

## 1 NAME OF THE VETERINARY MEDICINAL PRODUCT

Mastermectin 0.5% Pour-on Solution for Cattle

## 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

### Active Substance

Ivermectin Ph.Eur 5 mg

### Excipients

Benzyl Alcohol Ph.Eur 10 mg

N-methyl Pyrrolidone 35 mg

For a full list of excipients, see section 6.1

## 3 PHARMACEUTICAL FORM

Pour-on solution.

A clear, colourless solution

## 4 CLINICAL PARTICULARS

### 4.1 Target Species

Cattle.

### 4.2 Indications for use, specifying the target species

In cattle: For the treatment of infections with the following parasites

Gastro-intestinal worms -

*Haemonchus placei* (adult and fourth stage larvae)

*Ostertagia ostertagi* (adult and fourth stage larvae, including inhibited larvae)

*Trichostrongylus axei* (adult and fourth stage larvae)

*Trichostrongylus colubriformis* (adult and fourth stage larvae)

*Cooperia punctata* (adult only)

*Cooperia oncophora* (adult only)

*Strongyloides papillosus* (adult only)

*Oesophagostomum radiatum*, (adult and fourth stage larvae)

Lungworm (adult and fourth stage larvae) – *Dictyocaulus viviparus*.

Warbles (parasitic stages) – *Hypoderma bovis*, *Hypoderma lineatum*.

Mange mites – *Sarcoptes scabiei* var. *bovis*. The product may also be used to reduce infection of the mange mite *Chorioptes bovis*, but complete elimination may not occur.

Sucking and biting lice – *Linognathus vituli*, *Haematopinus eurysternus*, *Bovicola* (*Damalinia*) *bovis*.

Mastermectin 0.5% Cattle Pour-on has persistent activity against infections acquired with *Trichostrongylus axei* and *Cooperia* spp. up to 14 days after treatment, but only in the case of group treatment; *Ostertagia ostertagi* and *Oesophagostomum radiatum* up to 21 days after treatment; *Dictyocaulus viviparus* up to 28 days after treatment. It also has persistent activity against horn flies (*Haematobia irritans*) for up to 28 days

after treatment; partial efficacy against *Haematobia irritans* may last for up to 35 days post application.

### **4.3 Contraindications**

Do not use in cases of known hypersensitivity to the active ingredient.

Do not use in lactating dairy cows producing milk for human consumption. Do not use in non-lactating dairy cows, including pregnant dairy heifers, within 60 days of calving.

The product has been formulated for topical application specifically for cattle. It should not be administered to other species as severe adverse reactions, including fatalities in dogs, may occur (See also section 4.5).

### **4.4 Special warnings for each target species**

Do not treat cattle when their hide is wet.

Do not treat cattle if rain is expected, as rain within 2 hours of treatment may reduce efficacy.

Do not apply to areas of skin which have mange scabs or other lesions, or to areas contaminated with mud or manure.

To avoid secondary reactions due to the death of *Hypoderma* larvae in the oesophagus or in the spine, it is recommended to administer the product at the end of warble fly activity and before the larvae reach their resting sites.

### **4.5 Special precautions for use Special precautions for use in animals**

The product has been formulated for topical application specifically for cattle. It should not be administered to other species as severe adverse reactions may occur. Cases of intolerance with fatal outcome are reported in dogs, especially Collies, old English Sheepdogs and related breeds or crosses, and also in turtles/tortoises.”

It is recommended to treat all animals within a herd or group.

The shedding of nematode eggs can continue for some time after treatment.

Frequent and repeated use may lead to the development of resistance. It is important that the correct dose is given in order to minimise the risk of resistance. To avoid under dosing animals should be grouped according to their body weight and dosed according to the heaviest animal in the group.

Close container after use.

### **Special precautions to be taken by the person administering the veterinary medicinal product to animals**

May be irritating to human skin and eyes and the user should be careful not to apply it to himself or other persons.

Operators should wear rubber gloves, boots, goggles and a waterproof coat when applying the product.

Protective clothing should be washed after use.

As absorption through skin can occur, in the event of accidental skin contact, wash the affected area immediately with soap and water.

Laboratory studies in rabbits and rats with the excipient N-methyl pyrrolidone have shown evidence of foetotoxic effects. The veterinary medicinal product should not be administered by pregnant women and women suspected of being pregnant. Personal protective equipment consisting of gloves and protective clothing should be worn when handling the veterinary medicinal product by women of childbearing age. If accidental eye exposure occurs, flush the eyes immediately with water and get medical attention.

Do not smoke, eat or drink while handling the product.

Wash hands after use.

Use only in well ventilated areas or outdoors.

Highly inflammable, keep away from heat, sparks, open flame or other sources of ignition.

### **4.6 Adverse reactions (frequency and seriousness)**

None known.

### **4.7 Use during pregnancy, lactation or lay**

The safety of the veterinary medicinal product has not been established in cattle during pregnancy or lactation, or in animals intended for breeding. Laboratory studies in rabbits and rats with the excipient N-methyl pyrrolidone have shown evidence of foetotoxic effects. Use only according to the benefit-risk assessment by

the responsible veterinarian. Please also see section 4.3.

#### **4.8 Interaction with other medicinal products and other forms of interactions**

Do not combine ivermectin treatment with vaccination against lungworms. If vaccinated animals are to be treated, treatment should not be carried out within a period of 28 days before or after vaccination.

#### **4.9 Amounts to be administered and administration route**

Assess bodyweight as accurately as possible before calculating the dosage.

##### Dosage

1ml per 10kg body weight (based on a recommended dosage level of 500 micrograms per kg body weight).

##### Administration

For topical application.

The formulation should be applied along the mid-line of the back in a narrow strip between the withers and tailhead.

The 250 ml and 1.0 litre packs must be used with appropriate dosing equipment.

##### **Instructions for using the dispensing chamber:**

- a) Take dip tube and insert end into base of measuring cap with slotted end going to the bottom of the container.
- b) Remove shipping cap from container.
- c) Screw measuring cap onto container.
- d) Select the correct dose rate by rotating the adjuster cap in either direction to position the dose indicator to the appropriate dose.
- e) Gently squeeze the bottle to fill to level (any excess will return to the bottle) and then tip and apply to animal along backline.

#### **4.10 Overdose (symptoms, emergency procedures, antidotes), if necessary**

No signs of toxicity appeared in trials up to 3 times the recommended dose rate. Clinical symptoms of ivermectin toxicity include ataxia and depression.

No antidote has been identified. In case of overdose, symptomatic treatment should be given.

#### **4.11 Withdrawal period(s)**

Meat and offal: 31 days.

Milk: Not permitted for use in lactating cattle producing milk for human consumption. Do not use in non-lactating dairy cows, including pregnant dairy heifers, within 60 days of calving.

### **5 PHARMACOLOGICAL or IMMUNOLOGICAL PROPERTIES**

Ivermectin is a mixture of two compounds belonging to the avermectin family, which are a macrocyclic lactone group of endectocides. Avermectin is a microbial metabolite of the soil organism *Streptomyces avermilitis*.

**ATC vet code: QP54AA01.**

Therapeutic group: endectocide.

#### **5.1 Pharmacodynamic properties**

It is generally accepted that ivermectin exerts its action in two main ways, interference with neurotransmission and opening chloride ion channels. The effect of ivermectin on the parasitic CNS is considered to operate through glutamate-mediated chloride channels. Compounds of this class may also interact with other ligand-gated chloride channels, such as those gated by the neurotransmitter gamma-aminobutyric acid (GABA).

The opening of pre-synaptic chloride ion channels results in an efflux of chloride ions and depolarisation of

the nerve terminal. These effects interfere with normal neurotransmission between nerves and muscles, resulting in parasite paralysis and eventual death.

## **5.2 Pharmacokinetic particulars**

After administration of Mastermectin Pour-On, the ivermectin is absorbed through the skin into the circulation of the treated animal. The maximum concentration in plasma occurs around 70 hours after application. Peak concentrations of about 7 ng/ml are obtained.

The residual antiparasitic effect of ivermectin is due to its persistence, which in turn is due in part to its long intrinsic half-life ( $t_{1/2B}$  of approximately 210 hours), in part to its relatively high plasma protein binding (80% in cattle; binding remains relatively constant over time) and in part to the nature and type of the ivermectin formulation.

Elimination is in the faeces (via biliary excretion). Over 60% of the dose is excreted after 3 days.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Isopropyl alcohol  
Polypropoxylate-2-myristyl ether propionate  
N-methyl-2-pyrrolidone  
Benzyl alcohol  
Water

### **6.2 Major incompatibilities**

None known.

### **6.3 Shelf-life**

Shelf life of the veterinary medicinal product as packaged for sale: 2 years

Shelf life after first opening the immediate packaging: 6 months

### **6.4 Special precautions for storage**

Do not store above 25°C.  
Protect from direct light.  
Store in original container.  
Keep the bottle tightly closed.

### **6.5 Nature and composition of immediate packaging**

250 ml white non-fluorinated and fluorinated high density polyethylene bottle with drawing tube and measuring device.

250 ml natural fluorinated high density polyethylene pour bottles with internal graduated calibration chamber.

1.0 L white non-fluorinated and fluorinated high density polyethylene bottle with drawing tube and measuring device.

2.5 L white non-fluorinated and fluorinated high density polyethylene backpacks with polypropylene strap and vented cap.

5 L white non-fluorinated and fluorinated high-density polyethylene back-pack with polypropylene strap and vented cap.

Closure: White polypropylene screw-cap

Not all pack sizes may be marketed.

### **6.6 Special precautions for the disposal of unused veterinary medicinal products or waste materials**

**derived from the use of such products**

The product is extremely dangerous to fish and aquatic life. Do not contaminate surface water or ditches with product or the used container. Any unused product or waste material should be disposed of in accordance with national requirements.

**7 MARKETING AUTHORISATION HOLDER**

ECO Animal Health Europe Limited  
6th Floor  
South Bank House  
Barrow Street  
Dublin 4  
D04 TR29  
Ireland

**8 MARKETING AUTHORISATION NUMBER(S)**

VPA22693/022/001

**9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

26 January 2001

**10 DATE OF REVISION OF THE TEXT**

01 March 2024