SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Doxytab vet. 400 mg Tablets for dogs

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each tablet contains:

Active substance:

Doxycycline	400 mg
(as doxycycline hyclate	461.7 mg)

Excipients:

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Tablet.
Yellow with brown spots, round and convex tablet with a cross-shaped break line on one side. The tablets can be divided into 2 or 4 equal parts.

4. CLINICAL PARTICULARS

4.1 Target species

Dogs.

4.2 Indications for use, specifying the target species

Treatment of the following conditions caused by bacteria sensitive to doxycycline:

Dogs:
Rhinitis caused by *Bordetella bronchiseptica* and *Pasteurella* spp.;
Bronchopneumonia caused by *Bordetella* spp. and *Pasteurella* spp.;
Interstitial nephritis caused by *Leptospira* spp.;

4.3 Contraindications

Do not use in known cases of hypersensitivity to tetracyclines or to any of the excipients.

4.4 Special warnings for each target species

None.

4.5 Special precautions for use

Special precautions for use in animals
The product should be administered with caution to animals with dysphagia or diseases accompanied with vomiting, since administration of doxycycline hyclate tablets has been associated with oesophageal erosion.
In order to reduce the likelihood of oesophageal irritation as well as other gastrointestinal side effects, the product should be administered together with food.
Special care should be taken when administering the product to animals with liver disease, since increases in hepatic enzymes have been documented in some animals after doxycycline treatment.
The product should be administered with caution to young animals, since tetracyclines as a class may cause permanent discolouration of the teeth, when administered during tooth development. However, human literature indicates that doxycycline is less likely than other tetracyclines to cause these abnormalities, due to its reduced ability to chelate calcium.
As tablets are flavoured store tablets out of reach of the animals in order to avoid accidental ingestion.
Due to the likely variability (time, geographical) in the occurrence of resistance of bacteria for doxycycline, bacteriological sampling and susceptibility testing are recommended. Official, national and regional antimicrobial policies should be taken into account when the product is used.
Use of the product deviating from the instructions given in the SPC may increase the prevalence of bacteria resistant to doxycycline and may decrease the effectiveness of treatment with other tetracyclines, due to the potential for cross-resistance.

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

This product may cause hypersensitivity reactions. People with known hypersensitivity to tetracyclines should avoid contact with the veterinary medicinal product. If you develop symptoms following exposure such as skin rash, seek medical advice immediately and show the package leaflet to the physician. This product may cause serious gastrointestinal effects if ingested, especially by children. To avoid accidental ingestion, unused tablet parts should be returned to the open blister space and inserted back into the carton that should be stored in a safe place out of sight and reach of children. In case of accidental ingestion, seek medical advice and show the package leaflet or the label to the physician.
Wash hands after use.

4.6 Adverse reactions (frequency and seriousness)

Gastrointestinal disorders such as vomiting, diarrhoea and oesophagitis have been reported as side effects following long term doxycycline therapy.
In very young animals discoloration of the teeth may occur by the formation of a tetracycline-calcium phosphate complex.
Hypersensitivity reactions, photosensitivity and in exceptional cases photodermatitis may occur after exposure to intense daylight.
Retardation of skeletal growth of young animals (reversible upon discontinuation of therapy) is known to occur with use of other tetracyclines and might occur following administration of doxycycline.

4.7 Use during pregnancy, lactation or lay

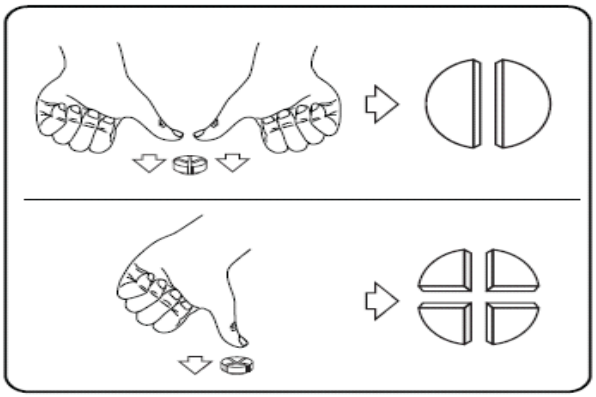
The safety of the veterinary medicinal product has not been established during pregnancy and lactation. Tetracyclines as a class can retard foetal skeletal development (fully reversible) and cause discolouration of the deciduous teeth. However, evidence from human literature suggests that doxycycline is less likely to cause these abnormalities than other tetracyclines. Use only according to the benefit/risk assessment by the responsible veterinarian.

4.8 Interaction with other medicinal products and other forms of interaction

Do not administer concurrently with bactericidal antibiotics such as penicillins and cephalosporins.
Oral absorbents and substances containing multivalent cations such as antacids and iron salts should not be used from 3 hours before to 3 hours after the administration of doxycycline as they reduce doxycycline availability. The half-life of doxycycline is reduced by concurrent administration of antiepileptic drugs such as phenobarbital and phenytoin.

4.9 Amounts to be administered and administration route

Oral use.
The recommended dose is 10 mg doxycycline per kg per day. The daily dose may be split into two administrations per day (i.e. 5 mg/kg bodyweight twice daily).
The majority of routine cases are expected to respond after between 5 and 7 days of therapy. Therapy should continue for 2 to 3 days beyond the clinical cure for acute infections. In chronic or refractory cases, a longer course of therapy, up to 14 days, may be required.
In dogs with interstitial nephritis due to leptospirosis, treatment for 14 days is recommended.
To ensure a correct dosage body weight should be determined as accurately as possible to avoid underdosing.
Tablets should be administered together with the food (see section 4.5).
The most appropriate tablet strength should be used in order to minimize divided tablets to be kept until the next dosing.
Tablets can be divided into 2 or 4 equal parts to ensure accurate dosing. Place the tablet on a flat surface, with its scored side facing up and the convex (rounded) side facing the surface.



2 equal parts: press down with your thumbs on both sides of the tablet.

4 equal parts: press down with your thumb in the middle of the tablet.

Return any divided tablets to the blister pack. Divided tablets should be used at the next administration. Any divided tablets remaining after the last administration of the product should be discarded.

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

In cases of overdose no symptoms are to be expected other than those mentioned in section 4.6.

4.11 Withdrawal period

Not applicable.

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Antibacterial for systemic use, Tetracyclines
ATCvet code: QJ01AA02

5.1 Pharmacodynamic properties

Doxycycline is a second-generation tetracycline. The product is mainly bacteriostatic; it inhibits bacterial protein synthesis by blocking the binding of transfer RNA at the messenger RNA-ribosome-complex.
Resistance is mainly mediated by efflux pumps or ribosomal protection proteins. Cross-resistance among tetracyclines is common but depends on resistance mechanisms: i.e. mutation in efflux pumps that renders resistance to tetracycline may still be sensitive to doxycycline. However, induction of the ribosomal protection proteins confers cross-resistance to doxycycline.

Bacterial species and origin	MIC_{90} (µg/ml)	Resistant[#] (%)
Pasteurella in dogs (FR 2017)		3 (N=101)
B. bronchiseptica in dogs and cats (DE 2016/2017)	1.0	

[#] = 100 – Susceptible (%), cut-off point for susceptibility ≤ 4 µg/ml, based on the recommendations of the French CA-SFM (Comité de l'Antibiogramme de la Société Française de Microbiologie)
N = total strains tested

5.2 Pharmacokinetic particulars

After oral administration doxycycline is mainly absorbed from the duodenum and jejunum. Following oral administration, the bioavailability is > 50%.
The peak plasma concentration, C_{max} of 1710 ng/ml was reached in dogs between 0.5 and 6 hours after dosing 10 mg/kg bw during feeding. In some dogs a second plasma peak (variable in height) was noticed. The average AUC_t was 26300 h·ng/mL. The estimated half-life, based on a limited amount of dogs only, was 8.9 hours.

Doxycycline is widely distributed throughout the body and can accumulate intracellularly for example in leukocytes. It is deposited in active bone tissue and teeth. Doxycycline penetrates better to the cerebrospinal fluid than the older tetracyclines. Doxycycline is primarily eliminated through faeces by direct intestinal excretion and to a lesser extent by glomerular excretion and biliary secretion.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sodium starch glycolate (type A)
Silica, colloidal hydrated
Cellulose, microcrystalline
Lactose monohydrate
Chicken flavour
Magnesium stearate

6.2 Major incompatibilities

Not applicable.

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale 48 months.

6.4 Special precautions for storage

This veterinary medicinal product does not require any special storage conditions. Keep the blister in the outer carton. Any remaining portions of divided tablets should be returned in the opened blister and given at the next administration.

6.5 Nature and composition of immediate packaging

Aluminium - PVC/PE/PVDC blister

Package sizes:
Cardboard box of 3 blisters of 10 tablets
Cardboard box of 5 blisters of 10 tablets
Cardboard box of 10 blisters of 10 tablets
Cardboard box of 1 blister of 30 tablets
Cardboard box of 5 blisters of 30 tablets
Cardboard box of 10 blisters of 30 tablets
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 product should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

CP-Pharma Handelsgesellschaft mbH
Ostlandring 13
31303 Burgdorf
Germany

8. MARKETING AUTHORISATION NUMBER

Vm 20916/4037

9. DATE OF FIRST AUTHORISATION

24 August 2020

10. DATE OF REVISION OF THE TEXT

February 2024