Cyanocobalamin B12 Ankermann®

1 mg Film-Coated Tablet
Anti-anemic, vitamin B_{12} preparation

DESCRIPTION:
The finished product is a round, biconvex, white coated tablet.

FORMULATION:
Each tablet contains:
Active substance:
Cyanocobalamin .....1.00 mg
Excipients:
Lactose monohydrate.....258.70 mg
Povidone K 30.....10.07 mg
Croscarmellose sodium.....2.75 mg
Stearic acid.....5.00 mg
Aquapolish® P white.....14.70 mg
Sucrose.....58.87 mg
Talc.....13.73 mg
Kaolin, heavy.....6.06 mg
Calcium carbonate.....8.88 mg
Titanium dioxide.....6.06 mg
Acacia, dried dispersion.....4.00 mg
Macrogol 6000.....0.40 mg
Macrogolglycerol hydroxystearate.....0.07 mg
Sodium laurilsulfate.....0.06 mg
Montan glycol wax.....0.50 mg

INDICATION:
In case of haematological and neurological symptoms of a vitamin B_{12} deficiency, where these cannot be corrected by nutrition alone.
For the treatment of vitamin B_{12} deficiency, which can manifest as haematopoietic disorders such as pernicious anaemia (idiopathic or following gastrectomy); atrophic gastritis, sprue, celiac disease, funicular spinal disease and other symptoms associated with vitamin B_{12} deficiency, which can arise, for example, due to malabsorption following partial intestinal ventricle resection to treat blind-loop syndrome, and certain rare forms of anaemia in pregnancy.
To support treatment with amino salicylic acid and other pharmaceutical products (e.g. long-term treatments with active substances that inhibit gastric acid production) that can lead to reduced vitamin B_{12} levels.

DOSAGE, METHOD AND LENGTH OF ADMINISTRATION:

Individual and Daily Doses

Use in adults

The recommended daily dose is 1 tablet **B12 Ankermann®**. This corresponds to 1 mg cyanocobalamin per day.

Use in children and adolescents

B12 Ankermann® is not suitable for use by children and adolescents under the age of 18.

Use in elderly patients

The same dose as for other adults applies.

If you have kidney problems

In patients with moderate kidney problems, **B12 Ankermann®** can be used in the normal dosage. In cases of severe kidney problems, a dose reduction is recommended. In addition, the amount of vitamin B_{12} in your blood serum should be checked regularly.

If you have liver problems

It is not known if you can safely take this medicine if you are having liver problems. Please inform your doctor if you have any liver problems.
Method and Length of Administration
The coated tablet should be swallowed whole with some fluid, preferably in the morning on an empty stomach. The treatment duration is determined by the therapeutic response. A targeted diagnostics and therapy control should adjust the patient to an optimal dose of cyanocobalamin.

Parenteral treatment should be given for haematological and neurological symptoms until blood values have returned to normal.

As long as **B12 Ankermann®** is well tolerated, the duration of use is not limited. Oral vitamin B_{12} tablets can be substituted for life as long as the cause of the vitamin B_{12} deficiency persists and sufficient vitamin uptake from intestines is proven. You should contact your doctor regularly to monitor treatment response.

If you take more B12 Ankermann® than you should:

If you take more **B12 Ankermann®** than you should, talk to your doctor who will decide about required measures. No case of intoxication has been reported.

There is no known antidote for overdose. In the case of overdose, symptomatic treatment should be initiated.

If you forget to take B12 Ankermann®

If you forget to take a dose, you should take it as soon as you remember unless it is time to take your next dose. If this happens, do not take the forgotten dose but take your usual dose at the correct time. Do not take a double dose to make up for a forgotten dose.

If you stop taking B12 Ankermann®

You should always consult your doctor before stopping treatment.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

CONTRAINDICATIONS:
B12 Ankermann® is contraindicated in patients with known hypersensitivity to the active substance cyanocobalamin or to any of the excipients which are contained in the product.
B12 Ankermann® coated tablets must not be used in patients who are in need of cyanide detoxification (e.g. patients with tobacco amblyopia or retrobulbar neuritis in pernicious anaemia). In this situation, other cobalamin derivatives should be administered.
B_{12}-deficient individuals who are at risk of Leber's optic atrophy should not be given cyanocobalamin to treat the B_{12} deficiency.

ADVERSE EFFECTS:
In the assessment of side effects the following frequency categories are used:
Very common (≥1/10)
Common (≥1/100 to <1/10)
Uncommon (≥1/1,000 to < 1/100)
Rare (≥1/10,000 to <1/1,000)
Very rare (<1/10,000)
Not known (cannot be estimated from the available data)

Uncommon: may affect up to 1 in 100 people

– Severe hypersensitivity reactions which can manifest as hives, skin rash or itching of large areas of the body.

Not known (frequency cannot be estimated from the available data):

– acne like and blister eruptions;

– fever.

OVERDOSE
Vitamin B_{12} has a large therapeutic range. Poisonings or overdose symptoms are not known. Cases of accidental overdose should be treated symptomatically, if necessary.

SPECIAL WARNINGS AND PRECAUTIONS FOR USE
The following should be noted in the case of blood-formation disorders and/or neurological disorders:
Talk to your doctor or pharmacist before taking **B12 Ankermann®**.
At the beginning of treatment, your clinical condition should be diagnosed by your physician to clarify the underlying reason of the deficiency, including the assessment of your gastrointestinal tract func-

Pharma Code
Pharma Code

tion. Your doctor will decide if vitamin B_{12} absorption from food is insufficient and if the oral supplementation with **B12 Ankermann®** is necessary.

Due to the serious nature of the disease, your doctor will probably want to monitor your response to this medicine within the first 3 months. This will probably involve examination of your blood. If you adhere well to the treatment plan, the treatment may be lifelong, depending on your underlying disease.

If you are in need of periodic renal dialyses, your doctor should perform regular blood examinations and the dosage of **B12 Ankermann®** may need to be reduced

If you have a folic acid deficiency, this may weaken your response to therapy. In this case, the use of **B12 Ankermann®** should be accompanied by folic acid supplementation.

B12 Ankermann is not suitable for children and adolescent below the age of 18 as there is insufficient clinical data and the dose is unsuitable.
Patients with rare hereditary galactose intolerance, lactase deficiency, glucose-galactose malabsorption, rare hereditary fructose intolerance or sucrase-isomaltase deficiency should not take **B12 Ankermann®** coated tablets.

INTERACTION WITH OTHER MEDICINAL PRODUCTS AND OTHER FORMS OF INTERACTION
The absorption of vitamin B_{12} may be impaired by proton pump inhibitors (e.g. omeprazol), histamine H2-antagonists (e.g. cimetidin), colchicine, neomycin, and amino salicylic acid.
Serum levels may also be lowered by oral contraceptives, but this interaction is unlikely to have clinical significance.
Chloramphenicol may attenuate the effect of vitamin B_{12} in anaemia.
Steroid drugs, such as prednisone, have been reported to increase the absorption of vitamin B_{12} in patients with pernicious anaemia.
Nitrous oxide (N2O) induces a functional vitamin B_{12} deficiency.
Metformin may lower the serum levels of vitamin B_{12}.

PREGNANCY AND LACTATION
If you are pregnant, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine. If necessary, the use of **B12 Ankermann®** during pregnancy may be taken into consideration.

B12 Ankermann® can be used during breastfeeding.

PRECLINICAL SAFETY DATA
No toxicity was shown in animal studies even at very high doses. There are no reports of any adverse effects relating to the administration of cyanocobalamin on male and female pre- and postnatal development. In addition, there are no reports of supplement-associated teratogenic, mutagenic or carcinogenic effects.

PHARMACOLOGICAL PROPERTIES
Pharmacodynamic properties
Pharmacotherapeutic group: Anti-anaemic, vitamin B_{12}
ATC code: B03BA01
As a member of the prosthetic groups of methylmalonyl CoA isomerase, vitamin B_{12} is needed to convert propionic acid into succinic acid. Furthermore, alongside folic acid, vitamin B_{12} is involved in the formation of labile methyl groups which are transmitted to other methyl acceptors via transmethylation processes. The vitamin also influences the synthesis of nucleic acids, in particular during haematopoiesis and other cell maturation processes.

Availability and requirement
The human body is unable to synthesize vitamin B_{12}, and it is absorbed from food. Foods which are rich in vitamin B_{12} are liver, kidney, heart, and other meats, fish, oysters, milk, and egg yolk. Vitamin B_{12} is administered for therapeutic purposes in the form of cyanocobalamin and/or hydroxocobalamin. Both are pro-drugs that the body converts into the active forms methylcobalamin and 5-adenosylcobalamin. The daily requirement of B_{12} amounts to around 1 µg.

Signs of deficiency
An impairment or lack of vitamin B_{12} absorption will eventually result in clinical symptoms if plasma levels fall below 200 pg/ml. The consequences are megaloblastic anaemia and neurological deficits in the peripheral and central nervous system. Polyneuropathy may be present in combination with lesions in the dorsal columns of the spinal cord; mental disorders may also arise. Early signs of deficiency may include fatigue and paleness, tingling in hands and feet, an unsteady gait and reduced physical strength.
Symptoms caused by a vitamin B_{12} deficiency can only be corrected by the intake of Vitamin B_{12}

Pharmacokinetic properties
Vitamin B_{12} is absorbed via two different routes:
- Active absorption in the small intestine involving intrinsic factor. The transportation of vitamin B_{12} into the tissues involves attachment to transcobalamins which are substances from the plasma-beta globulins group.
- Independently of intrinsic factor, the vitamin can also pass into the bloodstream by means of passive diffusion via the gastrointestinal tract or the mucous membranes. Approximately 1–3% of orally administered quantities enter the blood in a dose-linear fashion. Thus, for high oral doses (~ 1000 µg/day), adequate absorption is provided even in patients with a lack of intrinsic factor.
- Up to 90% of body stores are in the liver, where the vitamin is stored as the active coenzyme with a turnover rate of 0.5 to 0.8 µg daily. In healthy adults eating a mixed diet, the total body content of vitamin B_{12} is about 3 to 5 mg. It will generally take 3–5 years for clinical signs of vitamin B_{12} deficiency to occur.

Vitamin B_{12} is excreted mainly by the gall bladder and up to 1 µg is reabsorbed via the enterohepatic circulation. If the body's storage capacity is exhausted due to high doses, in particular subsequent to parenteral administration, excess amounts of vitamin B_{12} are excreted in the urine.

CAUTION:
Foods, Drugs, Devices and Cosmetics Act prohibits dispensing without prescription. For suspected adverse drug reaction, please report to the FDA: www.fda.gov.ph.

STORAGE CONDITION:
Store below 30 °C

AVAILABILITY
Original packs (blister packs) with 10 coated tablets, 50 coated tablets and 100 coated tablets.

Manufactured by:
Artesan Pharma GmbH & Co. KG
Wendlandstraße 1, 29439 Lüchow, Germany

For:
Wörwag Pharma GmbH & Co. KG
Flugfeld-Allee 24, 71034, Böblingen, Germany

Imported & Distributed by:
Metro Drug Inc.
Sta. Rosa Estate, Barangay Macabling,
Santa Rosa City,
Laguna. Phillippines

Registration Number: DR-XY47821

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Wörwag Pharma GmbH & Co. KG
Flugfeld-Allee 24, 71034 Böblingen

VNr. 02-0322-00 / XXXXX

148 x 420 mm / PC XXX / LC XXXXXXXX

costumer:	Wörwag Pharma GmbH & Co. KG
product:	B12 Ankermann®
	Gebrauchsinformation / Leaflet
country:	**Philippines (PH)**
dimensions:	148 x 420 mm – **Artesan**
font:	DIN Next CYR (size: min. 9 pt / line spacing: min. 3,5 mm)
colors:	■ black
	Dieline

date:	...02.06.2020	3	02-0620-00	JuS/SHe
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	04.06.2020	1	02-0620-00	JuS
	25.03.2022	1	02-0322-00	JuS
	06.04.2022	1,7	02-0322-00	JuS