

## **1. NAME OF THE VETERINARY MEDICINAL PRODUCT**

Catobevit 100 mg/ml + 0.05 mg/ml solution for injection for cattle, horses, dogs and cats

## **2. QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each ml contains:

### **Active substances:**

Butafosfan:	100.00 mg
Cyanocobalamin (vitamin B12):	0.05 mg

### **Excipients:**

Phenol:	4.00 mg
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For the full list of excipients, see section 6.1.

## **3. PHARMACEUTICAL FORM**

Solution for injection.

Pink to reddish pink solution.

## **4. CLINICAL PARTICULARS**

### **4.1 Target species**

Cattle, horses, dogs and cats.

### **4.2 Indications for use, specifying the target species**

As supportive treatment of metabolic or reproductive disorders, when supplementation of phosphorous and cyanocobalamin is needed.

In case of peri-parturient metabolic disorders, tetany and paresis (milk fever), the product should be administered in addition to magnesium and calcium, respectively.

Supporting muscle function in the presence of deficiencies of phosphorous and/or cyanocobalamin.

### **4.3 Contraindications**

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

### **4.4 Special warnings for each target species**

It is recommended to determine the cause(s) of the metabolic or reproductive disorders to define the most appropriate measures of prevention and treatment and the need for a therapy with supplemental phosphorus and vitamin B12.

### **4.5 Special precautions for use**

Special precautions for use in animals

Not applicable.

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

People with known hypersensitivity to any of the ingredients should avoid contact with the product. The product might be mildly irritating to the skin or the eye. Dermal and ocular exposure should therefore be avoided. In case of accidental dermal or ocular exposure rinse the skin and/or the eye with water.

#### **4.6 Adverse reactions (frequency and seriousness)**

In cats, following subcutaneous injection in the interscapular region, reactions at injection site (swelling, oedema, erythema and induration) can be observed.

#### **4.7 Use during pregnancy, lactation or lay**

The safety of the product has not been established in pregnant and lactating cows, mares, bitches and queens. However, its use during pregnancy and lactation in those species should not pose any particular problem.

#### **4.8 Interaction with other medicinal products and other forms of interaction**

None known.

#### **4.9 Amounts to be administered and administration route**

##### Route of administration:

Cattle, horses: intravenous

Dogs and cats: intravenous, intramuscular, subcutaneous

##### Dose:

Animal species / sub-category	Butafosfan (mg/kg)	Vitamin B12 (µg/kg)	Product (ml/kg)	Route of administration
Cattle	2.0-5.0	1.0-2.5	0.02-0.05	IV
Calves	3.3-5.6	1.65-2.8	0.033-0.056	IV
Horses	2.0-5.0	1.0-2.5	0.02-0.05	IV
Foals	3.3-5.6	1.65-2.8	0.033-0.056	IV
Dogs	2.5-25	1.0-2.5	0.025-0.25	IV, IM, SC
Cats	10-50	5-25	0.1-0.5	IV, IM, SC

Repeat once daily, if necessary.

The cap may be safely punctured up to 25 times. If more than 25 broachings are required, use of a draw off needle is recommended.

It is recommended to use 100 ml packaging for treatment of dogs and cats.

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

None known.

#### **4.11 Withdrawal period(s)**

Cattle, horses:

Meat and offal: zero days

Milk: zero hours

### **5. PHARMACOLOGICAL PROPERTIES**

Pharmacotherapeutic group: alimentary tract and metabolism; mineral supplements; other mineral products, combinations.

ATCvet code: QA12CX99.

#### **5.1 Pharmacodynamic properties**

Butafosfan is an organic phosphorus source for animal metabolism. Among others phosphorus is relevant for energy metabolism. It is essential for gluconeogenesis since most intermediates of that process need to be phosphorylated. Direct pharmacological effects of butafosfan beyond simple phosphorus substitution have additionally been postulated.

Cyanocobalamin is a co-enzyme in the biosynthesis of glucose from propionate. Further it serves as a co-factor to enzymes important in fatty acid synthesis and is important for maintenance of normal haemopoiesis, protection of the liver, and maintenance of muscle tissue, healthy skin, brain and pancreatic metabolism. It belongs to the class of water-soluble B vitamins synthesized by the microbiotic flora in the digestive system of the animals (reticulorumen and large intestine). Owing to the microbes' own requirements, the synthesis usually does not produce sufficient quantities to cover the needs of the entire animal organism. Marked deficiencies occur rarely, even in case of an inadequate supply with cyanocobalamin.

The exact mode of action of cyanocobalamin and butafosfan in combination is not fully understood. Various effects on bovine lipid metabolism of cyanocobalamin and butafosfan in combination have been observed in clinical studies including reduced serum levels of ketosis-related non-esterified fatty acids and  $\beta$ -hydroxybutyric acid.

#### **5.2 Pharmacokinetic particulars**

Following intravenous administration to cattle butafosfan is distributed in the extravascular space within minutes and rapidly excreted from the body unchanged. The elimination half-life is 83 to 116 minutes. Within twelve hours after intravenous administration a mean of 77% of the parent compound is recovered in the urine. Only traces of butafosfan are found in the milk. Metabolic degradation was not detected. Butafosfan is rapidly absorbed and eliminated after parenteral administration in all target animal species.

The metabolism of cyanocobalamin is complex and is associated closely with that of folic acid and of ascorbic acid. Vitamin B12 is stored in significant amounts in the liver, further storage sites include kidney, heart, spleen and brain. Tissue half-life of vitamin B12 is 32 days. In ruminants vitamin B12 is excreted primarily in the faeces and in smaller amounts in the urine.

### **6. PHARMACEUTICAL PARTICULARS**

#### **6.1 List of excipients**

Phenol

Sodium hydroxide (*for pH adjustment*)  
Water for injections

## **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: 28 days

## **6.4. Special precautions for storage**

This veterinary medicinal product does not require any special temperature storage conditions.  
Store the bottle in the outer box in order to protect from light.

## **6.5 Nature and composition of immediate packaging**

100 ml amber glass bottle type II with bromobutyl rubber stopper and aluminium cap with a flip-off seal.  
250 ml amber glass bottle type I with bromobutyl rubber stopper and aluminium cap with a flip-off seal.

Pack sizes:

Box with 1 bottle of 100 ml  
Box with 1 bottle of 250 ml

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**

KRKA d.d., Novo mesto, Šmarješka cesta 6, 8501 Novo mesto, Slovenia

## **8. MARKETING AUTHORISATION NUMBER(S)**

## **9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

## **10 DATE OF REVISION OF THE TEXT**

## **PROHIBITION OF SALE, SUPPLY AND/OR USE**

