SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Cyclosol LA 200 mg/ml solution for injection for cattle and pigs.

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

Active substance:
Oxytetracycline 200.0 mg (equivalent to 216.0 mg oxytetracycline dihydrate)

Excipients:

Sodium formaldehyde sulphoxylate dihydrate	5.0 mg
Povidone K17	50.0 mg
N-methyl-2-pyrrolidone	380.0 mg

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection.
A clear yellow to reddish-brown aqueous solution.

4. CLINICAL PARTICULARS

4.1 Target species

Cattle and pigs.

4.2 Indications for use, specifying the target species

Cattle: For the treatment of respiratory infections caused by oxytetracycline susceptible organisms such as *Arcanobacterium (Actinomyces) pyogenes* and *Haemophilus somnus.*
Pigs: For the treatment of respiratory infections caused by oxytetracycline susceptible organisms such as *Pasteurella Multocida.*

4.3 Contraindications

Do not use in cases of hypersensitivity to the active substance, or to any of the excipients.
Do not use in animals with an impaired liver and/or kidney function.

4.4 Special warnings for each target species

None.

4.5 Special precautions for use

Special precautions for use in animals
For the 250 mL pack, the use of a multidose syringe is recommended. To refill the syringe, the use of a draw off needle is recommended to avoid excessive broaching of the stopper.
It is recommended to use the veterinary medicinal product in the early stages of disease and to evaluate the response to treatment within 72 hours. Resistance against oxytetracycline may vary. Use of the veterinary medicinal product should be based on susceptibility testing and taking into account official and local antimicrobial policies.
Inappropriate use of the veterinary medicinal product may increase the prevalence of bacteria resistant to oxytetracycline and may decrease the effectiveness of treatment with tetracyclines due to the potential for cross resistance.
Because oxytetracycline can retard foetal skeletal development and may cause discoloration and enamel hypoplasia of foetal teeth, the veterinary medicinal product should be used cautiously in the last half of pregnancy.

Special precautions to be taken by the person administering the veterinary medicinal product to animals
People with known hypersensitivity to tetracyclines should avoid contact with the veterinary medicinal product.
The direct or indirect contact of the user via skin or mucosa should be avoided because of the risk of sensitisation. Wash hands after use. In case of contact with eyes or skin, wash immediately with water as irritation may occur.

Laboratory studies in rabbits and rats conducted with the excipient N-methyl pyrrolidone have shown evidence of foetotoxic effects. Women of childbearing age, pregnant women or women suspected of being pregnant should use the veterinary medicinal product with serious caution to avoid accidental self-injection.

Special precautions for the protection of the environment
Not applicable.

Other precautions
Not applicable.

4.6 Adverse reactions (frequency and seriousness)

Cattle:

Rare (1 to 10 animals / 10,000 animals treated):	Hypersensitivity reaction (including anaphylaxis [a]) Hepatic toxicosis, Haematologic effects

Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Injection site reactions [b]
Undetermined frequency (cannot be estimated from the available data)	Photosensitivity [c] Decreased milk production [d]

a Which may be fatal. In case of a serious anaphylactic reaction in cattle the administration of epinephrine, antihistamines and corticosteroids should be considered.
b Transient swelling and/or yellow staining (and local necrosis) will occur following intramuscular administration. Swelling will be visible for several days after injection.
c When exposed to intensive sunlight, particularly treated animals with poor skin pigmentation.
d Small drop in lactating animals for up to 3 days following injection.

Pigs:

Rare (1 to 10 animals / 10,000 animals treated):	Hepatic toxicosis, Haematologic effects
Undetermined frequency (cannot be estimated from the available data)	Photosensitivity[a], Injection site reactions[b], Decreased milk production[c]

a When exposed to intensive sunlight, particularly treated animals with poor skin pigmentation.
b Transient swelling and/or yellow staining (and local necrosis) will occur following intramuscular administration. Swelling will be visible for several days after injection.
c Small drop in lactating animals for up to 3 days following injection.

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or its local representative or the national competent authority via the national reporting system. See the package leaflet for contact details.

4.7 Use during pregnancy, lactation or lay

The placenta is readily passed by oxytetracycline and concentration in the foetal blood may reach those of the maternal circulation, although concentration is usually somewhat lower. The use is not recommended in the last 2-3 weeks of pregnancy.
The safety of the veterinary medicinal product has not been established in cattle and pigs during pregnancy until 3 weeks before expected partus, lactation or in animals intended for breeding. Laboratory studies in rabbits and rats conducted

with the excipient N-methyl pyrrolidone have shown evidence of foetotoxic effects. Use only according to the benefit-risk assessment by the responsible veterinarian.

Tetracyclines are deposited in deciduous and permanent teeth causing discoloration, enamel hypoplasia, and reduced mineralisation. Tetracyclines can retard foetal skeletal development. Oxytetracycline is excreted in the milk; concentrations are generally low.

4.8 Interaction with other medicinal products and other forms of interaction

Oxytetracycline should not be administered simultaneously with penicillins or cephalosporins.

4.9 Amount(s) to be administered and administration route

Administration route: intramuscular use (deep). It is strongly recommended to divide the intramuscular dosages over two or more injection sites - maximum 15 ml per injection site in cattle over 150 kg body weight and 7 ml in pigs and calves. Injection sites should be alternated.

Pigs
20 mg oxytetracycline per kg bodyweight, if necessary repeat after 72 hours.

Cattle not producing milk for human consumption
20 mg oxytetracycline per kg bodyweight, if necessary repeat after 72 hours.

Cattle producing milk for human consumption
20 mg oxytetracycline per kg bodyweight as a single injection only.

To ensure a correct dosage, body weight should be determined as accurately as possible.

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

After intramuscular administration of the antibiotic in lethal dosages, central nervous system symptoms as excitation and convulsions, followed by depression, generalized muscular paralysis and respiratory arrest, preceding death were observed (death usually occurs through respiratory failure). Long-term treatment may result in gastrointestinal disturbances and changes of gut flora (supra-infections). High dosages or chronic administration of oxytetracycline may delay bone growth and healing in young animals. Chronic overdose may lead to drug accumulation and nephrotoxicity. There are no known antidotes to oxytetracycline toxicity.

4.11 Withdrawal period(s)

Cattle:	Meat and offal:	35 days.
	Milk:	8 days.
Pigs:	Meat and offal:	28 days.

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Tetracycline antimicrobial

ATCvet code: QJ01AA06

5.1 Pharmacodynamic properties

Oxytetracycline is a bacteriostatic antibiotic. It exerts its action by inhibiting the protein synthesis of the bacterial cell. Inhibition of bacterial protein synthesis results in disturbance of all functions necessary for the life of bacteria, especially cell-division, and the formation of the cell wall are impaired.
Resistance is usually plasmid-mediated. Micro-organisms that have become resistant to one tetracycline frequently exhibit resistance to the others.

5.2 Pharmacokinetic particulars

Absorption of oxytetracycline following intramuscular injection of the veterinary medicinal product is fast. In pigs the C_{max} is measured within 2 to 3 hours; the C_{max} is approximately 4 µg/ml. In cattle absorption is somewhat slower; the C_{max} is measured after 3 to 5 hours; the C_{max} is approximately 3 to 6 µg/ml.
A plasma concentration of 0.5 µg/ml or more is maintained for 72 hours in cattle and pigs. Concentrations of 0.1 µg/ml are maintained for 5 days. Bioavailability of the veterinary medicinal product is approximately 100%.
High concentrations of oxytetracycline are detectable in kidney, liver, and urine, but oxytetracycline is widely distributed in the body, including lungs and muscle. The placenta is readily passed by oxytetracycline and concentration in the foetal blood may reach that of the maternal circulation.
Oxytetracycline apparently is not metabolized *in vivo* and is eliminated primarily unchanged, via glomerular filtration. It is also excreted into the GI tract via both biliary and nonbiliary routes and may become inactive after chelation with faecal material.

5.3 Environmental properties

Not applicable.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sodium formaldehyde sulphoxylate dihydrate
Povidone K17
N-methyl-2-pyrrolidone
Ethanolamine
Magnesium oxide, light
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: 30 months.
Shelf life after first opening the immediate packaging: 14 days.

6.4 Special precautions for storage

Do not freeze. Keep the container in the outer carton.

6.5 Nature and composition of immediate packaging

Amber-coloured, glass type II vials containing 50/100/250 ml solution for injection in an outer cardboard box.
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

Eurovet Animal Health B.V.
Handelsweg 25
5531 AE Bladel
The Netherlands

8. MARKETING AUTHORISATION NUMBER

Vm 16849/5009

9. DATE OF FIRST AUTHORISATION

24 April 2002

10. DATE OF REVISION OF THE TEXT

November 2023

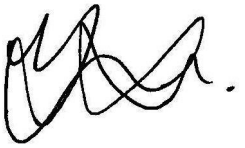
PROHIBITION OF SALE, SUPPLY AND/OR USE

POM-V

11. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCT

Veterinary medicinal product subject to prescription.

Find more product information by searching for the ‘Product Information Database’ or ‘PID’ on www.gov.uk.



Approved: 03 April 2024