

## **SUMMARY OF PRODUCT CHARACTERISTICS**

### **1. NAME OF THE VETERINARY MEDICINAL PRODUCT**

Mektix CHEWABLE 12.5 mg/125 mg film-coated tablets for dogs weighing at least 5 kg

### **2. QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each film-coated tablet contains:

**Active substances:**

Milbemycin oxime	12.5 mg
Praziquantel	125.0 mg

**Excipients:**

For the full list of excipients, see section 6.1.

### **3. PHARMACEUTICAL FORM**

Film-coated tablet.

Pale yellowish brown, oval, biconvex, mottled, film coated tablets.

### **4. CLINICAL PARTICULARS**

#### **4.1 Target species**

Dogs (weighing at least 5 kg).

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

Treatment of mixed infections by adult cestodes and nematodes of the following species:

- Cestodes:

*Dipylidium caninum*

*Taenia* spp.

*Echinococcus* spp.

*Mesocystoides* spp.

- Nematodes:

*Ancylostoma caninum*

*Toxocara canis*

*Toxascaris leonina*

*Trichuris vulpis*

*Crenosoma vulpis* (Reduction of the level of infection)

*Angiostrongylus vasorum* (Reduction of the level of infection by immature adult (L5) and adult parasite stages; see specific treatment and disease prevention schedules under section 4.9 Amount(s) to be administered and administration route)

*Thelazia callipaeda* (see specific treatment schedule under section 4.9 Amount(s) to be administered and administration route)

The veterinary medicinal product can also be used in the prevention of heartworm disease (*Dirofilaria immitis*) if concomitant treatment against cestodes is indicated.

#### **4.3 Contraindications**

Do not use in dogs weighing less than 5 kg.

Do not use in cases of hypersensitivity to the active substances or to any of the excipients.

See also section 4.5 Special precautions for use.

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

Parasite resistance to any particular class of anthelmintic may develop following frequent, repeated use of an anthelmintic of that class.

It is recommended to treat all the animals in the same household concomitantly. In order to develop an effective worm control programme local epidemiological information and the risk of exposure of the dog should be taken into account, and it is recommended to seek professional (e. g. veterinary) advice.

When *D. caninum* infection is present, concomitant treatment against intermediate hosts, such as fleas and lice, should be considered to prevent re-infection.

#### **4.5 Special precautions for use**

##### Special precautions for use in animals

Studies with milbemycin oxime indicate that the margin of safety in certain dogs of Collie or related breeds is less than in other breeds. In these dogs, the recommended dose should be strictly observed.

The tolerance of the veterinary medicinal product in young puppies from these breeds has not been investigated.

Clinical signs in Collies are similar to those seen in the general dog population when overdosed.

Treatment of dogs with a high number of circulating microfilariae can sometimes lead to the appearance of hypersensitivity reactions, such as pale mucous membranes, vomiting, trembling, laboured breathing or excessive salivation.

These reactions are associated with the release of proteins from dead or dying microfilariae and are not a direct toxic effect of the veterinary medicinal product. The use in dogs suffering from microfilaremia is thus not recommended.

In heartworm risk-areas, or in the case it is known that a dog has been travelling to and from heartworm risk regions, before using the veterinary medicinal product, a veterinary consultation is advised to exclude the presence of any concurrent infestation of *Dirofilaria immitis*. In the case of a positive diagnosis,

adulticidal therapy is indicated before administering the veterinary medicinal product.

No studies have been performed with severely debilitated dogs or individuals with seriously compromised kidney or liver function. The veterinary medicinal product is not recommended for such animals or only according to a benefit/risk assessment by the responsible veterinarian.

In dogs less than 4 weeks old, tapeworm infection is unusual. Treatment of animals less than 4 weeks old with a combination veterinary medicinal product may therefore not be necessary.

As the tablets are flavoured, they should be stored in a safe place out of the reach of animals.

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

Accidental ingestion of a tablet by a child may be harmful. In order to prevent children from accessing the veterinary medicinal product, tablets should be administered and stored out of sight and reach of children.

In the event of accidental ingestion of one or more tablets, seek medical advice immediately and show the package leaflet or the label to the doctor.

Wash hands after use.

Special precautions for the protection of the environment:

Not applicable.

Other precautions

Echinococcosis represents a hazard for humans. As Echinococcosis is a notifiable disease to the World Organisation for Animal Health (OIE), specific guidelines on the treatment and follow-up, and on the safeguard of persons, need to be obtained from the relevant competent authority (e. g. experts or institutes of parasitology).

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

Dogs:

Very rare ( $<1$ animal / 10,000 animals treated, including isolated reports):	Systemic disorders (e.g. lethargy) Neurological disorders (e.g. ataxia, muscle tremor) Digestive tract disorders (e.g. anorexia, diarrhoea, drooling, emesis) Hypersensitivity reaction
---	--

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or the national competent authority via the national reporting system. See also section 16 of the package leaflet for respective contact details.

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

Pregnancy and lactation:

Can be used during pregnancy and lactation.

Fertility:

Can be used in breeding dogs.

#### 4.8 Interaction with other medicinal products and other forms of interaction

No interactions were observed when the recommended dose of the macrocyclic lactone selamectin was administered during treatment with the combination of milbemycin oxime and praziquantel at the recommended dose. In the absence of further studies, caution should be taken in the case of concurrent use of the veterinary medicinal product and other macrocyclic lactones. Also, no such studies have been performed with reproducing animals.

#### 4.9 Amount(s) to be administered and administration route

Oral use.

To ensure a correct dosage, body weight should be determined as accurately as possible.

Minimum recommended dose rate: 0.5 mg of milbemycin oxime and 5 mg of praziquantel per kg are given once orally.

The veterinary medicinal product should be administered with or after some food. The veterinary medicinal product is palatable i.e. it is usually taken voluntarily by dogs (voluntary consumption on > 80% of occasions in animals studied). If the dog does not voluntarily accept the tablet, it can also be administered into the mouth.

Depending on the bodyweight of the dog, the practical dosing is as follows:

Body weight	Film-coated tablets
5 – 25 kg	1 tablet
>25 – 50 kg	2 tablets
>50 – 75 kg	3 tablets

In cases when heartworm disease prevention is used and at the same time treatment against tapeworm is required, the veterinary medicinal product can replace the monosubstance veterinary medicinal product for the prevention of heartworm disease.

For treatment of *Angiostrongylus vasorum* infections, milbemycin oxime should be given four times at weekly intervals. It is recommended, where concomitant treatment against cestodes is indicated, to treat once with the veterinary medicinal product and continue with the monovalent veterinary medicinal product containing milbemycin oxime alone, for the remaining three weekly treatments.

In endemic areas administration of the veterinary medicinal product every four weeks will prevent angiostrongylosis by reducing immature adult (L5) and adult parasite burden, where concomitant treatment against cestodes is indicated.

For the treatment of *Thelazia callipaeda*, milbemycin oxime should be given in 2 treatments, seven days apart. Where concomitant treatment against cestodes is indicated, the veterinary medicinal product can replace the monosubstance veterinary medicinal product containing milbemycin oxime alone.

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

No other signs than those observed at the recommended dose have been observed (see 4.6).

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

Not applicable.

### **5. PHARMACOLOGICAL PROPERTIES**

**Pharmacotherapeutic group:** Endectocides, Macrocyclic lactones, milbemycin, combinations

**ATCvet code:** QP54AB51

#### **5.1 Pharmacodynamic properties**

Milbemycin oxime belongs to the group of macrocyclic lactones, isolated from the fermentation of *Streptomyces hygroscopicus* var. *aureolacrimosus*. It is active against mites, against larval and adult stages of nematodes as well as against larvae of *Dirofilaria immitis*.

The activity of milbemycin is related to its action on invertebrate neurotransmission: Milbemycin oxime, like avermectins and other milbemycins, increases nematode and insect membrane permeability to chloride ions via glutamate-gated chloride ion channels (related to vertebrate GABA<sub>A</sub> and glycine receptors). This leads to hyperpolarisation of the neuromuscular membrane and flaccid paralysis and death of the parasite.

Praziquantel is an acylated pyrazino-isoquinoline derivative. Praziquantel is active against cestodes and trematodes. It modifies the permeability for calcium (influx of Ca<sup>2+</sup>) in the membranes of the parasite inducing an imbalance in the membrane structures, leading to membrane depolarisation and almost instantaneous contraction of the musculature (tetany), rapid vacuolization of the syncytial tegument and subsequent tegumental disintegration (blebbing), resulting in easier expulsion from the gastrointestinal tract or death of the parasite.

## **5.2 Pharmacokinetic particulars**

After oral administration of praziquantel in the dog, after a small amount of food, peak serum levels of parent are rapidly attained ( $T_{max}$  approximately 0.25-2.5 hours) and decline quickly ( $t_{1/2}$  approximately 1 hour); there is a substantial hepatic first-pass effect, with very rapid and almost complete hepatic biotransformation, principally to monohydroxylated (also some di- and tri-hydroxylated) derivatives, which are mostly glucuronide and/or sulfate conjugated before excretion. Plasma binding is about 80%. Excretion is fast and complete (about 90% in 2 days); the principal route of elimination is renal. After oral administration of milbemycin oxime in dogs, after a small amount of food, peak plasma levels occur at about 0.75-3.5 hours, and decline with a half-life of the unmetabolised milbemycin oxime of 1-4 days. Bioavailability is about 80%.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Cellulose, microcrystalline  
Lactose monohydrate  
Povidone  
Croscarmellose sodium  
Silica, colloidal anhydrous  
Meat Flavour  
Yeast powder  
Magnesium stearate  
Hypromellose  
Talc  
Propylene Glycol  
Liver Flavour

### **6.2 Major Incompatibilities**

Not applicable.

### **6.3 Shelf life**

Shelf life of the veterinary medicinal product as packaged for sale: 3 years

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

Store in the original package in order to protect from moisture. This veterinary medicinal product does not require any special temperature storage conditions.

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

Blister packs consisting of cold formed OPA/Al/PVC foil and aluminium foil.  
Cardboard box with 1 blister of 2 tablets.

Cardboard box with 1 blister of 4 tablets.

Cardboard box with 12 blisters, each blister contains 4 tablets (total 48 tablets).

Not all pack sizes may be marketed.

#### **6.6 Special precautions for the disposal of unused veterinary medicinal product or waste materials derived from the use of such products**

Medicines should not be disposed of via wastewater.

The veterinary medicinal product should not enter water courses as milbemycin oxime may be dangerous for fish and other aquatic organisms.

Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal product should be disposed of in accordance with local requirements.

### **7. MARKETING AUTHORISATION HOLDER**

KRKA, d.d., Novo mesto  
Šmarješka cesta 6  
8501 Novo mesto  
Slovenia

### **8. MARKETING AUTHORISATION NUMBER**

Vm 01656/5049

### **9. DATE OF FIRST AUTHORISATION**

26 August 2021

### **10. DATE OF REVISION OF THE TEXT**

August 2023

### **11. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS**

Veterinary medicinal product subject to prescription.

Find more product information by searching for the "Product Information Database" or "PID" on [www.gov.uk](http://www.gov.uk)

Revised: August 2023  
AN: 02617/2022

Approved 08 August 2023

A handwritten signature in black ink, appearing to read "J. Hunter.", is positioned below the approval date. The signature is stylized, with a large, looped initial "J" followed by the name "Hunter." in a cursive script.