

# Summary of Product Characteristics

## 1 NAME OF THE VETERINARY MEDICINAL PRODUCT

Moxiclear 40 mg + 4 mg spot-on solution for small cats and ferrets

## 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 0.4 ml pipette contains:

### Active substances:

Imidacloprid 40 mg

Moxidectin 4 mg

### Excipients:

Butylhydroxytoluene (E 321) 0.4 mg

Benzyl Alcohol to 0.4 ml

For the full list of excipients, see section 6.1.

## 3 PHARMACEUTICAL FORM

Spot-on solution.

A clear colourless to yellow solution with light opalescence.

## 4 CLINICAL PARTICULARS

### 4.1 Target Species

Cats, ferrets

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

**For cats** suffering from, or at risk from, mixed parasitic infections:

- For the treatment and prevention of flea infestation (*Ctenocephalides felis*),
- the treatment of ear mite infestation (*Otodectes cynotis*),
- the treatment of notoedric mange (*Notoedres cati*),
- the prevention of heartworm disease (L3 and L4 larvae of *Dirofilaria immitis*),
- the treatment of infections with gastrointestinal nematodes (L4 larvae, immature adults and adults of *Toxocara cati* and *Ancylostoma tubaeforme*).

The product can be used as part of a treatment strategy for flea allergy dermatitis (FAD).

**For ferrets** suffering from, or at risk from, mixed parasitic infections::

- For the treatment and prevention of flea infestation (*Ctenocephalides felis*),
- the prevention of heartworm disease (L3 and L4 larvae of *Dirofilaria immitis*).

### **4.3 Contraindications**

Do not use in kittens under 9 weeks of age.

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

For ferrets: Do not use Moxiclear for large cats (0.8 ml) or Moxiclear for dogs (any size).

For dogs, the corresponding "Moxiclear for dog" product, which contains 100 mg/ml imidacloprid and 25 mg/ml moxidectin, must be used.

Do not use on canaries.

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

Please refer to section 4.5.

The product's efficacy has not been tested in ferrets weighing over 2 kg and therefore the duration of effect might be shorter in these animals.

Brief contact of the animal with water on one or two occasions between monthly treatments is unlikely to significantly reduce the efficacy of the product. However, frequent shampooing or immersion of the animal in water after treatment may reduce the efficacy of the product.

Parasite resistance to any particular class of anthelmintic may develop following frequent, repeated use of an anthelmintic of that class. Therefore, the use of this product should be based on the assessment of each individual case and on local epidemiological information about the current susceptibility of the target species in order to limit the possibility of a future selection for resistance.

The use of the product should be based on the confirmed diagnosis of mixed infection (or risk of infection, where prevention applies) at the same time (see also sections 4.2 and 4.9).

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

#### Special precautions for use in animals

The treatment of cats weighing less than 1 kg and ferrets weighing less than 0.8 kg should be based on a risk-benefit assessment.

There is limited experience on the use of the product in sick and debilitated animals, thus the product should only be used based on a risk-benefit assessment for these animals.

Care should be taken that the content of the pipette or the applied dose does not come into contact with the eyes or mouth of the recipient and/or other animals. Do not allow recently treated animals to groom each other. Oral uptake by Collies, Old English Sheepdogs and related breeds or crossbreeds should be prevented.

It is recommended that cats and ferrets living in, or travelling to areas endemic for heartworm are treated monthly with the product to protect them from heartworm disease.

Whilst the accuracy of diagnosis of heartworm infection is limited, it is recommended that attempts be made to check the heartworm status of any cat and ferret aged over 6 months, before beginning prophylactic treatment, as use of the product on cats or ferrets which have adult heartworms may cause serious adverse effects, including death. If adult heartworm infection is diagnosed, the infection should be treated in accordance with current scientific knowledge.

In certain individual cats *Notoedres cati* infestation may be severe. In these severe cases concomitant supportive treatment is necessary as treatment with the product alone may not be sufficient to prevent death of the animal.

Imidacloprid is toxic for birds, especially canaries.

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

Avoid contact with skin, eyes or mouth.

Do not eat, drink or smoke during application. Wash hands thoroughly after use. After application do not stroke or groom animals until the application site is dry.

In case of accidental spillage onto skin, wash off immediately with soap and water.

People with known hypersensitivity to benzyl alcohol, imidacloprid or moxidectin should administer the product with caution. In very rare cases the product may cause skin sensitisation or transient skin reactions (for example numbness, irritation or burning/tingling sensation).

In very rare cases the product may cause respiratory irritation in sensitive individuals. If the product accidentally gets into eyes, they should be thoroughly flushed with water.

If skin or eye symptoms persist, or the product is accidentally swallowed, seek medical advice immediately and show the package leaflet or the label to the physician.

Do not ingest. In case of accidental ingestion, seek medical advice immediately and show the package leaflet or the label to the physician.

In order to prevent children from getting access to pipettes, keep the pipette in the original packaging until ready for use and dispose of used pipettes immediately.

Treated animals should not be handled until the application site is dry, and children should not be allowed to play with treated animals until the application site is dry. It is therefore recommended that animals are not treated during the day, but should be treated during the early evening, and that recently treated animals are not allowed to sleep with owners, especially children.

The solvent in the product may stain or damage certain materials including leather, fabrics, plastics and finished surfaces. Allow the application site to dry before permitting contact with such materials.

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

Use of the product may result in transient pruritus in cats. On rare occasions greasy fur, erythema and vomiting can occur. These signs disappear without further treatment. The product may, in rare cases, cause local hypersensitivity reactions. If the animal licks the application site after treatment, neurological signs (most of which are transient) may be observed in very rare cases (see section 4.10).

The product tastes bitter. Salivation may occasionally occur if the animal licks the application site immediately after treatment. This is not a sign of intoxication and disappears within some minutes without treatment. Correct application will minimise licking of the application site.

The product may in very rare cases cause at the application site a sensation resulting in transient behavioural changes such as lethargy, agitation, and inappetence.

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**

The safety of the veterinary medicinal product has not been established during pregnancy and lactation. Laboratory studies with either imidacloprid or moxidectin in rats and rabbits have not produced any evidence of teratogenic, foetotoxic or maternotoxic effects.

Use only accordingly to the benefit-risk assessment by the responsible veterinarian.

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

During treatment with the product no other antiparasitic macrocyclic lactone should be administered. No interactions between the product and routinely used veterinary medicinal products or medical or surgical procedures have been observed.

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

##### **Dosage schedule for cats:**

The recommended minimum doses are 10 mg/kg bodyweight imidacloprid and 1.0 mg/kg bodyweight moxidectin, equivalent to 0.1 ml/kg bodyweight of product.

The treatment schedule should be based on individual veterinary diagnosis and on the local epidemiological situation.

Weight of cat	Pipette size to be used	Volume	Imidacloprid [mg/kg bw]	Moxidectin [mg/kg bw]
≤ 4 kg	Moxiclear for small cats	0.4 ml	minimum of 10	minimum of 1
> 4 ≤ 8 kg	Moxiclear for large cats	0.8 ml	10-20	1-2
> 8 kg	the appropriate combination of pipettes			

#### Flea treatment and prevention (*Ctenocephalides felis*)

One treatment prevents future flea infestation for 4 weeks. Existing pupae in the environment may emerge for 6 weeks or longer after treatment is initiated, depending upon climatic conditions. Therefore, it may be necessary to combine treatment with the product with environmental treatments aimed at breaking the flea life cycle in the surroundings. This can result in a more rapid reduction in the household flea population. The product should be administered at monthly intervals when used as part of a treatment strategy for flea allergy dermatitis.

#### Treatment of ear mite infestation (*Otodectes cynotis*)

A single dose of the product should be administered. A further veterinary examination 30 days after treatment is recommended as some animals may require a second treatment. Do not apply directly to the ear canal.

#### Treatment of notoedric mange (*Notoedres cati*)

A single dose of the product should be administered.

#### Heartworm prevention (*Dirofilaria immitis*)

Cats in areas endemic for heartworm, or those which have travelled to endemic areas, may be infected with adult heartworms. Therefore prior to treatment with the product, the advice provided in section 4.5 should be considered.

For prevention of heartworm disease, the product must be applied at regular monthly intervals during the time of the year when mosquitoes (the intermediate hosts which carry and transmit heartworm larvae) are present. The product may be administered throughout the year or at least 1 month before the first expected exposure to mosquitoes. Treatment should continue at regular monthly intervals until 1 month after the last exposure to mosquitoes. To establish a treatment routine, it is recommended that the same day or date be used each month. When replacing another heartworm preventative product in a heartworm prevention programme, the

first treatment with the product must be given within 1 month of the last dose of the former medication.

In non-endemic areas there should be no risk of cats having heartworm. Therefore they can be treated without special precautions.

#### Roundworm and hookworm treatment (*Toxocara cati* and *Ancylostoma tubaeforme*)

In areas endemic for heartworm, monthly treatment may significantly reduce the risk of re-infection caused by the respective roundworms and hookworms. In areas non-endemic for heartworm, the product can be used as part of a seasonal prevention programme against fleas and gastrointestinal nematodes.

#### Dosage schedule for ferrets:

One pipette of Moxiclear spot-on solution for Small Cats (0.4 ml) should be administered per animal. Do not exceed the recommended dose.  
The treatment schedule should be based on the local epidemiological situation.

#### Flea treatment and prevention

One treatment prevents future flea infestation for 3 weeks. Under heavy flea pressure it may be necessary to repeat administration after 2 weeks.

#### Heartworm prevention

Ferrets in areas endemic for heartworm, or those which have travelled to endemic areas, may be infected with adult heartworms. Therefore prior treatment with the product, the advice provided in section 4.5 should be considered.

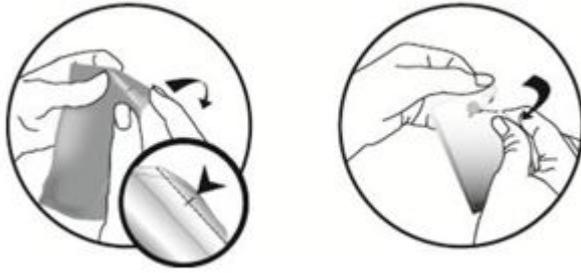
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In non-endemic areas there should be no risk of ferrets having heartworm. Therefore they can be treated without special precautions.

#### Method of administration

For external use only. Do not remove the pipette from the sachet until ready to use.

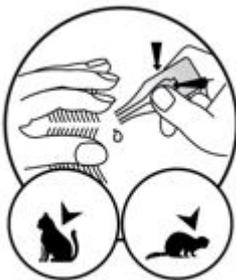
Remove the pipette from the outer sachet using scissors or fold along diagonal line to expose nick; tear back at nick.



Hold the pipette upright. Tap the narrow part of the pipette to ensure the contents remain within the main body of the pipette. Twist or snap back the tip.



Part the coat on the back of the animal at the base of the neck in front of the shoulder blades until the skin is visible. Place the tip of the pipette on the skin and squeeze the pipette several times to empty its contents completely and directly onto the skin in one spot. Application at the base of the skull will minimise the opportunity for the animal to lick the product. Apply only to undamaged skin.



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

Up to 10 times the recommended dose was tolerated in cats with no evidence of adverse effects or undesirable clinical signs.

The product was administered to kittens at up to 5 times the recommended dose, every 2 weeks for 6 treatments, and there were no serious safety concerns. Transient mydriasis, salivation, vomiting and transient rapid respiration were observed.

After accidental oral ingestion or overdose, neurological signs (most of which are transient) such as ataxia, generalised tremors, ocular signs (dilated pupils, little pupillary reflex, nystagmus), abnormal respiration, salivation and vomiting may occur in very rare cases.

The product was administered to ferrets at 5 times the recommended dose, every 2 weeks for 4 treatments, and there was no evidence of adverse effects or undesirable clinical signs.

In case of accidental oral uptake, symptomatic treatment should be administered. There is no known specific antidote. The use of activated charcoal may be beneficial.

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

Not applicable.

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

Pharmacotherapeutic group: Antiparasitic products, insecticides and repellents, macrocyclic lactones, milbemycins.  
ATCvet code: QP54AB52.

#### **5.1 Pharmacodynamic properties**

Imidacloprid, 1-(6-Chloro-3-pyridylmethyl)-N-nitro-imidazolidin-2-ylideneamine is an ectoparasiticide belonging to the chloronicotinyl group of compounds. Chemically, it is more accurately described as a chloronicotinyl nitroguanidine. Imidacloprid is effective against larval flea stages and adult fleas. Flea larvae in the pet's surroundings are killed after contact with a pet treated with the product. Imidacloprid has a high affinity for the nicotinic acetylcholine receptors in the post-synaptic region of the central nervous system (CNS) of the flea. The ensuing inhibition of cholinergic transmission in insects results in paralysis and death. Due to the weak nature of the interaction with mammalian nicotinic receptors and the postulated poor penetration through the blood-brain barrier in mammals, it has virtually no effect on the mammalian CNS. Imidacloprid has minimal pharmacological activity in mammals.

Moxidectin, 23-(O-methyloxime)-F28249 alpha is a second-generation macrocyclic lactone of the milbemycin family. It is a parasiticide which is active against many internal and external parasites. Moxidectin is active against larval stages (L3, L4) of *Dirofilaria immitis*. It is also active against gastrointestinal nematodes. Moxidectin interacts with GABA and glutamate-gated chloride channels. This leads to opening of the chloride channels on the postsynaptic junction, the inflow of chloride ions and induction of an irreversible resting state. The result is flaccid paralysis of affected parasites, followed by their death and/or expulsion.

## 5.2 Pharmacokinetic particulars

After topical administration of the product, imidacloprid is rapidly distributed over the animal's skin within one day of application. It can be found on the body surface throughout the treatment interval. Moxidectin is absorbed through the skin, reaching maximum plasma concentrations approximately 1 to 2 days after treatment in cats. Following absorption from the skin, moxidectin is distributed systemically and is slowly eliminated from the plasma as manifested by detectable moxidectin concentrations in plasma throughout the treatment interval of one month.

## Environmental properties

See section 6.6.

# 6 PHARMACEUTICAL PARTICULARS

## 6.1 List of excipients

Benzyl alcohol  
Butylhydroxytoluene (E321)  
Propylene carbonate

## 6.2 Major incompatibilities

Not applicable.

## 6.3 Shelf-life

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

## 6.4 Special precautions for storage

Do not store above 25°C.

Store in the original package in order to protect from light and moisture.

## 6.5 Nature and composition of immediate packaging

0.4 ml clear pipette with a film composed of 3 layers: a polypropylene/COC, solvent free lacquer laminate and a copolymer of polyethylene/EVOH/polyethylene. The pipettes are sealed within a child resistant 4-ply foil sachet composed of LDPE/nylon/aluminium foil/polyester film and presented in an outer box.

### Package Sizes:

Pipettes are presented in cardboard boxes containing 1, 2, 3, 4, 6, 9, 12, 21 or 42 pipettes. Each pipette is individually sealed in a foil sachet.

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 should not enter water courses as this may be dangerous for fish and other aquatic organisms.

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

## **7 MARKETING AUTHORISATION HOLDER**

Norbrook Laboratories (Ireland) Limited  
Rossmore Industrial Estate  
Monaghan  
Ireland

## **8 MARKETING AUTHORISATION NUMBER(S)**

VPA22664/139/001

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

Date of first authorisation: 24 November 2017

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

January 2019