ANIMEC SUPER SOLUTION FOR INJECTION

ECOTOXIC

A 10 g/L ivermectin and 100 g/L clorsulon injectable solution for the treatment and control of internal and external parasties of cattle, including adult liver flukes.

INTRODUCTION:
ANIMEC SUPER is an injectable parasiticide for cattle. One low-volume dose effectively kills internal and external parasites, including adult liver flukes that impair the health and productivity of cattle.

PRODUCT DESCRIPTION:
ANIMEC SUPER is a ready-to-use, sterile solution of ivermectin and clorsulon. Ivermectin is a member of the avermectin family, a family of potent broad-spectrum antiparasitic agents which are isolated from fermentation of the naturally occurring soil organism *Streptomyces avermitilis*. Clorsulon is an amino-benzene disulphonamide with a unique mode of action against liver fluke.

PRODUCT INDICATIONS:

ANIMEC SUPER is indicated for the effective treatment and control of the following susceptible species of gastro-intestinal worms, lungworm, liver flukes, mites and lice:

- **Gastrointestinal roundworms:** For the control of adult and immature *Ostertagia ostertagi* (including inhibited fourth stage larvae)
- *O. lyrata* (Brown stomach worm)
- *Trichostrongylus axei* (Stomach hair worm)
- *T. colubriformis* (Intestinal hair worm)
- *Cooperia oncophora, C. punctata* (Small intestine worm)
- *Bunostomum phlebotomum* (Hookworm)
- *Oesophagostomum radiatum* (Nodule worm)
- Adult stages of *Nematodirus helvetianus, N. spathiger* (Thin-necked intestinal worm)
- *Trichuris* spp. (Whipworm)

- **Lungworms:** Adult and immature *Dictyocaulus viviparous.*

PERSISTENT ACTIVITY:
ANIMEC SUPER given at the recommended dosage of 1 mL/50kg liveweight effectively controls infections with *Ostertagia* spp. *acquired up to at least 14 days after treatment, Cooperia* spp. *acquired up to at least 7 days after treatment and Dictyocaulus viviparous* and *Oesophagostomum radiatum* acquired up to at least 21 days after treatment.

• **Sucking Lice:** *Linognathus vituli, Haematopinus eurysternus, Solenopotes capillatus.*

• **Mites:** *Psoroptes* spp.

• **Liver Flukes:** *Fasciola hepatica* (adults)

ANIMEC SUPER also aids in the effective control of;
• **Biting Lice:** *Bovicola bovis.*

• **Mites:** *Chorioptes bovis.*

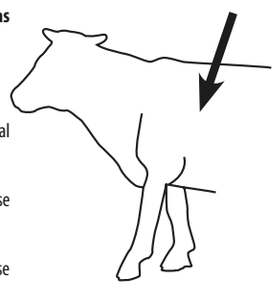
DOSAGE:
A representative sample of animals should be weighed before treatment either with scales or a weighband. Dose rate to be based on heaviest cattle in each group (bulls, cows, steers, claves etc). Do not underdose. Where there is large variation in size within the group, draft into two or more lines based on bodyweight to avoid excessive overdosing.

Use the following dosage recommendations:

Liveweight (kg)	Dose volume (mL)	Cattle Treated 50 mL Pack	Cattle Treated 250 mL Pack	Cattle Treated 500 mL Pack
50-100	2	25	100	250
101-150	3	17	66	166
151-200	4	13	50	125
201-250	5	10	40	100
251-300	6	8	33	83
301-350	7	7	28	71
351-400	8	6	25	62
401-450	9	6	22	55
451-500	10	5	20	50
501-550	11	5	18	45
551-600	12	4	16	41
601-650	13	4	15	38

Heavier animals (for example, mature bulls) should receive an additional 1 mL for each 50 kg over 650 kg.

DIRECTIONS FOR USE:
By law the user must take due care, obtaining expert advice where necessary, to avoid unnecessary pain and distress when using the product other than as directed on the label.
Shake bottle thoroughly before use. Discard 28 days after broaching.



ADMINISTRATION:
Ensure injection is subcutaneous. Intramuscular injection will result in prolonged residues. Where intramuscular injection may have occurred, animals producing meat and offal for human consumption must not be sold for slaughter within 91 days of the last treatment.

ANIMEC SUPER is only to be given under the skin, not into muscle, at the approved dose of 1 mL (10 mg ivermectin and 100 mg clorsulon) per 50 kg liveweight. This provides dose levels of 200 micrograms/kg ivermectin and 2 mg/kg of clorsulon.

ANIMEC SUPER should be injected under loose skin on the anterior half of the neck. A 16-gauge, 15 to 20 mm needle is suggested. Check accuracy of injection guns regularly. Use

sterile equipment. Divide doses greater than 10 mL between two injection sites to reduce occasional discomfort or site reaction.

When the temperature of the product is below 5°C, difficulty in administration may be experienced due to increased viscosity. Warming the product and injection equipment to around 15°C will greatly increase the ease with which the product can be injected.

MODE OF ACTION:
The avermectin family of compounds, of which ivermectin is a member, kills certain parasitic nematodes (roundworms) and arthropods. The action is unique to the avermectin class of antiparasitic agents and involves a chemical that serves as a signal from one nerve cell to another, or from a nerve cell to a muscle cell. This chemical, a neurotransmitter, is called gamma aminobutyric acid or GABA.

In roundworms, ivermectin stimulates the release of GABA from nerve endings and enhances binding of GABA to special receptors at nerve junctions, thus interrupting nerve impulses – thereby paralysing and killing the parasite.

The enhancement of GABA effect in arthropods such as mites and lice resembles that in roundworms except that nerve impulses are interrupted between the nerve ending and the muscle cell. Again, this leads to paralysis and death in most species.

Ivermectin has no measurable effect against liver flukes or tapeworms, presumably because they do not have GABA as a nerve impulse transmitter.

Recommended doses of ivermectin have a wide safety margin in livestock. The principal neurotransmitter in mammals, acetylcholine, is unaffected by ivermectin. Ivermectin does not readily penetrate the central nervous system of mammals where GABA functions as a neurotransmitter.

Clorsulon is rapidly absorbed into the circulating blood. Erythrocytes with bound drug, as well as plasma, are ingested by *Fasciola* spp. Adult *Fasciola* spp. are killed by clorsulon because of inhibition of enzymes in the glycolyitic pathway, which is their primary source of energy.

It is an offence for users of this product to cause residues exceeding the relevant MRL in the New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards.

WITHHOLDING PERIOD:
- **ANIMALS PRODUCING MEAT AND OFFAL FOR HUMAN CONSUMPTION MUST NOT BE SOLD FOR SLAUGHTER EITHER DURING TREATMENT OR WITHIN 28 DAYS OF THE LAST TREATMENT.**
- **MILK INTENDED FOR SALE FOR HUMAN CONSUMPTION MUST BE DISCARDED DURING TREATMENT AND FOR 14 DAYS FOLLOWING THE LAST TREATMENT.**
- **BOBBY CALVES BORN TO TREATED COWS MUST NOT BE SOLD FOR SLAUGHTER EITHER DURING TREATMENT OR WITHIN 28 DAYS OF THE LAST TREATMENT OF THE COW.**
- **91 DAY MEAT WHP IF INTRAMUSCULAR (IM) INJECTION MAY HAVE OCCURRED.**

PRECAUTIONS:
DO NOT administer intravenously or intramuscularly.
Specifically formulated for cattle, do not use in other species.

NOTE TO USER:
Transitory discomfort has been observed in some cattle following subcutaneous administration. A low incidence of soft-tissue swelling at the injection site may be experienced and should resolve without treatment. Ideally, divide doses greater than 10 mL between two injection sites to reduce occasional discomfort or site reaction. Different injection sites should be used for other parenteral products.

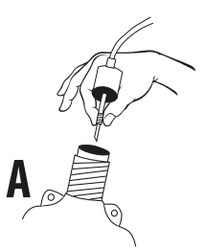
ENVIRONMENTAL SAFETY:
Studies indicate that when ivermectin comes into contact with soil, it readily and tightly binds to the soil and becomes inactive over time.

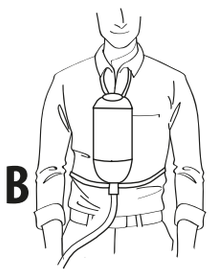
Containers and any residual content should be disposed of safely (i.e., by burying or incineration) as free ivermectin may adversely affect fish and certain water-borne organisms.

PARASITE CONTROL PROGRAM:
As with all farm management practices, an effective parasite control program should be administered on a year-round basis.

It should be considered that resistance can develop to any anthelmintic and it is therefore advisable to consult your veterinarian or animal health advisor for recommended parasite management practices to reduce the development of resistance. It is advisable that a resistance test be conducted regularly when using any parasite treatment.

INSTRUCTIONS FOR USE WITH AUTOMATIC INJECTION EQUIPMENT:
- Disinfect all needles are syringes before using by boiling in clean water for 15 – 20 minutes.
- Boiled needles should be stored in an antiseptic solution before use and changed frequently when injecting cattle.
- Remove the draw-off assembly from the sterile pack. Handle carefully to avoid contamination.
- Connect the plastic tube firmly to the dosing syringe. Use a stepped adapter if needed.
- Remove cap from bottle and disinfect rubber stopper with alcohol or other suitable chemical disinfectant. Hold bottle upright and fully insert draw-off needle into centre of rubber stopper (see illustration A). Secure firmly with screw-on cap attached to tube.
- Hang bottle comfortably in inverted position from neck (see illustration B), shoulder or belt. Use attachment tapes provided.
- Gently prime injector. Equipment is now ready for use.
- After use, remove draw-off assembly and flush out entire apparatus with clean water before storing.
- Store partly-used bottle in cardboard carton to protect from light. Do not re-use empty bottles.
- If the connecting tube is used a second time, it should also be boiled for 15 – 20 minutes before use along with the injecting syringe and needles.





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