1 NAME OF THE VETERINARY MEDICINAL PRODUCT

Topimec 5 mg/ml Pour-on Solution

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:
Active Substance:
Ivermectin 5.00 mg
Excipient(s):
For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Pour-on solution.
A clear solution.

4 CLINICAL PARTICULARS

4.1 Target Species

Cattle (beef and non-lactating dairy cattle)

4.2 Indications for use, specifying the target species

For the treatment of infections with the following species of gastrointestinal roundworms, lungworms, warbles, mites and lice for beef and non-lactating dairy cattle:

Gastro-intestinal roundworms (adults and fourth stage larvae):
Ostertagia ostertagi (including inhibited O. ostertagi)
Haemonchus placei
Trichostrongylus axei
Trichostrongylus colubriformis
Cooperia spp.
Oesophagostomum radiatum
Strongyloides papillosus (adult only)

Lungworms (adult and fourth stage larvae):
Dictyocaulus viviparus

Eye worms (adult):
Thelazia spp.

Warbles(parasitic stages):
Hypoderma bovis
Hypoderma lineatum

Mites:
Chorioptes bovis (reduction of infestation)
Sarcoptes scabiei var bovis.

Sucking lice: *Linognathus vituli, Haematopinus eurysternus*

Biting Lice:
Damalinia bovis

The product given at the recommended dosage of 500 micrograms/kg bodyweight, has persistent activity against *Trichostrongylus axei* and *Cooperia spp* acquired during the 14 days after treatment, only if the whole herd is treated simultaneously. It also has a persistent activity against *Ostertagia ostertagi* and *Oesophagostomum radiatum* acquired during the first 21 days after treatment and *Dictyocaulus viviparus* (lungworm) acquired during the first 28 days after treatment. It also has a persistent activity on horn flies (*Haematobia irritans*) for 28 days after treatment, partial efficacy may last for up to 35 days post application. Occasionally variable activity may be observed against *Haemonchus placei (L4), Cooperia spp, Trichostrongylus axei* and *Trichostrongylus colubriformis.*

4.3 Contraindications

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

4.4 Special warnings for each target species

Do not treat cattle when hair or hide is wet. Do not treat cattle if rain is expected, as rain within two hours of treatment may reduce efficacy. However, the efficacy of the product against established infections of O. *ostertagi* or *D. viviparus* is not adversely affected if the hide is wet or if rain falls shortly after treatment.
Do not apply to areas of skin that may have mange scabs or other lesions or to areas contaminated with mud or manure.

Care should be taken to avoid the following practices because they increase the risk of development of resistance and could ultimately result in ineffective therapy:

- Too frequent and repeated use of anthelmintics from the same class, over an extended period of time.
- Underdosing, which may be due to underestimation of body weight, misadministration of the product, or lack of calibration of the dosing device.

Suspected clinical cases of resistance to anthelmintics should be further investigated using appropriate tests (e.g. Faecal Egg Count Reduction Test). Where the results of the test(s) strongly suggest resistance to a particular anthelmintic, an anthelmintic belonging to another pharmacological class and having a different mode of action should be used.

Resistance to ivermectin has been reported in *Cooperia spp*. and in *Ostertagia ostertagi* in cattle. Resistance has also been reported in *Haemonchus contortus* in cattle outside the EU. Therefore, the use of this product should be based on local (region, farm) epidemiological information about susceptibility of this helminth species and recommendations on how to limit further selection for resistance to anthelmintics.

4.5 Special precautions for use

Special precautions for use in animals
Ivermectins may not be well tolerated in all non-target species. 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. To avoid secondary reactions due to the death of *Hypoderma* larvaein the oesophagus or in the spine, it is recommended to administer the product at the end of the period of warble fly activity and before the larvae reach their resting site. As Ivermectin is extremely dangerous to fish and aquatic life, treated animals should not have direct access to surface water and ditches during treatment.

Special precautions to be taken by the person administering the veterinary medicinal product to animals
The product 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 and boots with a waterproof coat when applying the product. Protective clothing should be washed after use. Use only in well-ventilated areas or outdoors.
HIGHLY FLAMMABLE.

Keep away from heat, spark, open flame or other source of ignition. Do not eat, drink or smoke whilst handling the product.
As absorption through skin can occur, in the event of accidental skin contact the affected area should be washed immediately with soap and water. If irritation persists, seek medical advice and show the package label to the doctor.
If accidental eye exposure occurs, flush the eyes immediately with water and seek medical attention. Wash hands after use.
For external use only.

Other precautions
The influence of extreme climatic conditions on persistent activity of the product is unknown. The product is very toxic to aquatic organisms and dung insects.
Treated cattle should not have direct access to ponds, streams or ditches for 14 days after treatment. Long term effects on dung insects caused by continuous or repeated use cannot be excluded therefore repeat treatments on a pasture with in a season should only be given on the advice of the veterinarian.

4.6 Adverse reactions (frequency and seriousness)

Occasionally slight irritation at the application site may occur. However, usually these irritations rapidly disappear without treatment.

4.7 Use during pregnancy, lactation or lay

The product can be used during pregnancy and lactation (see section 4.11 for details relating to use in dairy cattle).
The product will not affect the fertility of cows and bulls and can be given to all ages of animals including young calves.

4.8 Interaction with other medicinal products and other forms of interactions

None known.

4.9 Amounts to be administered and administration route

For single topical administration.
Dosage: 1 ml per 10 kg bodyweight (based on a recommended dose of 500 micrograms/kg bodyweight).
To ensure administration of a correct dose, body weight should be determined as accurately as possible.
If animals are to be treated collectively rather than individually they should be grouped according to their bodyweight and dosed accordingly, in order to avoid under- or over- dosing.

Administration: Pour-on use. The formulation should be applied along the mid-line of the back in a narrow strip between the withers and tailhead. The product should be used with appropriate dosing equipment. The interval between 2 treatments should be at least 28 days.

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

No sign of toxicity appeared up to 1.5 mg/kg (3 times the recommended dose rate). No antidote has been identified. The signs of overdose can be trembling, convulsions and coma. In case of overdose symptomatic treatment should be given.

4.11 Withdrawal period(s)

Meat and offal: 28 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 prior to calving.

5 PHARMACOLOGICAL or IMMUNOLOGICAL PROPERTIES

Pharmacotherapeutic Group: Antiparasitic Products, insecticides and repellents, Endectocides
ATCvet code: QP54AA01.

5.1 Pharmacodynamic properties

Ivermectin is a member of the macrocyclic lactone class of endectocides, which have a unique mode of action. Compounds of the class bind selectively and with high affinity to glutamate-gated chloride ion channels, which occur in invertebrate nerve and muscle cells. This leads to an increase in the permeability of the cell membrane to chloride ions with hyperpolarization of the nerve or muscle cell, resulting in paralysis and death of the parasite. 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 margin of safety for compounds of this class is attributable to the fact that mammals do not have glutamate-gated chloride channels, the macrocyclic lactones have a low affinity for other mammalian ligand-gated chloride channels and they do not readily cross the blood-brain barrier.

5.2 Pharmacokinetic particulars

After topical administration of the product at the recommended dose of 500 microgram per kg bodyweight, plasma concentrations increased to an average plateau of 12-16 ng/ml between 36-144 hours post treatment (T_{max} is 3.7 days) with

a Cmax of 16.89 ng/ml. After day 6 the ivermectin levels gradually decreased to an average of less than 2 ng/ml at 28 days. The concentrations mentioned relate to the main component of ivermectin, 22, 23-dihydroavermectin B1a. The mean AUC for ivermectin is about 4157 ng/ml/hr with an elimination half life of 6.4 days.
Liver and fat contain the highest residue levels and muscle the lowest. Ivermectin is mainly excreted in faeces following biliary excretion.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Crodamol Cap
Trolamine
Isopropyl alcohol.

6.2 Major incompatibilities

None known.

6.3 Shelf-life

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

6.4 Special precautions for storage

Highly flammable – keep away from heat, sparks, open flame or other sources of ignition. Close container when not in use. Bottles should remain upright during storage. Protect from light. Store in tightly closed original container.

6.5 Nature and composition of immediate packaging

High density polyethylene container (flat bottomed flexi packs) with a copolymer polypropylene 38mm tamper evident closure (1L, 2.5L and 5L).
The 1L pack will also have a dial a dose dosing cup.
Pack sizes: 1L, 2.5L, 5L and 6L.
The 6L consists of a 5L and 1L pack combined in one carton.
Or
High density polyethylene squeeze measure pour containers with high density polyethylene/polypropylene homopolymer tamper evident closure (polyseal-expanded polyethylene liners). Pack sizes: 250 ml, 500 ml and 1 L.

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

EXTREMELY DANGEROUS FOR FISH AND AQUATIC ORGANISMS. Do not contaminate ponds, waterways or ditches with the product or empty container.

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

7 MARKETING AUTHORISATION HOLDER

Chanelle Pharmaceuticals Manufacturing Limited

8 MARKETING AUTHORISATION NUMBER(S)

VPA10987/159/001

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

13/05/2005

10 DATE OF REVISION OF THE TEXT

11/2018