SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Cephorum 250 mg film-coated tablets for dogs

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each tablet contains:

Active ingredient:
Cefalexin 250 mg
(equivalent to cefalexin monohydrate 263 mg)

Excipients:
Titanium dioxide (E171) 0.55 mg
Excipient qsp 1 tablet of 355 mg

For a full list of excipients, see section 6.1

3. PHARMACEUTICAL FORM

Film-coated tablet
Round, white to yellowish, biconvex tablet, scored on one side. 'CX' is imprinted above the scoreline, '250' is imprinted below the scoreline.
The tablets are not divisible.

4. CLINICAL PARTICULARS

4.1 Target species

Dogs

4.2 Indications for use, specifying the target species

The product is indicated for the treatment of urinary tract infections in dogs caused by *Klebsiella pneumoniae* and for the treatment of bacterial skin infections in dogs, when susceptible organisms are present.

4.3 Contraindications

Do not use in cases of known hypersensitivity to the active substance, to other cephalosporins, to other substances of the β-lactam group or to any of the excipients.
Do not use in rabbits, gerbils, guinea pigs and hamsters.

4.4 Special warnings for each target species

None

4.5 Special precautions for use

i. Special precautions for use in animals

Use of the product should be based on susceptibility testing and take in to account official and local antimicrobial policies.
Use of the product deviating from the instructions given in the SPC may increase the prevalence of bacteria resistant to cefalexin and may decrease the effectiveness of treatment with other cephalosporins, or with penicillins, due to potential cross-resistance.
In case of an allergic reaction, treatment should be withdrawn.
As with other antibiotics which are excreted mainly by the kidneys, unnecessary accumulation may occur in the body when renal function is impaired. In cases of known renal insufficiency the dose should be reduced, antimicrobials known to be nephrotoxic should not be administered concurrently and the product should be used only according to a risk/benefit assessment by the responsible veterinarian.

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

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

1. Do not handle this product if you know you are sensitised, or if you have been advised not to be in contact with such preparations.
2. Handle this product with great care to avoid exposure taking all recommended precautions.
3. 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 in breathing are more serious symptoms and require urgent medical attention. In case of accidental ingestion, seek medical attention immediately showing the physician this information.

Wash hands after use.

4.6 Adverse reactions (frequency and seriousness)

In rare cases vomiting, diarrhoea and hypersensitivity can occur. In cases of hypersensitivity reactions the treatment should be stopped.

The frequency of adverse reactions is defined using the following convention:
- very common (more than 1 in 10 animals displaying adverse reaction(s) during the course of one treatment)
- common (more than 1 but less than 10 animals in 100 animals)
- uncommon (more than 1 but less than 10 animals in 1,000 animals)
- rare (more than 1 but less than 10 animals in 10,000 animals)
- very rare (less than 1 animal in 10,000 animals, including isolated reports)

4.7 Use during pregnancy, lactation or lay

The safety of the veterinary medicinal product has not been established in bitches during pregnancy and lactation. Use only accordingly to the benefit/risk assessment by the responsible veterinarian.

4.8 Interaction with other medicinal products and other forms of interaction

The bactericidal activity of cephalosporins is reduced by concomitant administration of bacteriostatic acting compounds (macrolides, sulphonamides and tetracyclines).
Nephrotoxicity can be increased when 1st generation cephalosporins are combined with polypeptide antibiotics, aminoglycosides and some diuretics (furosemide).
Concomitant use with such active substances should be avoided.

4.9 Amounts to be administered and administration route

For oral use.

The recommended dose rate is 15 mg cefalexin / kg bodyweight twice daily. In severe or acute conditions the above dose may be safely doubled to 30 mg/kg or given at more frequent intervals.
The table below is intended as a guide for the recommended dose of 15 mg cefalexin per kg bodyweight. Any increase in the dose should be calculated case-by-case for the individual animal concerned.

Bodyweight in kg	Number of tablets per dose*
12 to 18	1 tablet
19 to 32	2 tablets
33 to 50	3 tablets

* Two doses per day should be given

To ensure a correct dosage body weight should be determined as accurately as possible to avoid underdosing.
Treatment for five days is recommended but this may be extended or shortened at the discretion of the veterinary surgeon.
Any increase in dose or duration of use, and any use in dogs less than 12 kg bodyweight, should be in accordance with a risk/benefit assessment by the responsible veterinarian.

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

Symptoms of overdose include nausea, vomiting, epigastric distress, diarrhoea and haematuria. Treatment should be symptomatic.

4.11 Withdrawal period(s)

Not applicable.

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group:

Antibacterials for systemic use, Other beta-lactam antibacterials, First-generation cephalosporins

ATC Vet Code: QJ01DB01

5.1 Pharmacodynamic properties>

Cefalexin, first generation cephalosporin, inhibits bacterial cell wall synthesis in a manner similar to the penicillins, and is widely considered to be bactericidal in action. It is thought that cefalexin acts by binding to and inactivating a number of different penicillin-binding proteins (PBPs) located on the inner aspects of the bacterial cell membrane. Cephalosporins are essentially time-dependent antibiotics.

Cefalexin is active against a large spectrum of gram-positive and gram-negative bacteria. The breakpoints for cefalexin are usually defined as S≤8 µg/ml, R> 32 µg/ml.

The *in vitro* activity of cefalexin against bacterial isolates from skin infections in dogs is as follows:

Pathogen	**MIC_{90}** (µg/ml)
S. intermedius	0.5 to 8
S. aureus	2 to 8
E. coli	2 to 16
Beta haemolytic *Streptococcus* spp. (86)	2

The MIC_{90} value of cefalexin against *Klebsiella pneumoniae* isolated from urinary tract infections in dogs is 4 µg/ml.

The most prevalent resistance mechanism among gram-negative bacteria to cefalexin is due to the production of various beta-lactamases (cephalosporinase) that cause inactivation. Resistance in gram-positive bacteria often involves a decreased affinity of the PBPs (penicillin-binding proteins) for beta-lactam drugs. Efflux pumps, extruding the

antibiotic from the bacterial cell, and structural changes in porins (reducing passive diffusion of the drug through the cell wall), may contribute to bacterial resistance. Cross-resistance (involving the same resistance mechanism) exists between antibiotics belonging to the beta-lactam group due to their similar structures. This occurs with beta-lactamase enzymes, structural changes in porins or variations in efflux pumps. Co-resistance (involving different resistance mechanisms) has been reported in *E. coli* due to a plasmid with resistance genes.

5.2 Pharmacokinetic particulars>

After oral administration, 60 to 80% of cefalexin is absorbed from the small intestine. The delay reported between administration and beginning of absorption is approximately 20 minutes and differences in mean AUC, Cmax, and Tmax are not significantly affected by food administration concomitant to treatment with cefalexin.

Dose administered (mg/kg)	15
Cmax (µg/ml)	17.6
Tmax (min)	158
AUC (µg.h/ml)	73.5
Half life (min)	107

Protein binding is low at 18%. Cefalexin is widely distributed into a variety of tissue fluids, including bile, synovial and pericardial fluid. The passage into interstitial tissue, as demonstrated in wound fluid concentration, peritoneal fluid and skin blisters is generally good.

Cefalexin is minimally metabolized and primarily excreted via the renal route, around 70% of an oral dose is excreted into the urine in 24 hours in the dog. It is important to note that cefalexin concentrations obtained in urine are well above plasma concentrations, and similarly concentrations in bile may be up to four times higher.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Titanium dioxide (E 171)
Povidone K25
Sodium starch glycolate (Type A)
Magnesium stearate
Macrogol 6000
Lactose monohydrate
Hypromellose
Talc
Peppermint oil
Saccharin sodium dihydrate

6.2 Incompatibilities

None known.

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale in polypropylene securitainers: 4 years

Shelf life of the veterinary medicinal product as packaged for sale in blister packs: 4 years

6.4 Special precautions for storage

Do not store above 25°C.
Protect from light.

6.5 Nature and composition of immediate packaging

White polypropylene securitainers with white polyethylene snap on caps containing 50, 100 or 250 tablets.

PVC/PVDC – Aluminium foil blister packs containing 10 strips of 14 tablets each.

Not all pack sizes may be marketed.

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

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

TVM UK Animal Health Ltd
Building B
Kirtlington Business Centre
Kirtlington
Oxfordshire
OX5 3JA

8. MARKETING AUTHORISATION NUMBER

Vm 46275/4002

9. DATE OF FIRST AUTHORISATION

11 June 1999

10. DATE OF REVISION OF THE TEXT

March 2020

Approved 24 March 2020