

**ANNEX I**  
**SUMMARY OF PRODUCT CHARACTERISTICS**

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Tulinovet 100 mg/mL solution for injection for cattle, pigs and sheep

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each mL contains

### Active substance:

Tulathromycin 100 mg

### Excipients:

Qualitative composition of excipients and other constituents	Quantitative composition if that information is essential for proper administration of the veterinary medicinal product
Monothioglycerol	5 mg
Propylene glycol	
Citric acid	
Hydrochloric acid, dilute (for pH adjustment)	
Sodium hydroxide (for pH adjustment)	
Water for injections	

Clear colourless to slightly yellow or slightly brown solution

## 3. CLINICAL INFORMATION

### 3.1 Target species

Cattle, pigs and sheep

### 3.2 Indications for use for each target species

#### Cattle

Treatment and metaphylaxis of bovine respiratory disease (BRD) associated with *Mannheimia haemolytica*, *Pasteurella multocida*, *Histophilus somni* and *Mycoplasma bovis* susceptible to tulathromycin. The presence of the disease in the group must be established before the product is used.

Treatment of infectious bovine keratoconjunctivitis (IBK) associated with *Moraxella bovis* susceptible to tulathromycin.

#### Pigs

Treatment and metaphylaxis of swine respiratory disease (SRD) associated with *Actinobacillus pleuropneumoniae*, *Pasteurella multocida*, *Mycoplasma hyopneumoniae*, *Haemophilus parasuis* and *Bordetella bronchiseptica* susceptible to tulathromycin. The presence of the disease in the group must be established before the product is used. The veterinary medical product should only be used if pigs are expected to develop the disease within 2–3 days.

#### Sheep

Treatment of the early stages of infectious pododermatitis (foot rot) associated with virulent *Dichelobacter nodosus* requiring systemic treatment.

### **3.3 Contraindications**

Do not use in cases of hypersensitivity to macrolide antibiotics or to any of the excipients.

### **3.4 Special warnings**

Cross resistance occurs with other macrolides. Do not administer simultaneously with antimicrobials with a similar mode of action such as other macrolides or lincosamides.

#### Sheep:

The efficacy of antimicrobial treatment of foot rot might be reduced by other factors, such as wet environmental conditions, as well as inappropriate farm management. Treatment of foot rot should therefore be undertaken along with other flock management tools, for example providing dry environment.

Antibiotic treatment of benign foot rot is not considered appropriate. Tulathromycin showed limited efficacy in sheep with severe clinical signs or chronic foot rot, and should therefore only be given at an early stage of foot rot.

### **3.5 Special precautions for use**

#### Special precautions for safe use in the target species:

Use of the veterinary medicinal product should be based on susceptibility testing of the bacteria isolated from the animal.

If this is not possible, therapy should be based on local (regional, farm level) epidemiological information about susceptibility of the target bacteria. Official, national and regional antimicrobial policies should be taken into account when the veterinary medicinal product is used.

Use of the product deviating from the instructions given in the SPC may increase the prevalence of bacteria resistant to the tulathromycin and may decrease the effectiveness of treatment with other macrolides, due to the potential for cross resistance.

If a hypersensitivity reaction occurs appropriate treatment should be administered without delay.

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

Tulathromycin is irritating to eyes. In case of accidental eye exposure, flush the eyes immediately with clean water.

Tulathromycin may cause sensitisation by skin contact resulting in e.g. reddening of the skin (erythema) and/or dermatitis. In case of accidental spillage onto skin, wash the skin immediately with soap and water.

Wash hands after use.

In case of accidental self-injection, seek medical advice immediately and show the package leaflet or the label to the physician.

If there is suspicion of a hypersensitivity reaction following accidental exposure (recognised by e.g. itching, difficulty in breathing, hives, swelling on the face, nausea, vomiting) appropriate treatment should be administered. Seek medical advice immediately and show the package leaflet or the label to the physician.

### Special precautions for the protection of the environment:

Not applicable.

### **3.6 Adverse events**

#### Cattle:

Very common (>1 animal / 10 animals treated):	Transient pain reactions and local swellings at the injection site* Congestion, oedema, fibrosis and haemorrhage at the injection site**
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\*may persist for up to 30 days after injection

\*\*may appear for approximately 30 days after injection

#### Pigs:

Very common (>1 animal / 10 animals treated):	Congestion, oedema, fibrosis and haemorrhage at the injection site**
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\*\*may appear for approximately 30 days after injection

#### Sheep:

Very common (>1 animal / 10 animals treated):	Signs of discomfort (head shaking, rubbing injection site, backing away)***
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\*\*\*these signs resolve within a few minutes

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 respective contact details.

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

Laboratory studies in rats and rabbits have not produced any evidence of teratogenic, foetotoxic or maternotoxic effects. The safety of the veterinary medicinal product has not been established during pregnancy and lactation. Use only according to the benefit/risk assessment by the responsible veterinarian.

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

None known.

### **3.9 Administration routes and dosage**

#### Cattle

Subcutaneous use.

A single subcutaneous injection of 2.5 mg tulathromycin/kg bodyweight (equivalent to 1 mL/40 kg bodyweight). For treatment of cattle over 300 kg bodyweight, divide the dose so that no more than 7.5 mL are injected at one site.

#### Pigs

Intramuscular use.

A single intramuscular injection of 2.5 mg tulathromycin/kg bodyweight (equivalent to 1 mL/40 kg bodyweight) in the neck.

For treatment of pigs over 80 kg bodyweight, divide the dose so that no more than 2 mL are injected at one site.

For any respiratory disease, it is recommended to treat animals in the early stages of the disease and to evaluate the response to treatment within 48 hours after injection. If clinical signs of respiratory disease persist or increase, or if relapse occurs, treatment should be changed, using another antibiotic, and continued until clinical signs have resolved.

### Sheep

Intramuscular use.

A single intramuscular injection of 2.5 mg tulathromycin/kg body weight (equivalent to 1 mL/40 kg body weight) in the neck.

To ensure correct dosage bodyweight should be determined as accurately as possible to avoid underdosing.

For multiple vial entry, an aspirating needle or multi-dose syringe is recommended to avoid excessive broaching of the stopper. The stopper of the 25, 50 and 100 mL vials may be punctured up to 20 times. The stopper of the 250 mL vials may be punctured up to 25 times.

### **3.10 Symptoms of overdose (and where applicable, emergency procedures and antidotes)**

In cattle at dosages of three, five or ten times the recommended dose, transient signs attributed to injection site discomfort were observed and included restlessness, head-shaking, pawing the ground, and brief decrease in feed intake. Mild myocardial degeneration has been observed in cattle receiving five to six times the recommended dose.

In young pigs weighing approximately 10 kg given three or five times the therapeutic dose transient signs attributed to injection site discomfort were observed and included excessive vocalisation and restlessness. Lameness was also observed when the hind leg was used as the injection site.

In lambs (approx. 6 weeks old), at dosages of three or five times the recommended dose, transient signs attributed to injection site discomfort were observed, and included walking backwards, head shaking, rubbing the injection site, lying down and getting up, bleating.

### **3.11 Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance**

Not applicable.

### **3.12 Withdrawal periods**

Cattle (meat and offal): 22 days.

Pigs (meat and offal): 13 days.

Sheep (meat and offal): 16 days.

Not authorised for use in animals producing milk for human consumption.

Do not use in pregnant animals which are intended to produce milk for human consumption within 2 months of expected parturition.

## 4. PHARMACOLOGICAL INFORMATION

### 4.1 ATCvet code: QJ01FA94

### 4.2 Pharmacodynamics

Tulathromycin is a semi-synthetic macrolide antimicrobial agent, which originates from a fermentation product. It differs from many other macrolides in that it has a long duration of action that is, in part, due to its three amine groups; therefore it has been given the chemical subclass designation of triamilide.

Macrolides are bacteriostatic acting antibiotics and inhibit essential protein biosynthesis by virtue of their selective binding to bacterial ribosomal RNA. They act by stimulating the dissociation of peptidyl-tRNA from the ribosome during the translocation process.

Tulathromycin possesses *in vitro* activity against *Mannheimia haemolytica*, *Pasteurella multocida*, *Histophilus somni* and *Mycoplasma bovis*, and *Actinobacillus pleuropneumoniae*, *Pasteurella multocida*, *Mycoplasma hyopneumoniae*, *Haemophilus parasuis* and *Bordetella bronchiseptica*, the bacterial pathogens most commonly associated with bovine and swine respiratory disease, respectively. Increased minimum inhibitory concentration (MIC) values have been found in some isolates of *Histophilus somni* and *Actinobacillus pleuropneumoniae*. *In vitro* activity against *Dichelobacter nodosus* (*vir*), the bacterial pathogen most commonly associated with infectious pododermatitis (foot rot) in sheep has been demonstrated.

Tulathromycin also possesses *in vitro* activity against *Moraxella bovis*, the bacterial pathogen most commonly associated with infectious bovine keratoconjunctivitis (IBK).

The Clinical and Laboratory Standards Institute CLSI has set the clinical breakpoints for tulathromycin against *M. haemolytica*, *P. multocida*, and *H. somni* of bovine respiratory origin and *P. multocida* and *B. bronchiseptica* of swine respiratory origin, as  $\leq 16$  µg/ml susceptible and  $\geq 64$  µg/ml resistant.

For *A. pleuropneumoniae* of swine respiratory origin the susceptible breakpoint is set at  $\leq 64$  µg/ml. CLSI has also published clinical breakpoints for tulathromycin based on a disk diffusion method (CLSI document VET08, 4th ed, 2018). No clinical breakpoints are available for *H. parasuis*. Neither EUCAST nor CLSI have developed standard methods for testing antibacterial agents against veterinary *Mycoplasma* species and thus no interpretative criteria have been set.

Resistance to macrolides can develop by mutations in genes encoding ribosomal RNA (rRNA) or some ribosomal proteins; by enzymatic modification (methylation) of the 23S rRNA target site, generally giving rise to cross-resistance with lincosamides and group B streptogramins (MLS<sub>B</sub> resistance); by enzymatic inactivation; or by macrolide efflux. MLS<sub>B</sub> resistance may be constitutive or inducible. Resistance may be chromosomal or plasmid-encoded and may be transferable if associated with transposons or plasmids, integrative and conjugative elements. Additionally, the genomic plasticity of *Mycoplasma* is enhanced by the horizontal transfer of large chromosomal fragments.

In addition to its antimicrobial properties, tulathromycin demonstrates immune-modulating and anti-inflammatory actions in experimental studies. In both bovine and porcine polymorphonuclear cells (PMNs; neutrophils), tulathromycin promotes apoptosis (programmed cell death) and the clearance of apoptotic cells by macrophages. It lowers the production of the pro-inflammatory mediators

leukotriene B4 and CXCL-8 and induces the production of anti-inflammatory and pro-resolving lipid lipoxin A4.

### 4.3 Pharmacokinetics

In cattle, the pharmacokinetic profile of tulathromycin when administered as a single subcutaneous dose of 2.5 mg/kg bodyweight was characterised by rapid and extensive absorption followed by high distribution and slow elimination. The maximum concentration ( $C_{\max}$ ) in plasma was approximately 0.5 µg/mL; this was achieved approximately 30 minutes post-dosing ( $T_{\max}$ ). Tulathromycin concentrations in lung homogenate were considerably higher than those in plasma. There is strong evidence of substantial accumulation of tulathromycin in neutrophils and alveolar macrophages. However, the *in vivo* concentration of tulathromycin at the infection site of the lung is not known. Peak concentrations were followed by a slow decline in systemic exposure with an apparent elimination half-life ( $t_{1/2}$ ) of 90 hours in plasma. Plasma protein binding was low, approximately 40%. The volume of distribution at steady-state ( $V_{ss}$ ) determined after intravenous administration was 11 L/kg. The bioavailability of tulathromycin after subcutaneous administration in cattle was approximately 90%.

In pigs, the pharmacokinetic profile of tulathromycin when administered as a single intramuscular dose of 2.5 mg/kg bodyweight was also characterised by rapid and extensive absorption followed by high distribution and slow elimination. The maximum concentration ( $C_{\max}$ ) in plasma was approximately 0.6 µg/mL; this was achieved approximately 30 minutes post-dosing ( $T_{\max}$ ). Tulathromycin concentrations in lung homogenate were considerably higher than those in plasma. There is strong evidence of substantial accumulation of tulathromycin in neutrophils and alveolar macrophages. However, the *in vivo* concentration of tulathromycin at the infection site of the lung is not known. Peak concentrations were followed by a slow decline in systemic exposure with an apparent elimination half-life ( $t_{1/2}$ ) of approximately 91 hours in plasma. Plasma protein binding was low, approximately 40%. The volume of distribution at steady-state ( $V_{ss}$ ) determined after intravenous administration was 13.2 L/kg. The bioavailability of tulathromycin after intramuscular administration in pigs was approximately 88%.

In sheep, the pharmacokinetic profile of tulathromycin, when administered as a single intramuscular dose of 2.5 mg/kg bodyweight, achieved a maximum plasma concentration ( $C_{\max}$ ) of 1.19 µg/mL in approximately 15 minutes ( $T_{\max}$ ) post-dosing and had an elimination half-life ( $t_{1/2}$ ) of 69.7 hours. Plasma protein binding was approximately 60-75%. Following intravenous dosing the volume of distribution at steady-state ( $V_{ss}$ ) was 31.7 L/kg. The bioavailability of tulathromycin after intramuscular administration in sheep was 100%.

## 5. PHARMACEUTICAL PARTICULARS

### 5.1 Major incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

### 5.2 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years

Shelf life after first opening the immediate packaging: 28 days

### 5.3 Special precautions for storage

Store below 30 °C.

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

Colourless type I glass vial.

Chlorobutyl rubber stopper (25, 50 and 100 mL vials).

Bromobutyl rubber stopper coated with a fluorinated polymer (250 mL vial).

Aluminium overseal.

Pack sizes:

Cardboard box containing 1 vial of 25 mL.

Cardboard box containing 1 vial of 50 mL.

Cardboard box containing 1 vial of 100 mL.

Cardboard box containing 1 vial of 250 mL.

Not all pack sizes may be marketed.

#### **5.5 Special precautions for the disposal of unused veterinary medicinal products or waste materials derived from the use of such products**

Medicines should not be disposed of via wastewater or household waste.

Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned.

### **6. NAME OF THE MARKETING AUTHORISATION HOLDER**

V.M.D.

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

EU/2/20/257/001-004

### **8. DATE OF FIRST AUTHORISATION**

Date of first authorisation: 16/09/2020

### **9. DATE OF THE LAST REVISION OF THE SUMMARY OF THE PRODUCT CHARACTERISTICS**

### **10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS**

Veterinary medicinal product subject to prescription.

Detailed information on this veterinary medicinal product is available in the [Union Product Database \(https://medicines.health.europa.eu/veterinary\)](https://medicines.health.europa.eu/veterinary).

## **ANNEX II**

### **OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION**

None.

**ANNEX III**  
**LABELLING AND PACKAGE LEAFLET**

## **A. LABELLING**

**PARTICULARS TO APPEAR ON THE OUTER PACKAGE**

**CARDBOARD BOX (25 mL / 50 mL / 100 mL / 250 mL)**

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

Tulinovet 100 mg/mL solution for injection

**2. STATEMENT OF ACTIVE SUBSTANCES**

Tulathromycin 100 mg/mL

**3. PACKAGE SIZE**

25 mL  
50 mL  
100 mL  
250 mL

**4. TARGET SPECIES**

Cattle, pigs and sheep

**5. INDICATIONS**

**6. ROUTES OF ADMINISTRATION**

Cattle: Subcutaneous use.  
Pigs and sheep: Intramuscular use.

**7. WITHDRAWAL PERIODS**

Withdrawal period:  
Meat and offal:  
Cattle: 22 days.  
Pigs: 13 days.  
Sheep: 16 days.

Not authorised for use in lactating animals producing milk for human consumption.  
Do not use in pregnant animals which are intended to produce milk for human consumption within 2 months of expected parturition.

**8. EXPIRY DATE**

Exp. {mm/yyyy}

Once broached use within 28 days.

**9. SPECIAL STORAGE PRECAUTIONS**

Do not store above 30 °C.

**10. THE WORDS “READ THE PACKAGE LEAFLET BEFORE USE”**

Read the package leaflet before use.

**11. THE WORDS “FOR ANIMAL TREATMENT ONLY”**

For animal treatment only.

**12. THE WORDS “KEEP OUT OF THE SIGHT AND REACH OF CHILDREN”**

Keep out of the sight and reach of children.

**13. NAME OF THE MARKETING AUTHORISATION HOLDER**

V.M.D.

**14. MARKETING AUTHORISATION NUMBERS**

EU/2/20/257/001 (25mL)

EU/2/20/257/002 (50 mL)

EU/2/20/257/003 (100 mL)

EU/2/20/257/004 (250 mL)

**15. BATCH NUMBER**

Lot {number}

<b>PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGE</b>
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**VIAL (Glass) for 100 mL and 250 mL package**

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

Tulinovet 100 mg/mL solution for injection

**2. STATEMENT OF ACTIVE SUBSTANCES**

Tulathromycin 100 mg/mL

**3. TARGET SPECIES**



**4. ROUTES OF ADMINISTRATION**

Cattle: SC.

Pigs and sheep: IM.

Read the package leaflet before use.

**5. WITHDRAWAL PERIODS**

Withdrawal period:

Meat and offal:

Cattle: 22 days.

Pigs: 13 days.

Sheep: 16 days.

Not authorised for use in lactating animals producing milk for human consumption.

Do not use in pregnant animals which are intended to produce milk for human consumption within 2 months of expected parturition.

**6. EXPIRY DATE**

Exp. {mm/yyyy}

Once broached use within 28 days.

**7. SPECIAL STORAGE PRECAUTIONS**

Do not store above 30 °C.

**8. NAME OF THE MARKETING AUTHORISATION HOLDER**

V.M.D.

**9. BATCH NUMBER**

Lot {number}

<b>MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS</b>
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<b>VIAL (Glass, 25 mL / 50 mL)</b>
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**1. NAME OF THE VETERINARY MEDICINAL PRODUCT**

Tulinovet



**2. QUANTITATIVE PARTICULARS OF THE ACTIVE SUBSTANCES**

Tulathromycin 100 mg/mL

**3. BATCH NUMBER**

Lot {number}

**4. EXPIRY DATE**

Exp. {mm/yyyy}

Once broached use within 28 days.

## **B. PACKAGE LEAFLET**

## PACKAGE LEAFLET

### 1. Name of the veterinary medical product

Tulinovet 100 mg/mL solution for injection for cattle, pigs and sheep

### 2. Composition

Each mL contains:

**Active substance:**

Tulathromycin 100 mg

**Excipients:**

Monothioglycerol 5 mg

Clear colourless to slightly yellow or slightly brown solution

### 3. Target species

Cattle, pigs and sheep

### 4. Indications for use

#### Cattle

Treatment and metaphylaxis of bovine respiratory disease (BRD) associated with *Mannheimia haemolytica*, *Pasteurella multocida*, *Histophilus somni* and *Mycoplasma bovis* susceptible to tulathromycin. The presence of the disease in the group must be established before the product is used.

Treatment of infectious bovine keratoconjunctivitis (IBK) associated with *Moraxella bovis* susceptible to tulathromycin.

#### Pigs

Treatment and metaphylaxis of swine respiratory disease (SRD) associated with *Actinobacillus pleuropneumoniae*, *Pasteurella multocida*, *Mycoplasma hyopneumoniae*, *Haemophilus parasuis* and *Bordetella bronchiseptica* susceptible to tulathromycin. The presence of the disease in the group must be established before the product is used. The veterinary medical product should only be used if pigs are expected to develop the disease within 2–3 days.

#### Sheep

Treatment of the early stages of infectious pododermatitis (foot rot) associated with virulent *Dichelobacter nodosus* requiring systemic treatment.

### 5. Contraindications

Do not use in cases of hypersensitivity to macrolide antibiotics or to any of the excipients.

## **6. Special warnings**

### Special warnings:

Cross resistance occurs with other macrolides. Do not administer simultaneously with antimicrobials with a similar mode of action such as other macrolides or lincosamides.

Special warnings for sheep: The efficacy of antimicrobial treatment of foot rot might be reduced by other factors, such as wet environmental conditions, as well as inappropriate farm management. Treatment of foot rot should therefore be undertaken along with other flock management tools, for example providing dry environment.

Antibiotic treatment of benign foot rot is not considered appropriate. Tulathromycin showed limited efficacy in sheep with severe clinical signs or chronic foot rot, and should therefore only be given at an early stage of foot rot.

### Special precautions for the safe use in the target species:

Use of the veterinary medicinal product should be based on susceptibility testing of the bacteria isolated from the animal.

If this is not possible, therapy should be based on local (regional, farm level) epidemiological information about susceptibility of the target bacteria. Official, national and regional antimicrobial policies should be taken into account when the veterinary medicinal product is used.

Use of the product deviating from the instructions given in the SPC may increase the prevalence of bacteria resistant to tulathromycin and may decrease the effectiveness of treatment with other macrolides, due to the potential for cross resistance.

If a hypersensitivity reaction occurs appropriate treatment should be administered without delay.

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

Tulathromycin is irritating to eyes. In case of accidental eye exposure, flush the eyes immediately with clean water.

Tulathromycin may cause sensitisation by skin contact resulting in e.g. reddening of the skin (erythema) and/or dermatitis. In case of accidental spillage onto skin, wash the skin immediately with soap and water.

Wash hands after use.

In case of accidental self-injection, seek medical advice immediately and show the package leaflet or the label to the physician.

If there is suspicion of a hypersensitivity reaction following accidental exposure (recognised by e.g. itching, difficulty in breathing, hives, swelling on the face, nausea, vomiting) appropriate treatment should be administered. Seek medical advice immediately and show the package leaflet or the label to the physician.

### Pregnancy and lactation:

Laboratory studies in rats and rabbits have not produced any evidence of teratogenic, foetotoxic or maternotoxic effects. The safety of the veterinary medicinal product has not been established during

pregnancy and lactation. Use only according to the benefit/risk assessment by the responsible veterinarian.

Interaction with other medicinal products and other forms of interaction:

None known.

Overdose:

In cattle at dosages of three, five or ten times the recommended dose, transient signs attributed to injection site discomfort were observed and included restlessness, head-shaking, pawing the ground, and brief decrease in feed intake. Mild myocardial degeneration has been observed in cattle receiving five to six times the recommended dose.

In young pigs weighing approximately 10 kg given three or five times the therapeutic dose transient signs attributed to injection site discomfort were observed and included excessive vocalisation and restlessness. Lameness was also observed when the hind leg was used as the injection site.

In lambs (approx. 6 weeks old), at dosages of three or five times the recommended dose, transient signs attributed to injection site discomfort were observed and included walking backwards, head shaking, rubbing the injection site, lying down and getting up, bleating.

Major incompatibilities:

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

## **7. Adverse events**

### **Cattle**

Very common (>1 animal / 10 animals treated):	Transient pain reactions and local swellings at the injection site* Congestion, oedema, fibrosis and haemorrhage at the injection site**
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\*may persist for up to 30 days after injection

\*\*may appear for approximately 30 days after injection

### **Pigs**

Very common (>1 animal / 10 animals treated):	Congestion, oedema, fibrosis and haemorrhage at the injection site**
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\*\*may appear for approximately 30 days after injection

### **Sheep**

Very common (>1 animal / 10 animals treated):	Signs of discomfort (head shaking, rubbing injection site, backing away)***
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\*\*\*these signs resolve within a few minutes

Reporting adverse events is important. It allows continuous safety monitoring of a product. If you notice any side effects, even those not already listed in this package leaflet, or you think that the medicine has not worked, please contact, in the first instance, your veterinarian. You can also report any adverse events to the marketing authorisation holder or local representative of the marketing authorisation holder

using the contact details at the end of this leaflet, or via your national reporting system: {national system details}

## **8. Dosage for each species, route(s) and method of administration**

### Cattle

Subcutaneous use.

A single subcutaneous injection of 2.5 mg tulathromycin/kg bodyweight (equivalent to 1 mL/40 kg bodyweight). For treatment of cattle over 300 kg bodyweight, divide the dose so that no more than 7.5 mL are injected at one site.

### Pigs

Intramuscular use.

A single intramuscular injection of 2.5 mg tulathromycin/kg bodyweight (equivalent to 1 mL/40 kg bodyweight) in the neck. For treatment of pigs over 80 kg bodyweight, divide the dose so that no more than 2 mL are injected at one site.

### Sheep

Intramuscular use.

A single intramuscular injection 2.5 mg tulathromycin/kg bodyweight (equivalent to 1 mL/40 kg bodyweight) in the neck.

## **9. Advice on correct administration**

For any respiratory disease, it is recommended to treat animals in the early stages of the disease and to evaluate the response to treatment within 48 hours after injection. If clinical signs of respiratory disease persist or increase, or if relapse occurs, treatment should be changed, using another antibiotic, and continued until clinical signs have resolved.

To ensure correct dosage bodyweight should be determined as accurately as possible to avoid underdosing.

For multiple vial entry, an aspirating needle or multi-dose syringe is recommended to avoid excessive broaching of the stopper. The stopper of the 25, 50 and 100 mL vials may be punctured up to 20 times. The stopper of the 250 mL vials may be punctured up to 25 times.

## **10. Withdrawal periods**

Cattle (meat and offal): 22 days.

Pigs (meat and offal): 13 days.

Sheep (meat and offal): 16 days.

Not authorised for use in lactating animals producing milk for human consumption. Do not use in pregnant animals which are intended to produce milk for human consumption within 2 months of expected parturition.

## **11. Special storage precautions**

Keep out of the sight and reach of children.

Do not store above 30 °C.

Do not use this veterinary medicinal product after the expiry date which is stated on the label after Exp.

Shelf life after first opening the immediate packaging: 28 days.

## **12. Special precautions for disposal**

Medicines should not be disposed of via wastewater or household waste.

Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any applicable national collection systems. These measures should help to protect the environment.

Ask your veterinary surgeon or pharmacist how to dispose of medicines no longer required.

## **13. Classification of veterinary medicinal products**

Veterinary medicinal product subject to prescription.

## **14. Marketing authorisation numbers and pack sizes**

EU/2/20/257/001-004

Pack sizes:

Cardboard box containing 1 vial of 25 mL

Cardboard box containing 1 vial of 50 mL

Cardboard box containing 1 vial of 100 mL

Cardboard box containing 1 vial of 250 mL

Not all pack sizes may be marketed.

## **15. Date on which the package leaflet was last revised**

11/2025

Detailed information on this veterinary medicinal product is available in the Union Product Database (<https://medicines.health.europa.eu/veterinary>).

## **16. Contact details**

Marketing authorisation holder:

V.M.D.

Hoge Mauw 900

2370 Arendonk

Belgium

Manufacturer responsible for batch release:

V.M.D.  
Hoge Mauw 900  
2370 Arendonk  
Belgium

Laboratoires BIOVE  
3, Rue de Lorraine  
62510 Arques  
France

For any information about this veterinary medicinal product, please contact the local representative of the marketing authorisation holder.

Local representatives and contact details to report suspected adverse reactions:

**België/Belgique/Belgien**

V.M.D.  
Hoge Mauw 900  
BE-2370 Arendonk  
Tél/Tel: +32 (0) 14 67 20 51  
[pv@inovet.eu](mailto:pv@inovet.eu)

**Република България**

Вет-трейд ООД  
бул. България 1  
BG-6000 Стара Загора  
Тел: + 359 42 636 858

**Česká republika**

Orion Pharma s.r.o.  
Na Strži 2102/61a,  
CZ-Praha, 140 00  
Tel: +420 227 027 263  
[orion@orionpharma.cz](mailto:orion@orionpharma.cz)

**Danmark**

Orion Pharma A/S,  
Ørestads Boulevard 73,  
DK-2300 København S  
Tlf: +45 86 14 00 00

**Deutschland**

V.M.D.  
Hoge Mauw 900  
2370 Arendonk  
Belgien  
Tel: +32 (0) 14 67 20 51  
[pv@inovet.eu](mailto:pv@inovet.eu)

**Lietuva**

UAB „Orion Pharma“  
Ukmergės g. 126  
LT-08100 Vilnius,  
Tel: +370 5 2769 499

**Luxembourg/Luxemburg**

V.M.D.  
Hoge Mauw 900  
2370 Arendonk  
Belgique / Belgien  
Tél/Tel: +32 (0) 14 67 20 51  
[pv@inovet.eu](mailto:pv@inovet.eu)

**Magyarország**

Orion Pharma Kft,  
Pap Károly u. 4-6  
HU-1139 Budapest,  
Tel.: +36 1 2370603

**Malta**

V.M.D.  
Hoge Mauw 900  
2370 Arendonk  
Belgium  
Tel: +32 (0) 14 67 20 51

**Nederland**

V.M.D.  
Hoge Mauw 900  
2370 Arendonk  
België  
Tel: +32 (0) 14 67 20 51  
[pv@inovet.eu](mailto:pv@inovet.eu)

**Eesti**

UAB „Orion Pharma“  
Ukmergės g. 126  
08100 Vilnius, Leedu  
Tel: +370 5 2769 499

**Ελλάδα**

Pharmaqua SA  
D. Solomou 28  
EL- 14451 Metamorfosi  
Τηλ: + 30 21 028 11 282

**España**

Leonvet SL  
P.I. Onzonilla 2ª Fase; C/A Parcela M4  
ES- 24391 Ribaseca  
Tel: +34 987280224

**France**

Laboratoires Biové  
Rue de Lorraine 3  
FR-62510 Arques  
Tél: +33 32 1982121

**Hrvatska**

Iris Farmacija d.o.o.  
Bednjanska 12,  
HR-10000 Zagreb  
Tel:+385 (0)91 2575 785

**Ireland**

Royal Veterinary Supplies  
Ardsallagh Navan Co. Meath  
IE-C15XOF9  
Tel: +353 87 9609919

**Ísland**

V.M.D.  
Hoge Mauw 900  
2370 Arendonk  
Belgiu  
Tel: +32 (0) 14 67 20 51

**Italia**

V.M.D.  
Hoge Mauw 900  
2370 Arendonk  
Belgio  
Tel: +32 (0) 14 67 20 51  
[pv@inovet.eu](mailto:pv@inovet.eu)

**Norge**

Orion Pharma AS Animal Health  
Postboks 4366 Nydalen,  
NO-0402 Oslo  
Tlf: +47 40 00 41 90

**Österreich**

Animed Service AG  
Liebochstraße 9  
AT- 8143 Dobl  
Tel: +43 31 5566710

**Polska**

Orion Pharma Poland Sp. z o.o.  
ul. Fabryczna 5A,  
PL-00-446 Warszawa  
Tel.: +48 22 833 31 77

**Portugal**

Hifarmax Lda  
Rua do Foio, 136 Pavilhao B  
PT- 2785-615 São Domingos de Rana  
Tel: + 351 21 457 1110

**România**

Orion Pharma România srl  
B-dul T. Vladimirescu nr 22,  
București, 050883-RO  
Tel: +40 31845 1646

**Slovenija**

Iris d.o.o.  
Cesta v Gorice 8  
SI-1000 Ljubljana  
Tel: +386 (0)1 2006650

**Slovenská republika**

Orion Pharma s.r.o.  
Na strži 2102/61a,  
Praha, 140 00  
Česká republika  
Tel: +420 227 027 263  
[orion@orionpharma.sk](mailto:orion@orionpharma.sk)

**Suomi/Finland**

Orion Pharma Eläinlääkkeet  
PL 425,  
FI-20101 Turku  
Puh: +358 10 4261

**Κύπρος**

Spyros Stavrinos Chemicals Ltd  
Agiou Spyridonos 4  
Pallouriotissa  
CY-1056 Nicosia  
Τηλ: +357 22 447464

**Latvija**

UAB „Orion Pharma“  
Ukmergės g. 126  
08100 Vilnius, Lietuva  
Tel: +370 5 2769 499

**Sverige**

Orion Pharma AB, Animal Health,  
Golfvägen 2,  
SE-182 31 Danderyd  
Tel: +46 8 623 64 40

**United Kingdom (Northern Ireland)**

Royal Veterinary Supplies  
Ardsallagh Navan Co. Meath  
C15XOF9  
Ireland  
Tel: +353 87 9609919