Summary of Product Characteristics

1 NAME OF THE VETERINARY MEDICINAL PRODUCT

Tilmovet 100 mg/g oral granules for pigs.

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each gram contains:

Acive substance:

Tilmicosin: 100 mg

Excipients

For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Oral granules.

A brown granulated powder.

4 CLINICAL PARTICULARS

4.1 Target Species

Pigs (weaned piglets and fattening pigs).

4.2 Indications for use, specifying the target species

The product is indicated for the treatment of pneumonia in weaned piglets and fattening pigs, caused by *Actinobacillus pleuropneumoniae, Mycoplasma hyopneumoniae, Pasteurella multocida* sensitive to tilmicosin.

4.3 Contraindications

Do not use in animals hypersensitive to tilmicosin and when there is resistance to tilmicosin or cross resistance to other macrolides like tylosin, erythromycin or lincomycin.

Tilmicosin is known to be toxic for horses. Do not allow horses or other equines access to feeds containing tilmicosin.

4.4 Special warnings for each target species

If for an individual animal, feed intake is such that the recommended dosage is not realised, medication should be carried out by parenteral treatment.

4.5 Special precautions for use

i) Special precautions for use in animals

Cross-resistance between tilmicosin and other macrolide antibiotic has been observed. Use of the product should be based on susceptibility testing and take into account official and local antimicrobial policies. Due to likely variability (time, geographical) in the occurrence of the resistance of bacteria for tilmicosin, bacteriological sampling and susceptibility testing are recommended. Inappropriate use of the product may increase the prevalence of bacteria resistant to tilmicosin and may decrease the effectiveness of treatment with tilmicosin related substances.

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

Accidental ingestion should be avoided by humans.
People with known hypersensitivity to macrolide antibiotics should avoid contact with the veterinary medicinal product.
May cause sensitisation by skin contact. May cause skin and eye irritation. Avoid direct skin contact. Wear overalls, safety glasses and impervious gloves when mixing and handling the product. Wash affected parts if skin contact occurs. If accidental eye contact occurs, immediately rinse thoroughly with water. In case of accidental ingestion, or if you develop symptoms following exposure such as skin rash, seek medical advice immediately and show the package leaflet or the label to the physician
Swelling of the face, lips or eyes or difficulty with breathing are more serious symptoms and require urgent medical attention.

If the operations involve the risk of exposure to dust, wear either a disposable filter and half mask respirator conforming to European Standard EN149 or a non-disposable respirator to European Standard EN140 fitted with a filter to EN143. This warning is particularly relevant to on-farm mixing, where the risk of exposure to dust is likely to be enhanced.

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4.6 Adverse reactions (frequency and seriousness)

Occasionally, feed intake may decrease (including feed refusal) in animals receiving medicated feed. This effect is transient

In case of occurrence of allergic reaction, the treatment should be withdrawn.

4.7 Use during pregnancy, lactation or lay

Laboratory studies in rats have not produced any evidence of a teratogenic, foetotoxic/embryotoxic effect of tilmicosin, however, a maternotoxicity was observed at doses that were close to the therapeutic dosage. The product can be used in sows whatever the pregnancy stages.

The safety of tilmicosin has not been established in boars used for breeding purposes.

4.8 Interaction with other medicinal products and other forms of interaction

Do not use simultaneously with other macrolides and lincosamides.

Do not use simultaneously with bacteriostatic antimicrobial agents.

Tilmicosin may lessen the antibacterial activity of β-lactam antibiotics.

4.9 Amounts to be administered and administration route

For oral administration after incoporation into feed.

The product should be administered to small quantities of feed for immediate consumption by individual animals. For treatment of goups of pigs, use an appropriate premix incorporated into medicated feedingstuff by an authorised feed manufacturer. Pigs to be treated should be separated and treated individually. The required quantity of the product should be thoroughtly mixed into the daily ration for each individual pig. The feed containing the oral granules should be provided as the sole ration for the periods recommended.

Individual pigs should receive 16 mg tilmicosin per kg bodyweight, corresponding to 160 mg sproduct/kg bodyweight, once a day during 15 days. To avoid underdosing body weight should be determined as accurately as possible and the amount of feed that the pig is likely to consume should be estimated. The correct quantity of the product should be added to the estimated quantity of daily ration for each pig, in a bucket or similar receptacle, and thoroughly mixed. The product should only be added to dry non-pelleted feed.

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

Vomiting and cardio-vascular collapse are symptoms of overdosing.

4.11 Withdrawal Period(s)

Meat and offal: 21 days.

5 PHARMACOLOGICAL or IMMUNOLOGICAL PROPERTIES

ATC Vet Code:

Pharmacotherapeutic group: Antibacterials for systemic use, macrolides, tilmicosin

ATC vet code: QJ01FA91

5.1 Pharmacodynamic properties

Tilmicosin is a mainly bactericidal semi-synthetic antibiotic of the macrolide group. It is believed to affect the bacterial protein synthesis *in vitro* and *in vivo*, without affecting the nucleic acid synthesis. It is mostly bacteriostatic. It has a bactericidal effect on *Pasteurella* spp.

Tilmicosin has a wide spectrum of activity against Gram-positive organisms and is particularly active against (*Pasteurella*, *Actinobacillus pleuropneumoniae*) and *Mycoplasma* organisms of porcine origin. Tilmicosin has some activity against certain Gram-negative micro-organisms.

Cross resistance between tilmicosin and other macrolide antibiotics has been observed.
Macrolides inhibit protein synthesis by reversibly binding to the 50S ribosomal subunit. Bacterial growth is inhibited by induction of the separation of peptidyl transfer RNA from the ribosome during the elongation phase.
Ribosomal methylase, encoded by the *erm* gene, can precipitate resistance to macrolides by alteration of the ribosomal binding site.
The gene that encodes for an efflux mechanism, *mef*, also brings about a moderate degree of resistance.
Resistance is also brought about by an efflux pump that actively rids the cells of the macrolide. This efflux pump is chromosomally mediated by genes referred to as *acrAB* genes. Resistance of Pseudomonas species and other Gramnegative bacteria, enterococci and staphylococci may be precipitated by chromosomally controlled alteration of permeability or uptake of the drug.

5.2 Pharmacokinetic properties

Absorption: When administered to pigs via the oral route at a dose of 400 ppm in the feed (equivalent to approximately 21.3 mg/kg/day), tilmicosin moves rapidly out of the serum into areas of low pH. The highest concentration in the serum (0.23 ± 0.08 µg/ml) was recorded on day 10 of medication, but concentrations above the limit of quantification (0.10 µg/ml) were not found in 3 out of 20 animals examined. Lung concentrations increased rapidly between days 2 and 4, but no significant changes were obtained following four days of dosing. The maximum concentration in lung tissue (2.59 ± 1.01 µg/ml) was recorded on day 10 of medication.

Distribution: Following oral administration, tilmicosin is distributed throughout the body, but especially high levels are found in the lung and in lung tissue macrophages. It is also distributed in the liver and kidney tissues.

Biotransformation: Several metabolites are formed, the predominant one being identified as T1. However the bulk of the tilmicosin is excreted unchanged.

Elimination: Following oral administration, tilmicosin is excreted mainly via the bile into the faeces, but a small proportion is excreted via the urine.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Corn cobs
Liquid paraffin
Macrogolglycerol ricinoleate
Phosphoric acid, concentrated for pH adjustment

6.2 Incompatibilities

Do not mix into feed containing bentonite.

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

6.3 Shelf-life

Shelf-life of the veterinary medicinal product as packaged for sale: 3 years.
Shelf life after first opening the container: 3 months.
Feed to which the oral granules has been added should be replaced if not consumed within 24 hours.
Store in the original container in order to protect from moisture.

6.4 Special precautions for storage

Do not store above 30ºC. Store in the original container in order to protect from moisture.

6.5 Nature and composition of immediate packaging

Pack of 0.25 kg or 1 kg in a polyethylene-lined 3-ply paper bag
Not all pack sizes may be marketed

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

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

7 MARKETING AUTHORISATION HOLDER

Huvepharma N.V.
Uitbreidingstraat 80
2600 Antwerpen
Belgium

8 MARKETING AUTHORISATION NUMBER(S)

VPA 10782/011/001

9 DATE OF THE FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 6th November 2009

Date of last renewal: 1st August 2014

10 DATE OF REVISION OF THE TEXT