SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

RHEMOX PREMIX 100 mg/g premix for medicated feeding stuff for pigs

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each gram of the veterinary medicinal product contains:

Active substance:
Amoxicillin base 100 mg
(as amoxicillin trihydrate 114.8 mg)

Excipient:
Corncob q.s.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Premix for medicated feeding stuff.
Light brown granules.

4. CLINICAL PARTICULARS

4.1 Target species

Pigs (after weaning)

4.2 Indications for use, specifying the target species

Treatment and prevention of infectious processes caused by *Streptococcus suis* susceptible to amoxicillin in pigs after weaning.

The presence of disease in the herd should be established before treatment.

4.3 Contraindications

Do not use in case of hypersensitivity to penicillins or other antimicrobials of the beta-lactam group.

Do not use in the presence of beta-lactamase producing bacteria.

Do not use in animals with renal impairment.
Do not administer to rabbits, hamsters, gerbils and guinea pigs.

4.4 Special warnings for each target species

None.

4.5 Special precautions for use

Special precautions for use in animals

Use of the veterinary medicinal product should be based on susceptibility testing and take into account official and local antimicrobial policies.

Long term or repeated use should be avoided by improving management practice and thorough cleansing and disinfection. Narrow spectrum antibacterial therapy should be used for first line treatment where susceptibility testing suggests the likely efficacy of this approach.

Inappropriate use of the veterinary medicinal product may increase the prevalence of bacteria resistant to amoxicillin.

The intake of medication by animals can be altered as a consequence of illness. In case of insufficient intake of feed, animals should be treated by the parenteral route.

Special precautions to be taken by the person administering the veterinary medicinal product to animals

Avoid inhalation of dust and contact with skin.

When applying the product, wear gloves and a disposable half-mask respirator conforming to European Standard EN 140 with a filter to EN 143.

Penicillins may cause hypersensitivity (allergy) following inhalation, ingestion and skin contact. Hypersensitivity to penicillins may lead to cross reactions to cephalosporins and vice versa. Allergic reactions to these substances may occasionally be serious.

Do not handle this product if you know you are sensitised or if you have been advised not to work with such preparations.

If you develop symptoms following exposure such as a skin rash, you should seek medical advice and show the doctor this warning. Swelling of the face, lips or eyes or difficulty with breathing are more serious symptoms and require urgent medical attention.

Do not smoke, eat or drink while handling the product.

Wash hands after use.

4.6 Adverse reactions (frequency and seriousness)

Hypersensitivity reactions; severity can range from a simple rash to anaphylactic shock.

Gastrointestinal symptoms (vomiting, diarrhoea).

Suprainfections caused by non-sensitive germs after prolonged use.

4.7 Use during pregnancy, lactation or lay

Not applicable.

4.8 Interaction with other medicinal products and other forms of interaction

Do not administer together with bacteriostatic anti-infectious agents (tetracyclines, sulphamides, spectinomycin, trimethoprim, chloramphenicol, macrolides and lincosamides)

Do not use simultaneously with neomycin as it blocks the absorption of oral penicillins.

Do not use with antibiotics which inhibit bacterial protein synthesis as they can antagonise the bactericide effect of penicillins, except for aminoglycoside antibiotics which are recommended for use with penicillins.

4.9. Amounts to be administered and administration route

In feed use

15 mg of amoxicillin/kg of b.w./day during 15 days.
This dose is equivalent to 0.15 g RHEMOX PREMIX/kg b.w./day

To calculate the dosage of RHEMOX PREMIX to be incorporated into feed:

g of RHEMOX PREMIX per kg of feed:

0.15 g RHEMOX PREMIX x Kg (body weight)/ Daily feed intake (Kg feed)

Considering that a pig consumes approximately 5% of its body weight per day, this dose corresponds to 300 mg of amoxicillin per Kg of feed which gives a rate of incorporation of 3.0 Kg/Ton (flour or granules).

The feed consumption will depend on the clinical condition of the animal. In order to obtain a correct dosage, the concentration of the antimicrobial agent should be adjusted taking into account the daily feed intake at the onset of treatment.
To ensure a correct dosage body weight should be determined as accurately as possible to avoid underdosing

Mixing instructions:
To ensure a correct dispersion, the veterinary medicinal product should first be mixed to equal parts with feed before incorporation into the final mix.
Avoid contact with water.
The veterinary medicinal product can be incorporated into pelleted feed, preaconditioned at a temperature not greater than 85ºC.

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

No adverse reactions were showed at 3X the recommended dose (45 mg/kg) for 15 days and at dose levels but twice time the period treatment (30 days).

If allergic or anaphylactic reactions were appearing, the medication will be suspended and the veterinarian will be warned. The immediate administration of epinephrine, antihistamines and/or corticoids is considered to be a suitable therapy of emergency.

4.11 Withdrawal period

Meat and offal: 4 days

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Antibacterials for systemic use, penicillins with extended spectrum
ATCvet code: QJ01CA04.

5.1. Pharmacodynamic properties

Amoxicillin is a broad spectrum beta-lactam antibiotic belonging to the aminopenicillins group. The antibacterial mechanism of action of amoxicillin consists of the inhibition of the biochemical processes of bacterial cell wall synthesis by selectively and irreversible blocking different enzymes involved in such processes, largely transpeptidase, endopeptidase and carboxypeptidase. The inadequate synthesis of the bacterial wall in susceptible species produces an osmotic imbalance which particularly affects growing bacteria (when bacterial wall synthesis processes are especially important), finally leading to lysis of the bacterial cell.

There is cross-resistance between different beta-lactams.

It has bactericidal activity and acts against Gram-positive and Gram-negative microorganisms.

The *in vitro* sensitivity to amoxicillin has been determined against porcine strains of *Streptococcus suis* isolated during 2002-2007 resulting in MIC_{90} values of 0.03 µg/ml (determination using the agar dilution method. Breakpoints according to NCCLS Document M31-A2).

5.2. Pharmacokinetic particulars

Absorption of oral amoxicillin by oral route is independent from food intake and peak plasma concentrations are reached rapidly in most animal species between 1 and 2 hours after the veterinary medicinal product's administration.

Amoxicillin binds sparingly to plasma proteins and rapidly spreads to the body fluids and tissues. Amoxicillin is essentially distributed in the extracellular compartment. Its distribution to the tissues is facilitated by its low binding rate to plasma proteins.

The metabolism of amoxicillin is limited to hydrolysis of the beta-lactam ring, leading to the release of inactive penicillanic acid (20%). Biotransformation takes place in the liver.

Most amoxicillin is eliminated through the kidneys in active form. It is also excreted in small quantities in milk and bile.

Pigs (after weaning)

Following single dose administration, C_{max} was 4.20 ± 2.90 µg/ml with a T_{max} of 1.5 hours. Administration of the veterinary medicinal product according to the recommended posology results in a maximum plasmatic concentration at steady of 0.93±0.27 µg/ml. After withdrawal of medicated feeding stuff, it takes place a progressive decrease of the plasmatic concentration of amoxicillin with levels of 0.08 µg/ml at 10 h.

6. PHARMACEUTICAL PARTICULARS

6.1. List of excipients

Non-crystallising liquid sorbitol
Light liquid paraffin
Corncob *(declared on labelling as carrier)*

6.2 Major 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: 2 years.
Shelf-life after first opening the container: 3 months.
Shelf-life after incorporation into meal or pelleted feed: 3 months.

6.4. Special precautions for storage

Do not store above 25ºC. Store in a dry place.
After first opening, keep the container tightly closed.

6.5. Nature and composition of immediate packaging

Thermosealed bags of a complex film made of paper/aluminium/LDPE. Bags of 3 kg and 24 kg.
Not all pack sizes may be marketed.

6.6. Special precautions for the disposal of unused veterinary medicinal products or waste materials derived from the use of such products

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

7. MARKETING AUTHORISATION HOLDER

Industrial Veterinaria, S.A.
Esmeralda, 19
E-08950 Esplugues de Llobregat (Barcelona) Spain
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e-mail: invesa@invesa.eu

8. MARKETING AUTHORISATION NUMBER(S)
{number}

9. DATE OF FIRST AUTHORISATION/ RENEWAL OF THE AUTHORISATION

Date of first authorisation:{Day/Month/Year}
Date of last renewal: {Day/Month/Year}

10. DATE OF REVISION OF THE TEXT

{Day/Month/Year}

PROHIBITION OF SALE, SUPPLY AND/OR USE

Veterinary medicinal product subject to prescription.
Administration by a veterinary surgeon or under their direct responsibility.

Consideration should be given to official guidance on the incorporation of medicated premixes in final feeds.