

# SUPERMEC

## SUPERMEC INJECTION

For the treatment and control of internal and external parasites of beef and non-lactating dairy cattle.

### INTRODUCTION

One low-volume dose of Supermec injection controls internal and external parasites that impair the health and productivity of cattle.

### PRODUCT DESCRIPTION

Supermec injection is a ready-to-use, sterile, non-agueous solution of Ivermectin. Ivermectin is derived from the avermectins, a family of highly active, broad spectrum, antiparasitic agents which are isolated from fermentation of the soil organisms *Streptomyces avermitilis*.

Supermec injection is a 1.0% w/v sterile solution of Ivermectin. At the rate of 1ml per 50kg bodyweight by subcutaneous injection, this formulation will deliver the recommended dosage level of 200mcg Ivermectin per kg bodyweight.

### PRODUCT INDICATIONS

Supermec injection is indicated for the treatment and control of the following species of gastro intestinal roundworms, lungworms, eyeworms, warbies, mites and sucking lice.

**Gastrointestinal roundworms (adults and fourth stage larvae):** *Ostertagia ostetagi* (including inhibited larval stages),

*Ostertagia lyrata*, *Haemonchus placei*, *Trichostrongylus axei*, *Trichostrongylus colubriformis*, *Cooperia oncophora*, *Cooperia punctata*, *Cooperia pectinata*, *Bunostomum phlebotomum*, *Oesophagostomum radiatum*, *Strongyloides papillosus* (adult), *Nematodirus helvetianus* (adult), *Nematodirus spathiger* (adult) and *Trichuris spp* (adult).

Lungworms (adult and fourth stage larvae):

*Dictyocaulus viviparus*

Eyeworms

*Thelazia spp*

Hypoderma bovis and Hypoderma lineatum

Mange Mites

*Psoroptes bovis*, *Sarcoptes scabiei var bovis*

Sucking lice

*Linognathus vituli*, *haematopinus eurytemus*, and *Solenopotes capillatus*

Supermec injection may also be used as an aid in the control of the biting louse *Damalinia bovis* and the mange mite *Chorioptes bovis*, but complete elimination may not occur.

Persistent activity

When cattle have to graze on pasture contaminated with infective larvae of cattle nematodes, treatment with Supermec injection at the recommended dose rate controls re-infection with *Haemonchus placei*, *Cooperia spp* and *trichostrongylus axei* acquired up to 14 days after treatment, *Ostertagia ostetagi* and *Oesophagostomum radiatum* acquired up to 21 days after treatment and *Dictyocaulus viviparus* acquired up to 28 days after treatment.

When young cattle are set-stocked, treatment with Supermec injection 3, 8 and 13 weeks after an April/May turn-out5t will give season long control of parasitic gastro-enteritis and parasitic bronchitis.

Where clean pasture will be available during the summer, give a summer treatment with Supermec injection and move stock to the clean pasture within two weeks of treatment. If stocks are introduced to pasture contaminated by cattle grazing earlier in the year, it is advisable to continue treating with Supermec injection at regular 5-6 weekly intervals to prevent the build-up of worm parasites.

*Ostertagia* larvae picked up from the pasture in late summer and early autumn can remain dormant in the stomach wall for many months. In late winter or spring they resume development resulting into serious disease. Autumn treatment with Supermec injection kills these larvae and prevents Type 11 ostertagiasis.

### Lungworms

Outbreaks of husk (hoose) are most common in summer and autumn. Routine treatment with Supermec injection for stomach and gut roundworm e.g. at 3, 8 and 13 weeks after turn-out can be used to control lungworm infection.

Where outbreaks of husk occur, treat promptly with Supermec injection and move stock to clean pasture within two weeks of treatment. However, note that lungworm larvae can survive in soil for up to a year or more, and it may be difficult to ensure that the pasture is clean. If clean pastures are unavailable treatment at 6 weekly intervals should control lungworm until housing.

### Eyeworms

The presence of these worms may produce irritation and excessive tear formation in the eye. These tears attract flies which are responsible for the transmission of infection to other cattle. The eyeworm are present throughout the year but transmission from one animal to another, and the annoyance caused by the flies occurs only during the summer months.

Treatment with Supermec injection controls adults eyeworms in cattle at any time of the year.

### Lice and Mites

Autumn treatment with Supermec injection controls sucking lice, sarcoptic and psoroptic mange mites as infections start to build up. Supermec injection may also be used as an aid in the control of biting lice and chorioptic mange mites, but complete elimination may not occur. Treat all animals in contact with each other to prevent cross-infection.

### Warbies

The best time to treat is in autumn or early winter, when Supermec injection stops the small migrating larvae before they have time to cause serious damage. Treatment with Supermec injection kills all stages of warbie larvae and may be given whenever convenient for the farmer. In spring, warbies show as lumps on the backs of previously untreated cattle.

Treatment with Supermec injection kills these larvae, thus further reducing the population of adult flies for the next season.

### PACKAGE INFORMATION

Supermec injection is available as a ready-to-use preparation 10ml, 50ml and 100ml volumes.

The 10ml pack is a multiple dose, rubber capped bottle.

Each bottle contains sufficient solution to treat 2 cattle of 250 kg bodyweight.

The 50ml pack is a multiple dose, rubber capped bottle.

To obtain optimal benefit from the persistent activity of Supermec injection is recommended that calves which are set-stocked in their first grazing season should be treated 3, 8 and 13 weeks after the day of turn-out.

This can protect the animal from parasitic gastro-enteritis and lungworm disease throughout the grazing season, provided they are set-stocked, all the calves are included in the program, and that no untreated cattle are added to the pasture.

Treated calves should always be monitored according to the good husbandry practices.

### DOSAGE AND ADMINISTRATION

Supermec injection should be given only by subcutaneous injection at the recommended dosage level of 200mcg Ivermectin per kilogram bodyweight. Each ml contains 10 mg of ivermectin sufficient to treat 50kg bodyweight. Use the following dosage schedule.

Bodyweight(kg)	Dose Volume(ml)
Up to 50	1.0
51-100	2.0
101-150	3.0
151-200	4.0
201-250	5.0
251-300	6.0
301-350	7.0
351-400	8.0
401-450	9.0

### ADMINISTRATION

Supermec injection is to be given subcutaneously only. Inject under the loose skin in front of behind the shoulder, use of a 17 gauge, half inch (15-20mm) needle is suggested. Replace with a fresh sterile needle after every 10-20 animals. Injection of animals with wet or dirty hides is not recommended.

### MODE OF ACTION

Ivermectin paralyses and ultimately kills parasitic nematodes, arachnids and insects by its effects on the nervous system of these parasites. At the therapeutic doses, Ivermectin has no adverse effect on the cattle since it does not readily penetrate their central nervous systems. Ivermectin belongs to the avermectin class of anthelmintic endectocides.

### WHEN TO USE SUPERMEC INJECTION

The suggested dosing programme has been developed to make the best use of the properties of Supermec injection. Your veterinary surgeon will be able to provide further advice.

### Stomach and Gut Roundworms

Roundworms larvae may survive on the pasture over the winter in great numbers. They infect grazing cattle immediately after turnout, maturing into egg laying worms and causing increased pasture contamination. Early season treatment with Supermec injection keeps down the population of worms in your stock and reduces the number of worm eggs passed onto the pasture to cause later infection.

Each bottle contains sufficient solution to treat 10 cattle of 250 kg bodyweight.

The 100ml pack is a multiple dose, rubber capped bottle.

Each bottle contains sufficient solution to treat 20 cattle of 250 kg bodyweight.

### WITHDRAWAL PERIOD

Cattle and camels must not be treated within 28 days of slaughter for human consumption.

Pigs, sheep, goats within 21 days of slaughter.

Do not treat lactating cows and ewes where the milk is to be used for human consumption.

### PRECAUTIONS

Transitory discomfort has been observed in some cattle following subcutaneous administration. Tissue swellings at the injection site have been observed. These reactions resolved without treatment.

Further information is available upon request. Do not smoke or eat while handling the product. Wash hands after use.

Keep out of reach of children.

### CONTAINER DISPOSAL

#### EXTREMELY DANGEROUS TO FISH AND AQUATIC LIFE.

Do not contaminate surface water or ditches with product or used container. Containers and any other residual contents should be disposed safely i.e. by burying in a waste ground away from water courses.

### PHARMACEUTICAL PRECAUTIONS

This product does not contain any antimicrobial preservative.

Swab septum before removing each dose. Use a dry sterile needle syringe.

When using the 250ml, 500ml and 1litre pack sizes, use only automatic syringe equipment. To refill the syringe use of a draw-off needle is recommended to avoid excess broaching of the stopper.

Protect from light. Store below 30°C.

Following withdrawal of the first dose use the product within 28 days. Discard unused material. Avoid introduction of contamination.

### UNDESIRABLE EFFECTS

Symptoms of poisoning in cattle include general motor depression, increased respiratory rates, muscle fasciculations, mydriasis and extensor rigidity of the limbs.

In cases of suspected overdosage, symptomatic and supportive therapy should be given as appropriate.

### Legal category PML

### NOTE TO USER

Take care to avoid self-administration: Transitory discomfort has been observed in some cattle following subcutaneous administration. Tissue swellings at the injection site have been observed.

These reactions resolved without treatment.

Ivermectin belongs to the avermectin [3-AV] class of anthelmintic endectocides. Chemical group of anthelmintic endectocides[3-AV]

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