LABELLING AND PACKAGE LEAFLET

A. LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGE
{1 x 50 ml / 1 x 200 ml / 1 x 500 ml}
PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGE{200 ml and 500 ml HDPE vials}

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Zermex 20 mg/ml LA Solution for Injection for Sheep
Moxidectin

2. STATEMENT OF ACTIVE SUBSTANCES

Active substance
Moxidectin 20 mg/ml

Excipients
Benzyl alcohol 70 mg/ml

3. PHARMACEUTICAL FORM

Solution for injection

4. PACKAGE SIZE

50 ml
200 ml
500 ml

5. TARGET SPECIES

Sheep

6. INDICATION(S)

7. METHOD AND ROUTE(S) OF ADMINISTRATION

The product should be administered as a single subcutaneous injection at the base of the ear at dose rate of 0.5 ml/10 kg bodyweight to give 1 mg moxidectin/ kg bodyweight.

Read the package leaflet before use.

8. WITHDRAWAL PERIOD(S)

Meat and offal: 104 days
Milk: Not permitted for use in dairy sheep, at any stage of life.
The withdrawal period is based solely on a single injection at the base of the ear.

9. SPECIAL WARNING(S), IF NECESSARY

Take care to avoid self-injection. Read the package leaflet before use for full user warnings.

Environmental risks have been identified for this product and special precautions apply. Read the package leaflet before use.

10. EXPIRY DATE

EXP {month/year}
Shelf life after first broaching the vial: 28 days.
Once broached, use by: …/…/…"

11. SPECIAL STORAGE CONDITIONS

Do not store above 25 °C.
Keep the container in the outer carton in order to protect from light.

12. SPECIAL PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCTS OR WASTE MATERIALS, IF ANY

Any unused veterinary medicinal product or waste material derived from such veterinary medicinal products should be disposed of in accordance with local requirements. Do not contaminate watercourses with the product. Extremely dangerous for fish and aquatic organisms.

13. THE WORDS "FOR ANIMAL TREATMENT ONLY" AND CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE, if applicable

For animal treatment only.

14. THE WORDS "KEEP OUT OF THE SIGHT AND REACH OF CHILDREN"

Keep out of the sight and reach of children.

15. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Zoetis UK Limited
1st Floor, Birchwood Building
Springfield Drive
Leatherhead
Surrey
KT22 7LP

16. MARKETING AUTHORISATION NUMBER

Vm 42058/5189

17. MANUFACTURER'S BATCH NUMBER

Lot {number}:

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS

50 ml HDPE vial

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Zermex 20 mg/ml LA Solution for Injection for Sheep

2. QUANTITY OF THE ACTIVE SUBSTANCE(S)

Moxidectin 20 mg/ml

3. CONTENTS BY WEIGHTS, BY VOLUME OR BY NUMBER OF DOSES

50 ml

4. ROUTE(S) OF ADMINISTRATION

Subcutaneous injection

5. WITHDRAWAL PERIOD(S)

Meat and offal: 104 days
Milk: Not permitted for use in dairy sheep, at any stage of life.
The withdrawal period is based solely on a single injection at the base of the ear.

6. BATCH NUMBER

Lot {number}

7. EXPIRY DATE

EXP { month/year}
Shelf life after first broaching the vial: 28 days.
Once broached, use by: …/…/…"

8. THE WORDS "FOR ANIMAL TREATMENT ONLY"

For animal treatment only.

B. PACKAGE LEAFLET

PACKAGE LEAFLET

Zermex 20 mg/ml LA Solution for Injection for Sheep

1. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER AND OF THE MANUFACTURING AUTHORISATION HOLDER RESPONSIBLE FOR BATCH RELEASE, IF DIFFERENT

Marketing authorisation holder:
Zoetis UK Limited
1st Floor, Birchwood Building
Springfield Drive
Leatherhead
Surrey
KT22 7LP

Manufacturer for the batch release:
Zoetis Manufacturing & Research Spain, S.L.
Ctra. Camprodón s/n "la Riba"
17813 Vall de Bianya
Girona
SPAIN

2. NAME OF THE VETERINARY MEDICINAL PRODUCT

Zermex 20 mg/ml LA Solution for Injection for Sheep
Moxidectin

3. STATEMENT OF THE ACTIVE SUBSTANCE(S) AND OTHER INGREDIENT(S)

Clear yellow liquid.

Each ml contains:

Active substance
Moxidectin 20 mg

Excipients
Benzyl alcohol 70 mg

4. INDICATION(S)

Treatment and prevention of mixed infections of gastro-intestinal nematodes, respiratory nematodes and certain arthropod parasites in sheep.
Moxidectin is indicated for treatment of infections caused by moxidectin sensitive strains of:

- Gastro-intestinal nematodes:
. *Haemonchus contortus* (adults and L3)
. *Ostertagia (Teladorsagia) circumcincta* (adults and L3, including inhibited larvae)
. *Trichostrongylus axei* (adults)
. *Trichostrongylus colubriformis* (adults and L3)

. *Nematodirus spathiger* (adults)
. *Cooperia curticei (macmasteri)* (adults)
. *Cooperia punctata* (adults)
. *Oesophagostomum columbianum* (L3)
. *Chabertia ovina* (adults)

- Respiratory tract nematodes
. *Dictyocaulus filaria* (adults)

- Larvae of Diptera
. *Oestrus ovis*: L1, L2, L3

- Mange mites
. *Psoroptes ovis*

Trials have shown that moxidectin is effective against certain strains of *Haemonchus contortus*, *Teladorsagia circumcincta* and *Trichostrongylus* spp. resistant to benzimidazoles.
The product has a persistent action and protects sheep against infection or re-infection with the following parasites for the period indicated:

Species	**Days**
Ostertagia (Teladorsagia) circumcincta	97
Haemonchus contortus	111
Trichostrongylus colubriformis	44
Psoroptes ovis	60

Persistent efficacy periods have not been established for parasite species other than those included in the list above. Therefore, re-infection of animals on pasture contaminated by parasites other than these remains possible before the 44 day minimum persistency period demonstrated for specific species.

5. CONTRAINDICATIONS

Do not use in dairy sheep, at any stage of life.
Do not use in sheep less than 15 kg bodyweight.
Do not inject the product by intravascular route. Intravascular injection may result in ataxia, paralysis, convulsions, collapse and death. See item “Advice on correct administration”.
Do not use in cases of hypersensitivity to the active substance or to any excipients.

6. ADVERSE REACTIONS

Swelling and inflammation may be found at the injection site in some animals. The swelling generally disappears within 7 days of treatment and generally resolves without any medical treatment.

In rare cases, adverse reactions such as transitory salivation, depression, drowsiness and ataxia might occur. No particular treatment is required; these symptoms usually disappear within 24 to 48 hours. There is no specific antidote.

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).

If you notice any side effects, even those not already listed in this package leaflet or you think that the medicine has not worked, please inform your veterinary surgeon.

7. TARGET SPECIES

Sheep

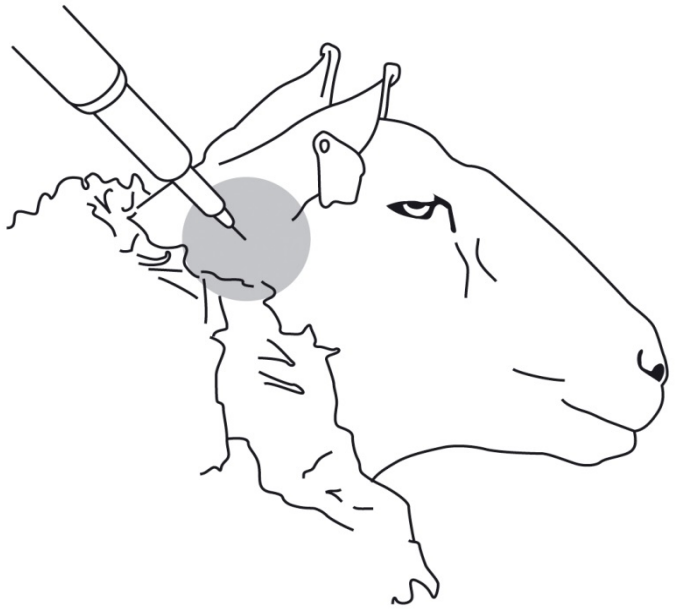
8. DOSAGE FOR EACH SPECIES, ROUTE(S) AND METHOD OF ADMINISTRATION

Dosage is 0.5 ml/10 kg bodyweight to give 1 mg moxidectin/ kg bodyweight. The 50ml vial stoppers must not be broached more than 10 times. Use automatic syringe equipment for the 200 ml and 500ml vials.

To ensure administration of a correct dose, bodyweight should be determined as accurately as possible; accuracy of the dosing device should be checked. 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 overdosing.

The injection should be administered as a single subcutaneous injection at the base of the ear using an 18 gauge, 25 mm hypodermic needle. With the animal's head under control, the formulation should be administered about 2 cm caudal from the anterior (rostral) edge of the pinna at the base of the ear. The skin at the base of the selected ear should be pinched and the product injected into the subcutaneous tissue. Following subcutaneous administration, the needle should be withdrawn from the skin as pressure is applied with the thumb at the point of insertion for several seconds. If leakage occurs then pressure should be applied for several additional seconds.

Diagram: Ear injection procedure



9. ADVICE

This product has been formulated specifically for subcutaneous injection in the base of the ear of sheep and must not be given by any other route of administration or to any other species.

10. WITHDRAWAL PERIOD(S)

Meat and offal: 104 days.

Milk: Not permitted for use in dairy sheep, at any stage of life.

The withdrawal period is based solely on a single injection at the base of the ear.

11. SPECIAL STORAGE PRECAUTIONS

Keep out of the sight and reach of children.
Do not store above 25°C.
Keep the container in the outer carton in order to protect from light.
Do not use this veterinary medicinal product after the expiry date which is stated on the label after EXP. Shelf life after first opening the container: 28 days.
When the container is broached for the first time, using the in-use shelf-life which is specified on this package leaflet, the date on which any product remaining in the container should be discarded should be worked out. This discard date should be written in the space provided on the label.

12. SPECIAL WARNING(S)

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 bodyweight, misadministration of the product, or lack of calibration of the dosing device (if any).

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 macrocyclic lactones has been reported in *Teladorsagia* in sheep in a number of countries. In 2008, throughout Europe, moxidectin resistance is very rare; it has been reported in a single case involving a levamisole-, benzimidazole and ivermectin-resistant strain of *Teladorsagia circumcincta*. Therefore the use of moxidectin should be based on local (regional, farm) epidemiological information about susceptibility of nematodes, local history of treatments and recommendations on how to use the product under sustainable conditions to limit further selection for resistance to anthelmintics. These precautions are especially important when moxidectin is being used to control resistant strains.
Can be used during pregnancy.
The effects of GABA agonists are increased by moxidectin.

Signs of overdoses have not been seen at 3 and 5 times the recommended dose. However, if they do occur they should be consistent with the mode of action of moxidectin and would be manifested as transient salivation, depression, drowsiness

and ataxia 24 to 36 hours post-treatment. The signs would usually disappear within 36 to 72 hours without treatment. There is no specific antidote.

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

User warnings

Avoid direct contact with skin and eyes.
Wash hands after use.
Do not smoke, drink or eat while handling the product.
Take care to avoid self-injection. If this occurs, it is unlikely that any product related symptoms will be observed. In case of accidental self injection, seek medical advice immediately and show the package leaflet or the label to the physician. Advice to Medical Practitioners in case of accidental self injection: Treat symptomatically.

Other precautions regarding impact on the environment

Moxidectin fulfils the criteria for a (very) persistent, bioaccumulative and toxic (PBT) substance; therefore, exposure of the environment to moxidectin must be limited to the extent possible. Treatments should be administered only when necessary and should be based on faecal egg counts or evaluation of the risk of infestation at the animal and/or herd level.

Like other macrocyclic lactones, moxidectin has the potential to adversely affect non-target organisms, in particular aquatic organisms and dung fauna.

- Faeces containing moxidectin excreted onto pasture by treated animals may temporarily reduce the abundance of dung feeding organisms. Following treatment of sheep with the product, levels of moxidectin that are potentially toxic to dung fly species may be excreted over a period of more than 4 weeks and may decrease dung fly abundance during that period. It has been established in laboratory tests that moxidectin may temporarily affect dung beetle reproduction; however, studies with incurred residues indicate no long-term effects. Nevertheless, in case of repeated treatments with moxidectin (as with products of the same anthelmintic class) it is advisable not to treat animals every time on the same pasture to allow dung fauna populations to recover.
- Moxidectin is inherently toxic to aquatic organisms including fish. The product should be used only according to the label instructions. Based on the excretion profile of moxidectin when administered as the injectable formulation to sheep, treated animals should not have access to watercourses during the first 11 days after treatment.

13. SPECIAL PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCT OR WASTE MATERIAL, IF ANY

Any unused veterinary medicinal product or waste material derived from such veterinary medicinal products should be disposed of in accordance with local requirements. Do not contaminate watercourses with the product. Extremely dangerous for fish and aquatic organisms.

Ask your veterinary surgeon or pharmacist how to dispose of medicines no longer required. These measures should help to protect the environment.

14. PID LINK (Do not print heading)

[The following statement must be included where reference to the European Union Product Database is included on the product information. This statement is relevant to both UK(GB) and UK(NI) products:]

Find more product information by searching for the 'Product Information Database' on www.gov.uk.

15. OTHER INFORMATION

Pharmacodynamic properties
Moxidectin is an endectocide active against a wide range of internal and external parasites and is a second generation macrocyclic lactone of the milbemycin family. Moxidectin interacts with GABA receptors and chloride channels. The net effect is to open the chloride channels on the postsynaptic junction to allow the inflow of chloride ions and induce an irreversible resting state. This results in flaccid paralysis and eventual death of parasites exposed to the drug.

The product has a persistent activity against the second instar larvae of *Oestrus Ovis* (L2 Larvae only) up to 80 days after treatment.
However, re-infestation with 1st instar larvae is not prevented and clinical signs arising from such re-infestation may be observed during this period.

Packaging

Presentations to be sold:
- Box containing 1 vial of 50ml size
- Box containing 1 vial of 200ml size
- Box containing 1 vial of 500ml size

Not all pack sizes may be marketed

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Approved 20 January 2025
Gavin Hall