1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Topimec 0.8 mg/ml Oral Solution for Sheep

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

Active substance:
Ivermectin 0.8 mg

Excipients:

Qualitative composition of excipients and other constituents	**Quantitative composition if that information is essential for proper administration of the veterinary medicinal product**
Benzyl Alcohol (E1519)	28.6 mg
Butylhydroxyanisole (E320)	0.10 mg
Propyl Gallate (E310)	0.10 mg
Propylene Glycol	
Disodium Edetate	
Polysorbate 80	
Disodium Hydrogen Phosphate Dihydrate	
Sodium Dihydrogen Phosphate Monohydrate	
Purified Water	

A transparent, yellow coloured solution.

3. CLINICAL INFORMATION

3.1 Target species

Sheep.

3.2 Indications for use for each target species

For the treatment of infections with the following parasites:

Nematodes
Gastrointestinal roundworms (adult and fourth larval stage)
Haemonchus contortus
Teladorsagia circumcincta
Trichostrongylus spp.
Cooperia spp.
Nematodirus spp.
Including *N. battus*
Strongyloides papillosus
Chabertia ovina

Lungworms (adult and fourth larval stage) - *Dictyocaulus filaria*

Arthropods
Nasal bot (all larval stages) - *Oestrus ovis*

3.3 Contraindications

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

3.4 Special warnings

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 or misadministration of the veterinary medicinal product.

Resistance to ivermectin (an avermectin) has been reported in *Teladorsagia* in sheep and goats within the EU and it is common in *Haemonchus* in sheep outside the EU. Therefore, the use of this veterinary medicinal product should be based on local (regional, farm) epidemiological information about susceptibility of nematode and recommendations on how to limit further selection for resistance to anthelmintics.

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.

The veterinary medicinal product has a cross-resistance with other avermectins and with milbemycines.

3.5 Special precautions for use

Special precautions for safe use in the target species:
The timing of treatment should be based on epidemiological factors and should be customised for each individual farm. A dosing programme should be established by the veterinary surgeon.
Veterinary advice should be sought on appropriate dosing programmes and stock management to achieve adequate parasite control, and to reduce the likelihood of anthelmintic resistance developing.
Veterinary advice should also be sought if the veterinary medicinal product does not achieve the desired clinical effect, as other diseases, nutritional disturbances or anthelmintic resistance might be involved.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:
Wash hands after use.
Do not eat, drink or smoke while handling the veterinary medicinal product.

Avoid contact with skin and eyes.
Personal protective equipment consisting of impervious gloves should be worn when handling the veterinary medicinal product.
As absorption through skin can occur, in the event of accidental skin contact, wash the affected area immediately with soap and water.
If accidental eye exposure occurs, flush the eyes immediately with water.

Special precautions for the protection of the environment:
The veterinary medicinal product should not enter water courses as ivermectin is EXTREMELY dangerous for fish and other aquatic organisms. Do not contaminate surface waters or ditches with the veterinary medicinal product or used container.

Other precautions:
Avermectins may not be well tolerated in non-target species. Cases of intolerance resulting in fatalities have been reported in dogs, especially collies, Old English Sheepdogs and related breeds or crosses, and also in turtles/tortoises.

3.6 Adverse events

Sheep:

Undetermined frequency:	Cough[1]

[1] immediately after treatment and this passing response is of no consequence.

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 its local representative or the national competent authority via the national reporting system. See the immediate packaging for respective contact details.

3.7 Use during pregnancy, lactation or lay

Pregnancy and lactation:
Can be used during pregnancy and lactation provided that the milk is not used for human consumption.

3.8 Interaction with other medicinal products and other forms of interaction

None known.

3.9 Administration routes and dosage

Oral use.

The recommended dose rate is 0.2 mg ivermectin per kg bodyweight (corresponding to 2.5 ml per 10 kg bodyweight).
To ensure a correct dosage, body weight should be determined as accurately as possible.

Accuracy of the dosing device should be checked. The use of suitably calibrated measuring equipment is recommended.

If animals are to be treated collectively rather than individually, they should be grouped according to their body weight and dosed accordingly, in order to avoid under- or over- dosing.

3.10 Symptoms of overdose (and where applicable, emergency procedures and antidotes)

At doses up to 4 mg ivermectin per kg administered by stomach tube (20x the recommended dose level) undesirable toxic reactions occurred. Acute symptoms (ataxia, staggering gait, incoordination, depression) were observed at the dose rate of 8 mg/kg (40x the recommended dose level) during a study carried out on 4 animals. Twenty-four hours later, the animals showed only mild incoordination and depression.
Three days post dose all the animals were nearly normal. It is possible that the signs of toxaemia were due to the propylene glycol.

No antidote has been identified. Symptomatic treatment may be beneficial.

3.11 Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance.

Not applicable.

3.12 Withdrawal periods

Meat and offal: 10 days.
Milk: Not authorised for use in lactating sheep producing milk for human consumption.
Sheep must not be treated within 60 days prior to the commencement of lactation, if milk is to be used for human consumption.

4. PHARMACOLOGICAL INFORMATION

4.1 ATCvet code : QP54AA01.

4.2 Pharmacodynamics

Ivermectin belongs to the avermectin family, which are a macrocyclic lactone group of endectocides. 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 grated 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.

4.3 Pharmacokinetics

The maximum plasma concentration is reached in 12 hours after oral administration and ranges from 6.3 to 17.9 ng/ml at the dose rate of 0.2 mg ivermectin per kg bodyweight. This concentration gradually decreases to range from 1.31 to 10.55 ng/ml 2 days post dose with a terminal half-life of 42.4 hours.

Ivermectin binds extensively to plasma proteins. Due to its high lipophilic nature, ivermectin is extensively distributed. It tends to accumulate in fat tissue, which acts as a drug reservoir and the highest levels of ivermectin are found in liver and fat.

Ivermectin is only partially metabolized. Ivermectin is mainly eliminated in the faeces as unaltered drug and faecal excretion accounts for 90% of the dose administered with < 2% of the dose excreted in urine. Ivermectin is also excreted by the mammary gland.

5. PHARMACEUTICAL PARTICULARS

5.1 Major incompatibilities

None known.

5.2 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years.
Shelf life after first opening the immediate packaging: 18 months.

5.3 Special precautions for storage

Do not store above 30 °C.

5.4 Nature and composition of immediate packaging

White flat-bottomed flexi packs composed of high-density polyethylene container, with a 38 mm tamper evident polypropylene cap.
Standard containers (jerry-cans) composed of high-density polyethylene container, with tamper evident polyethylene cap.

Pack sizes:
Flexi pack: 1 litre, 2.5 litres, 5 litres and 6 litres (5 litres +1 litre)
Jerry-cans: 1 litre, 2.5 litres, 5 litres and 10 litres

Not all pack sizes may be marketed.

5.5 Special precautions for the disposal of unused veterinary medicinal products or waste materials derived from the use of such products

Medicines should not be disposed of via wastewater or household waste.

The veterinary medicinal product should not enter water courses as ivermectin is extremely dangerous for fish and other aquatic organisms.

Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned.

6. NAME OF THE MARKETING AUTHORISATION HOLDER

Chanelle Pharmaceutical Manufacturing Limited

7. MARKETING AUTHORISATION NUMBER(S)

VPA10987/080/001

8. DATE OF FIRST AUTHORISATION

17/07/2009

9. DATE OF THE LAST REVISION OF THE SUMMARY OF THE PRODUCT CHARACTERISTICS

24/07/2026

10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS

Veterinary medicinal product subject to prescription.

Detailed information on this veterinary medicinal product is available in the Union Product Database (https://medicines.health.europa.eu/veterinary).