SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Milpro 16 mg/40 mg film-coated tablets for cats

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each tablet contains:
Active substances:

Milbemycin oxime	16 mg
Praziquantel	40 mg

Excipients:

Allura red AC (E129)	0.1 mg
Titanium Dioxide (E171)	0.5 mg

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Film coated tablet.
Oval shaped, red to pink, meat flavoured tablets with a score on both sides.
The tablets can be divided into halves.

4. CLINICAL PARTICULARS

4.1 Target species

Cats (weighing at least 2 kg).

4.2 Indications for use, specifying the target species

In cats: treatment of mixed infections by immature and adult cestodes (tapeworms) and adult nematodes (roundworms) of the following species:
Cestodes:
Echinococcus multilocularis,
Dipylidium caninum,
Taenia spp.,
Nematodes:
Ancylostoma tubaeforme,
Toxocara cati

Prevention of heartworm disease (*Dirofilaria immitis*), if concomitant treatment against cestodes is indicated.

4.3 Contraindications

Do not use in cats weighing less than 2 kg

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

4.4 Special warnings for each target species

It is recommended to treat all the animals living in the same household concomitantly.

In order to develop an effective worm control programme local epidemiological information and the living conditions of the cat should be taken into account and therefore it is recommended to seek professional advice.

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

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

4.5 i Special precautions for use in animals

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

Studies have shown that 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 product. The use in dogs suffering from microfilaremia is thus not recommended. In the absence of data on cats with microfilaraemia, its use should be according to a benefit risk assessment by the attending veterinarian.

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

As per good veterinary practice, animals should be weighed to ensure accurate dosing.
Ensure cats and kittens weighing between 0.5 kg and ≤2 kg receive the appropriate tablet strength (4 mg MBO/10 mg praziquantel) and the appropriate dose (1/2 or 1 tablet) for the corresponding weight band (1/2 tablet for cats weighing 0.5 to 1 kg ; 1 tablet for cats weighing >1 to 2 kg – 1 tablet).

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

Wash hands after use.

Part tablets should be returned to the open blister pack and stored in the carton.

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In the event of accidental ingestion of the tablets, particularly by a child, seek medical advice immediately and show the package leaflet or the label to the doctor.

4.5 iii 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.

4.6 Adverse reactions (frequency and seriousness)

In very rare occasions, especially in young cats, hypersensitivity reactions, systemic signs (such as lethargy), neurological signs (such as ataxia and muscle tremors) and/or gastrointestinal signs (such as emesis and diarrhoea) may be observed after administration of the veterinary medicinal product.

The frequency of adverse reactions is defined using the following convention:
- very common (more than 1 in 10 animals treated displaying adverse reaction(s))
- common (more than 1 but less than 10 animals in 100 animals treated)
- uncommon (more than 1 but less than 10 animals in 1,000 animals treated)
- rare (more than 1 but less than 10 animals in 10,000 animals treated)
- very rare (less than 1 animal in 10,000 animals treated, including isolated reports).

4.7 Use during pregnancy, lactation or lay

In a study, this combination of active substances was demonstrated to be well tolerated in breeding queens, including during pregnancy and lactation. As a specific study with this product has not been performed, use during pregnancy and lactation only according to a benefit/risk assessment by the responsible veterinarian.

4.8 Interaction with other medicinal products and other forms of interaction

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

4.9 Amounts to be administered and administration route

Oral use.

Animals should be weighed to ensure accurate dosing.

Minimum recommended dose rate: 2 mg of milbemycin oxime and 5 mg of praziquantel per kg are given once orally as a single dose.

The product should be administered with or after some food.
The product is a small size tablet.
To aid with administration, the product has been coated with a meat flavour.

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The tablets can be divided into halves.

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

Weight	Tablets
2 – 4 kg	1/2 tablet
>4 – 8 kg	1 tablet
>8 – 12 kg	1½ tablets

The product can be inserted into a programme for prevention of heartworm disease if at the same time treatment against tapeworms is indicated. The product has a duration of heartworm prevention of one month. For prevention of heartworm disease the use of a monosubstance is preferred.

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

In a study conducted with the product administered at 1X, 3X and 5X the therapeutic dose, and for a duration which exceed the therapeutic indication, i.e. 3 times at 15 day-intervals, signs uncommonly reported at the recommended dose (see section 4.6) have been observed at 5-fold the therapeutic dose after the second and third treatments. These signs disappeared spontaneously within a day.

4.11 Withdrawal period(s)

Not applicable.

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Antiparasitic products, insecticides and repellents: endectocides ; milbemycin, combinations
ATCvet code: QP54AB51 (Milbemycin combinations)

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 $GABA_A$ 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 Ca2+) 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

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subsequent tegumental disintegration (blebbing), resulting in easier expulsion from the gastrointestinal tract or death of the parasite.

5.2 Pharmacokinetic particulars

In the cat, praziquantel reaches peak plasma concentrations within 1-4 hours after oral administration.
The half life of elimination is around 3 hours.
In the dog, there is rapid hepatic biotransformation, principally to monohydroxylated derivatives.
The principal route of elimination in the dog is renal.

After oral administration in the cat, milbemycin oxime reaches peak plasma concentrations within 2-4 hours. The half life of elimination is around 32 to 48 hours.
In the rat, metabolism appears to be complete although slow, since unchanged milbemycin oxime has not been found in urine or feces. Main metabolites in the rat are monohydroxylated derivatives, attributable to hepatic biotransformation. In addition to relatively high liver concentrations, there is some concentration in fat, reflecting its lipophilicity.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Core:
Microcrystalline cellulose
Croscarmellose sodium
Magnesium stearate
Povidone
Silica hydrophobic colloidal

Coat:
Natural Poultry liver flavour
Hypromellose
Microcrystalline cellulose
Macrogol stearate
Allura Red AC (E129)
Titanium Dioxide (E171)

6.2 Major incompatibilities

Not applicable.

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years.
Shelf life after first opening the immediate packaging: 6 months.

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6.4 Special precautions for storage

This veterinary medicinal product does not require any special temperature storage conditions.
Half tablets should be stored in the original blister and be used for the next administration.
Keep the blister in the outer carton.

6.5 Nature and composition of immediate packaging

Aluminium/ Aluminium blister pack (Oriented polyamide/Aluminium/Polyvinyl chloride sealed to Aluminium film).

Available pack sizes:
Cardboard box of 2 tablets containing 1 blister of 2 tablets (divisible per tablet)
Cardboard box of 4 tablets containing 2 blisters of 2 tablets (divisible per tablet)
Cardboard box of 24 tablets containing 12 blisters of 2 tablets (divisible per tablet)
Cardboard box of 48 tablets containing 24 blisters of 2 tablets (divisible per tablet)

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

Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal product should be disposed of in accordance with local requirements.
The product should not enter water courses as this may be dangerous for fish and other aquatic organisms.

7. MARKETING AUTHORISATION HOLDER

VIRBAC
1ère avenue 2065m LID
06516 Carros
France

8. MARKETING AUTHORISATION NUMBER

Vm 05653/4184

9. DATE OF FIRST AUTHORISATION

07 August 2014

10. DATE OF REVISION OF THE TEXT

September 2021

Approved: 23/09/21

D Austin

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