

IRISH MEDICINES BOARD ACT 1995

EUROPEAN COMMUNITIES (ANIMAL REMEDIES) (No. 2) REGULATIONS 2007

(S.I. No. 786 of 2007)

VPA:10782/001/001

Case No: 7003196

The Irish Medicines Board in exercise of the powers conferred on it by Animal Remedies (No. 2) Regulations (S.I. No. 786 of 2007) hereby grants to:

Huvepharma NV

Uitbreidingstraat 80, 2600 Antwerpen, Belgium

an authorisation, subject to the provisions of the said Regulations and the general conditions of the attached authorisation, in respect of the Veterinary Medicinal Product:

Pharmasin 100 %w/w Water Soluble Granules for oral solution for pigs, broilers, pullets, turkeys and calves

The particulars of which are set out in Part 1 and Part 2 of the said Schedule. The authorisation is also subject to any special conditions as may be specified in Part 2 of the said Schedule.

This authorisation, unless previously revoked, shall continue in force from **28/11/2008** to **27/11/2013**.

Signed on behalf of the Irish Medicines Board

A person authorised in that behalf by the said Board.

Part II

Summary of Product Characteristics

1 NAME OF THE VETERINARY MEDICINAL PRODUCT

Pharmasin 100% w/w Water Soluble Granules for oral solution for pigs, broilers, pullets, turkeys and calves

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Tylosine tartrate: 100% w/w: 1100 gram granules contain 1100 gram tylosin tartrate corresponding to 1000 gram tylosin activity, equal to 1000 IU/mg.

3 PHARMACEUTICAL FORM

Granules for oral solution.

White to off-white coloured granules.

4 CLINICAL PARTICULARS

4.1 Target Species

Pigs, chickens (broilers, pullets), turkeys and calves.

4.2 Indications for use, specifying the target species

The presence of the clinical disease in the herd/flock should be established before preventive treatment is started.

Pigs:

- Treatment and prevention of Porcine Intestinal Adenomatosis (Ileitis) associated with *Lawsonia intracellularis*.
- Treatment and prevention of enzootic pneumonia caused by *Mycoplasma hyopneumoniae* and *Mycoplasma hyorhinis*.

Calves: treatment and prevention of pneumonia caused by *Mycoplasma spp*.

Chickens (Broilers – pullets):

- treatment and prevention of chronic respiratory diseases (CRD) caused by *Mycoplasma gallisepticum* and *Mycoplasma synoviae*
- treatment and prevention of necrotic enteritis caused by *Clostridium perfringens*.

Turkeys: treatment and prevention of infectious sinusitis caused by *Mycoplasma gallisepticum*.

4.3 Contraindications

Do not use in animals with known hypersensitivity to tylosin or other macrolides.

Do not use in cases with known resistance to tylosin or cross-resistance to other macrolides (MLS-resistance).

Do not use in animals vaccinated with tylosin-sensitive vaccines either at the same time or within 1 week previously.

Do not use in animals with hepatic disorders.

4.4 Special warnings for each target species

Due to likely variability (time, geographical) in susceptibility of bacteria to Tylosin, bacteriological sampling and susceptibility testing are recommended.

Under-dosing and/or treating for an insufficient length of time are considered to promote the development of resistance in bacteria and should be avoided.

4.5 Special precautions for use

Special precautions for use in animals

Animals with acute infections may have a reduced water and feed consumption and should be treated with a suitable injectable veterinary medicinal product first. The sensitivity of bacteria to tylosin may have changed over time or geographically. It is sound clinical practice to base treatment on susceptibility testing.

Do not leave or dispose of water containing tylosin tartrate where it may be accessible to either animals not under treatment or wildlife.

If individual animals show signs of a serious infection such as a reduced water or feed intake, then they should be treated individually, such as by injection.

Special precautions for the person administering the veterinary medicinal product to animals

Because of the possibility of contact dermatitis and irritation of the skin, eyes or respiratory tract, direct contact during administration should be avoided.

Macrolides may induce hypersensitivity reactions (allergy) after injection, inhalation, ingestion or contact with the skin. Cross-hypersensitivity to macrolides may be observed. Allergic reactions to these substances may be particularly hazardous. Therefore, direct contact during administering of the product should be avoided.

Hypersensitive persons should avoid all contact with the product.

Wear a mask, safety glasses and protective gloves when either reconstituting or administering the solution. After preparation of medicated water, wash exposed skin with soap and water.

In case of accidental eye contact, wash the eyes thoroughly with water.

Contact a physician if a skin rash is observed, in the event of oedema of the face, lips or eyes, or if breathing difficulties are encountered.

4.6 Adverse reactions (frequency and seriousness)

In pigs, adverse reactions have been observed, including diarrhea, pruritus, erythema of the skin, swelling of the vulva, rectal edema and prolapse. These reversible signs appeared 48-72 hours after start of treatment.

4.7 Use during pregnancy, lactation or lay

Laboratory studies in mice and rats have not produced any evidence of teratogenic, foetotoxic or maternotoxic effects. No studies have been conducted in the target species. Use only according to the benefit/risk assessment by the responsible veterinarian.

4.8 Interaction with other medicinal products and other forms of interaction

Antagonism with substances of the lincosamide group.

4.9 Amounts to be administered and administration route

Oral administration through the drinking water, milk or milk-replacer.

1.1 gram of the veterinary medicinal product corresponds to 1 gram of tylosin. The dosages are as follows:

Calves:

10 – 20 mg tylosin per kg BW (corresponding to 11 – 22 mg of the veterinary medicinal product per kg BW), twice daily (= daily dose of 20 – 40 mg tylosin per kg BW), for 7 to 14 days.

Turkeys:

75 – 100 mg tylosin per kg BW per day (corresponding to 82.5 – 110 mg of the veterinary medicinal product per kg BW) for 3 – 5 days.

Chickens (Broilers, pullets):

For the treatment of chronic respiratory disease:

75 – 100 mg tylosin per kg BW per day (corresponding to 82.5 – 110 mg of the veterinary medicinal product per kg BW) for 3 – 5 days.

For the treatment of necrotic enteritis:

20 mg tylosin per kg BW per day (corresponding to 22 mg of the veterinary medicinal product) for 3 days.

Pigs:

For the treatment of enzootic pneumonia:

20 mg tylosin per kg BW per day (corresponding to 22 mg of the veterinary medicinal product per kg BW) for 10 days.

For the treatment of ileitis or PIA:

5 – 10 mg tylosin per kg BW per day (corresponding to 5.5 - 11 mg of the veterinary medicinal product per kg BW) for 7 days.

For the preparation of the medicated water/milk/milk-replacer the body weight of the animals to be treated and their actual daily water/milk/milk-replacer consumption should be taken into due account. Consumption may vary depending on factors like age, state of health, breed, husbandry system. To provide the required amount of active substance in mg per litre drinking water/milk/milk-replacer the following calculation should be made:

$$\frac{\text{..... mg tylosin / kg bodyweight / day} \times \text{Average body weight (kg) of the animals to be treated}}{\text{Average amount of drinking water / animal (l)}} = \text{.....mg tylosin / l of drinking water}$$

Sufficient access to the system of water supply should be available for the animals to be treated to ensure adequate water consumption. No other source of drinking water should be available during the medication period.

Should there be no clear response to treatment within 3 days the treatment approach should be reconsidered. After the end of the medication period the water supply system should be cleaned appropriately to avoid intake of sub-therapeutic amounts of the active substance which might support development of resistance.

Medicated water, milk or milk replacer should be replaced every 24 hours.

If individual animals show signs of a serious infection such as a reduced water or feed intake, then they should be treated individually, such as by injection.

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

There is no evidence of tylosin toxicity in rats, at dose rates of up to 1000 mg/kg by the oral route.

There is no evidence of tylosin toxicity in chickens, turkeys, pigs or calves when administered orally at up to three times the recommended dose.

4.11 Withdrawal Period(s)

Meat and offal

Pigs: 1 day

Calves: 12 days

Chickens (broilers, pullets) and turkeys: 2 days

Not permitted for use in laying birds producing eggs for human consumption

5 PHARMACOLOGICAL or IMMUNOLOGICAL PROPERTIES

ATC Vet Code:

Pharmacotherapeutic group: macrolide antibiotic, ATC vet code: QJ01FA90

5.1 Pharmacodynamic properties

Tylosin is a macrolide antibiotic produced by a strain of *Streptomyces fradiae*. It exerts its antimicrobial effect by inhibiting protein synthesis of susceptible micro-organisms.

The tylosin spectrum of activity includes Gram-positive bacteria, some Gram – negative strains such as *Pasteurella*, and *Mycoplasma* spp.

5.2 Pharmacokinetic properties

In most species peak plasma concentrations have been attained 1 to 2 hours after administration of tylosin. Compared to plasma levels clearly higher tissue concentrations have been observed. Tylosin was extensively metabolised. Most of the residues are excreted in faeces predominantly consisting of tylosin A, tylosin factor D and dihydrodesmycosin.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

None

6.2 Incompatibilities

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

6.3 Shelf-life

Shelf-life of the veterinary medicinal product as packaged for sale: 24 months.

Shelf-life after dilution or reconstitution according to directions:

24 hours in medicated water

24 hours in medicated milk or milk replacer

Shelf-life after first opening the immediate packaging: 3 months.

6.4 Special precautions for storage

Store in the original container in order to protect from light. Do not store above 25°C.

6.5 Nature and composition of immediate packaging

Block bottomed zipped 1.1 kg PET-Alu-PE bag.

6.6 Special precautions for the disposal of unused veterinary medicinal products or waste materials

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

7 MARKETING AUTHORISATION HOLDER

Huvepharma NV
Uitbreidingstraat 80
2600 Antwerpen
Belgium

8 MARKETING AUTHORISATION NUMBER(S)

10782/001/001

9 DATE OF THE FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

28th November 2008

10 DATE OF REVISION OF THE TEXT