting NSAID (Non-Steroidal Anti-Inflammatory Drug).

**Storage Conditions** – (both) - Store between 2° and 30°C (36° and 86°F). Use within 60 days of first puncture. (250 mL also includes) - When using a draw-off spike or needle with a bore-diameter larger than 16-gauge, discard any product remaining in the vial immediately after use.

### **Indications –**

#### **Flunixin Injection**

**Horse:** Flunixin Injection is recommended for the alleviation of inflammation and pain associated with musculoskeletal disorders in the horse. It is also recommended for the alleviation of visceral pain associated with colic in the horse.

**Cattle:** Flunixin Injection is indicated for the control of pyrexia associated with bovine respiratory disease, endotoxemia and acute bovine mastitis. Flunixin Injection is also indicated for the control of inflammation in endotoxemia.

#### **Flunixin Injection-S**

**Swine (Only)** - is indicated for the control of pyrexia associated with swine respiratory disease.

### **Dosage and Administration**

#### **Flunixin Injection**

**Horse:** The recommended dose for musculoskeletal disorders is 0.5 mg per pound (1 mL/100 lbs) of bodyweight once daily. Treatment may be given by intravenous or intramuscular injection and repeated for up to five days. Studies show onset of activity is within 2 hours. Peak response occurs between 12 and 16 hours and duration of activity is 24-36 hours. The recommended dose for the alleviation of pain associated with equine colic is 0.5 mg per pound of bodyweight. Intravenous administration is recommended for prompt relief. Clinical studies show pain is alleviated in less than 15 minutes in many cases. Treatment may be repeated when signs of colic recur. During clinical studies

approximately 10% of the horses required one or two additional treatments. The cause of the colic should be determined and treated with concomitant therapy.

**Cattle:** The recommended dose for control of pyrexia associated with bovine respiratory disease and endotoxemia and control of inflammation in endotoxemia is 1.1 to 2.2 mg/kg (0.5 to 1mg/lb; 1 to 2 mL per 100 lbs) of bodyweight given by slow intravenous administration either once a day as a single dose or divided into two doses administered at 12 hour intervals for up to 3 days. The total daily dose should not exceed 2.2 mg/kg (1.0 mg/lb) of bodyweight. Avoid rapid intravenous administration of the drug. The recommended dose for acute bovine mastitis is 2.2 mg/kg (1.0 mg/lb; 2 mL per 100 lbs) of bodyweight given once by intravenous administration.

### **Flunixin Injection-S**

**Swine** - The recommended dose for swine is 2.2 mg/kg (1 mg/lb; 2 mL per 100 lbs) body weight given by a single intramuscular administration. The injection should be given only in the neck musculature with a maximum of 10 mL per site.

### **Differentiation –**

### **Residue Warnings**

**Flunixin Injection** - Cattle must not be slaughtered for human consumption within 4 days of the last treatment. Milk that has been taken during treatment and for 36 hours after the last treatment must not be used for food. Not for use in dry dairy cows. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal. Not for use in horses intended for food. Intramuscular administration has resulted in violative residues in the edible tissues of cattle sent to slaughter.

**Flunixin Injection-S** - Swine must not be slaughtered for human consumption within 12 days of the last treatment.

### **Contraindications**

#### **Flunixin Injection**

**Horse:** There are no known contra-indications to this drug when used as directed. Intra-arterial injection should be avoided. Horses inadvertently injected intra-arterially can show adverse reactions. Signs can be ataxia, incoordination, hyperventilation, hysteria and muscle weakness. Signs are transient and

disappear without antidotal medication within a few minutes. Do not use in horses showing hypersensitivity to flunixin meglumine.

**Cattle:** NSAIDs inhibit production of prostaglandins which are important in signaling the initiation of parturition. The use of flunixin can delay parturition and prolong labor which may increase the risk of stillbirth. Do not use Flunixin Injection (flunixin meglumine injection) within 48 hours of expected parturition. Do not use in animals showing hypersensitivity to flunixin meglumine. Use judiciously when renal impairment or gastric ulceration are suspected.

### **Flunixin Injection-S**

**Swine** - There are no known contraindications to this drug in swine when used as directed. Do not use in animals showing hypersensitivity to flunixin meglumine. Use judiciously when renal impairment or gastric ulceration is suspected.

### **PRECAUTIONS**

As a class, cyclo-oxygenase inhibitory NSAIDs may be associated with gastrointestinal and renal toxicity. Sensitivity to drug-associated adverse effects varies with the individual patient. Patients at greatest risk for renal toxicity are those that are dehydrated, on concomitant diuretic therapy, or those with renal, cardiovascular, and/or hepatic dysfunction. Since many NSAIDs possess the potential to induce gastrointestinal ulceration, concomitant use of Flunixin Injection (flunixin meglumine injection) with other anti-inflammatory drugs, such as other NSAIDs and corticosteroids, should be avoided or closely monitored.

**Horse:** The effect of flunixin meglumine injection on pregnancy has not been determined. Studies to determine activity of flunixin meglumine injection when administered concomitantly with other drugs have not been conducted. Drug compatibility should be monitored closely in patients requiring adjunctive therapy.

**Cattle:** Do not use in bulls intended for breeding, as reproductive effects of flunixin meglumine injection in these classes of cattle have not been investigated. NSAIDs are known to have potential effects on both parturition (See Contraindications) and the estrous cycle. There may be a delay in the onset of estrus if flunixin is administered during the prostaglandin phase of the estrous cycle. NSAIDs are known to have the potential to delay parturition through a tocolytic effect. The use of NSAIDs in the immediate post-partum period may interfere with uterine involution and expulsion of fetal membranes. Cows should be monitored carefully for placental retention and metritis if Flunixin Injection is used within 24 hours after parturition.

**Swine:** Not for use in breeding swine. The reproductive effects of flunixin meglumine injection have not been investigated in this class of swine. Intramuscular injection may cause local tissue irritation and damage. In an injection site irritation study, the tissue damage did not resolve in all animals by Day 28 post-injection. This may result in trim loss of edible tissue at slaughter.

## Strengths and Sizes Available-

Strength	Bottle Size
Flunixin Injection 50 mg / mL	100 and 250 mL vials
Flunixin Injection-S 50 mg / mL	100 and 250 mL vials
Private Label Brands	Distributor
Vetameg Injectable Solution 100 and 250 mL vials	Aspen
VetOne Prevail 100 and 250 mL vials	MWI
Flunixin Injection 100 and 250 mL vials	Covetrus

## Competition –

**Pioneer** – (Flunixin Inj) – Banamine Injectable Solution - 50 mg / mL (Merck)

Banamine Injectable-S Solution - 50 mg / mL (Merck)

**Generics** – \*All packaged in same strengths and sizes as Flunixin / Flunixin-S

### Flunixin Injection

Covetrus Flunixin Injection

Flu-Nix Sterile Injectable Solution (Agrilabs)

Flunixin Injection (Vet Tek)

Flunazine Injectable Solution (Bimeda)

### Flunixin Injection-S

Flunazine-S Injectable Solution (Bimeda)

Flunixin (flunixin meglumine) Injection A200-308

Observe label directions and withdrawal times. Not for use in bulls intended for breeding, dry cows or in calves to be processed for veal. Cyclooxygenase inhibitory NSAIDs may be associated with gastrointestinal, renal and hepatic toxicity. Concomitant use with other anti-inflammatory drugs should be avoided or closely monitored. Rare instances of anaphylactic-like reactions, some of which have been fatal, have been reported. See product labeling for full product information.

Flunixin (flunixin meglumine) Injection-S A200-476

Observe label directions and withdrawal times. Not for use in breeding swine. Cyclooxygenase inhibitory NSAIDs may be associated with gastrointestinal, renal and hepatic toxicity. Concomitant use with other anti-inflammatory drugs should be avoided. See product labeling for full product information.