INDICATIONS
For prevention and treatment of copper and selenium deficiencies and for improvement of cobalt supply.

EACH 100G BOLUS CONTAINS:
13.4 grams copper
0.3 grams selenium as sodium selenate
0.5 grams cobalt

BENEFITS
- Unique soluble glass formulation ensures that trace elements are delivered at a controlled and constant rate, compatible with the animal’s daily requirements.
- Contains ionic copper; a unique, rumen-available form of copper
- Contains ionic cobalt; a unique, rumen-available form of cobalt
- Provides copper, cobalt and selenium for up to six months
- Registered medicine (LM category in Ireland, POM-VPS in the UK)

LIST No | UNIT PACKAGE
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1COS006 | 20 Boluses

See reverse for Full Product Detail and Usage Instructions
**PRESENTATION**
Continuous release intraruminal device. A cylindrical, blue glass continual release intraruminal device approximately 82mm x 24mm and weighing approximately 100g.

**USES**
For prevention and treatment of copper and selenium deficiencies and for improvement of cobalt supply.

**DOSE AND ADMINISTRATION:**
Remove the bolus from the foil and ensure the bolus is at body temperature before administration.

Ruminating cattle over two months of age and weighing over 100 kg body weight: 2 boluses.

Administer orally using the Bimeda Cosecure Cattle Bolus applicator, which delivers the bolus directly into the top of the gullet. Great care should be taken not to cause any injury by rough handling or by placing the applicator too far inside the throat of the animal. Ensure that each animal has swallowed the boluses by holding the mouth closed and observing the animal for a short time after dosing. Gentle massage of the throat may facilitate swallowing of the boluses.

The boluses should normally be administered just before turnout, but administration may be carried out at any time, e.g. administer to dairy cows at drying off or at calving or 30 days post-calving or at artificial insemination.

To minimise the risk of regurgitation, avoid rough handling of animals after dosing.

Do not administer the recommended dosage to animals more frequently than once every 4.5 months to animals receiving concentrates unless subjected to a risk/benefit analysis.

**CONTRAINDICATIONS AND WARNINGS**
Do not administer to non-ruminating calves or to animals weighing less than 100kg body weight.

Do not administer to sheep.

**SPECIAL WARNINGS FOR EACH TARGET SPECIES**
The product may be administered to pregnant and lactating animals.

**USE DURING PREGNANCY, LACTATION OR LAY**
The product may be administered to pregnant and lactating animals.

**PHARMACOKINETIC PARTICULARS**
Following oral administration the boluses lodge in the reticulum where they dissolve slowly over a period of approximately four and a half to six months. The ultimate breakdown products are copper, cobalt and selenium in ionic form. The boluses provide a source of these trace elements at levels compatible with the animal’s daily requirements.

**PHARMACOLOGICAL PARTICULARS**
List of excipients
- Phosphorus (V)-oxide
- Sodium oxide
- Magnesium oxide
- Other oxides

**SPECIAL PRECAUTIONS FOR STORAGE**
Store in a dry place. Do not freeze.

Protect from frost.

**WITHDRAWAL PERIODS**
Cattle: Meat zero days; Milk zero hours.

**PHARMACOLOGICAL INFORMATION AND PRECAUTIONS**
Pharmacotherapeutic group: selenium combinations ATC vetc code: QA12CE99

**PHARMACODYNAMIC PROPERTIES**
The active substances are the essential trace elements copper, cobalt and selenium. The boluses are designed to dissolve slowly throughout the grazing season (up to 6 months), releasing copper, cobalt and selenium.

Copper is an integral part of several enzymes with oxidase function e.g. caeruloplasmin, monoamine oxidase, cytochrome oxidase, tyrosinase, l-lysyl oxidase, cytochrome C and superoxide dismutase. Thus copper is essential for a variety of body functions including growth. In addition, extra copper supplementation is essential in cases of infertility due to the formation of thiomolybdates with molybdenum.

Cobalt is an integral part in Vitamin B12(cyanocobalamin), which is important for several metabolic functions. This vitamin is synthesised by micro-organisms in the rumen and is absorbed from there into the systemic circulation. Vitamin B12 acts as a co-enzyme in several metabolic pathways and in ruminants its main role is in the metabolism of propionate, which is required for synthesis of glucose via succinate in the liver.

Selenium is an integral part in the glutathione peroxidase (GSHPx) enzymes, which are involved in the protection from oxidant stress. These enzymes have a synergistic role with vitamin E and other antioxidants in removing toxic peroxides from tissue and preventing oxidative damage to membranes. Selenium is required in the thyroid gland for the conversion of T4 to T3, the active thyroxine molecule as selenium is required in the iodothyronine deiodinase enzymes.

**LEGAL CATEGORY**
POM-VPS UK

**MARKETING AUTHORISATION NUMBER**
VM 18584/4000
VPA 22033/054/001

**MARKETING AUTHORISATION HOLDER**
Telsol Ltd, T/A Bimeda-Telsol, 25/24 Colomendy Industrial Estate, Denbigh, Denbighshire, Wales. LL16 5TA

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Please contact your local prescriber before using. Use Medicines Responsibly.

www.cosecureboluses.com