**ANNEX I**

**SUMMARY OF PRODUCT CHARACTERISTICS**

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Naxcel 100 mg/ml suspension for injection for pigs

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

One ml contains:

**Active substance:**
Ceftiofur (as crystalline free acid) 100 mg.

**Excipients:**

| **Qualitative composition of excipients and other constituents** |
|---|
| Triglycerides, medium chain |
| Cottonseed oil |

Opaque white to light brown suspension.

## 3. CLINICAL INFORMATION

### 3.1 Target species

Pigs.

### 3.2 Indications for use for each target species

Treatment of bacterial respiratory disease associated with *Actinobacillus pleuropneumoniae*, *Pasteurella multocida*, *Haemophilus parasuis* and *Streptococcus suis*.
Treatment of septicaemia, polyarthritis or polyserositis associated with *Streptococcus suis* infection.

### 3.3 Contraindications

Do not use in cases of hypersensitivity to the active substance, to other beta-lactam antibiotics or to any of the excipients.

### 3.4 Special warnings

None.

### 3.5 Special precautions for use

Special precautions for safe use in the target species:

For systemically-administered broad-spectrum cephalosporins (3$^{rd}$ and 4$^{th}$ generation, such as ceftiofur), it should be reflected that these are to be reserved for the treatment of clinical conditions which have responded poorly, or are expected to respond poorly, to less critical antimicrobials. Increased use, including use of the product deviating from the instructions given in the Summary of Product Characteristics (SPC), may increase the prevalence of bacteria resistant to ceftiofur. Official, national and regional antimicrobial policies should be taken into account when the product is used.

Whenever possible, the veterinary medicinal product should only be used based on susceptibility

testing. When considering the treatment strategy, it is appropriate to consider improvement of the herd management practice and use supporting treatment with suitable local products (e.g. disinfectants).

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

Penicillins and cephalosporins such as ceftiofur may cause hypersensitivity in people and in animals following injection, inhalation, ingestion or skin contact. Hypersensitivity to penicillins may lead to cross reactions to cephalosporins and vice versa. Allergic reactions to these substances may occasionally be serious.
People with known hypersensitivity to penicillins and cephalosporins should avoid contact with the veterinary medicinal product.

Avoid contact with skin or eyes. In the event of contact, wash with clean water.

If you develop symptoms following exposure such as a skin rash or persistent eye irritation, you should seek medical advice and show the package leaflet or the label to the physician. Swelling of the face, lips or eyes or difficulty with breathing are more serious symptoms and require urgent medical attention.

Special precautions for the protection of the environment:

Not applicable.

### 3.6 Adverse events

Pigs:

| | |
|---|---|
| Very common<br>(>1 animal / 10 animals treated): | Injection site swelling[1], Injection site skin discolouration[2,3], Injection site blister[2] |
| Very rare<br>(<1 animal / 10,000 animals treated, including isolated reports): | Anaphylactic-type reaction |

[1]Transient; following intramuscular injection.
[2]Have been observed for up to 42 days after injection and resolution has been observed at 56 days post injection.
[3]Less than 6 $cm^2$.

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 mice have not produced any evidence of teratogenic, foetotoxic or maternotoxic effects. Laboratory studies in rats revealed no teratogenic effects but maternotoxic (soft faeces) and foetotoxic (reduced foetal weight) effects were observed. No effects on the reproductive performance were observed. No studies have been conducted in pregnant or lactating sows, or in breeding pigs. 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

Intramuscular use.

Dose of 5 mg ceftiofur/kg body weight (equivalent to 1 ml of the veterinary medicinal product per 20 kg body weight) administered once in the neck by intramuscular injection.
Shake bottle vigorously for 30 seconds, or until all visual settlement has been resuspended.
To ensure a correct dosage, body weight should be determined as accurately as possible.
It is recommended to limit injection volumes to a maximum of 4 ml.

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

Owing to the low toxicity of ceftiofur in pigs, overdoses do not typically lead to any clinical signs other than transient local swellings as described in section 3.6 (Adverse events).

### 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

Meat and offal: 71 days.

## 4. PHARMACOLOGICAL INFORMATION

### 4.1 ATCvet code: QJ01DD90

### 4.2 Pharmacodynamics

Ceftiofur is a third-generation cephalosporin antibiotic, which is active against many Gram-positive and Gram-negative pathogens. Ceftiofur inhibits the bacterial cell wall synthesis, thereby exerting bactericidal properties.

Ceftiofur is particularly active against the following target pathogens causing respiratory and other diseases in pigs: *Actinobacillus pleuropneumoniae*, *Pasteurella multocida*, *Haemophilus parasuis* and *Streptococcus suis*. *Bordetella bronchiseptica* is inherently insensitive to ceftiofur *in vitro*.

Desfuroylceftiofur is the principal active metabolite. It has an antimicrobial activity similar to that of ceftiofur against the target pathogens.

At the recommended therapeutic dose, concentrations in plasma were higher than the $MIC_{90}$ values (<0.2 µg/ml) for the target bacteria isolated in clinical studies, for at least 158 hours.

### 4.3 Pharmacokinetics

After administration, ceftiofur is quickly metabolised to desfuroylceftiofur, the principal active metabolite.

Protein binding of ceftiofur and its major metabolite is approximately 70%. One hour after a single administration, plasma concentrations are above 1 µg/ml. Maximum concentrations in plasma (4.2 ± 0.9 µg/ml) are reached at approximately 22 hours after administration. Plasma concentrations above 0.2 µg/ml of ceftiofur and its metabolite are maintained for an appropriate period of time. Approximately 60% and 15% of the dose are excreted in the urine and faeces, respectively, within 10 days after administration.

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

### 5.3 Special precautions for storage

Do not store above 25 °C.

### 5.4 Nature and composition of immediate packaging

Cardboard box with one type I glass vial of 50 ml or 100 ml with a chlorobutyl-isoprene rubber stopper and an aluminium cap.

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

Zoetis Belgium

## 7. MARKETING AUTHORISATION NUMBER(S)

EU/2/05/053/001-002

## 8. DATE OF FIRST AUTHORISATION

Date of first authorisation: 19/05/2005.

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

{DD/MM/YYYY}

## 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).

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Naxcel 200 mg/ml suspension for injection for cattle

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

One ml contains:

**Active substance:**
Ceftiofur (as crystalline free acid) 200 mg.

**Excipients:**

| **Qualitative composition of excipients and other constituents** |
|---|
| Triglycerides, medium chain |
| Cottonseed oil |

Opaque white to light brown suspension.

## 3. CLINICAL INFORMATION

### 3.1 Target species

Cattle.

### 3.2 Indications for use for each target species

Treatment of acute interdigital necrobacillosis in cattle also known as panaritium or foot rot.
Treatment of acute post-partum (puerperal) metritis in cattle, in cases where treatment with another antimicrobial has failed.

### 3.3 Contraindications

Do not use in cases of hypersensitivity to the active substance, to other beta-lactam antibiotics or to any of the excipients.

### 3.4 Special warnings

None.

### 3.5 Special precautions for use

Special precautions for safe use in the target species:

For systemically-administered broad-spectrum cephalosporins (3$^{rd}$ and 4$^{th}$ generation, such as ceftiofur), it should be reflected that these are to be reserved for the treatment of clinical conditions which have responded poorly, or are expected to respond poorly, to less critical antimicrobials. Increased use, including use of the product deviating from the instructions given in the Summary of Product Characteristics (SPC), may increase the prevalence of bacteria resistant to ceftiofur. Official, national and regional antimicrobial policies should be taken into account when the product is used.

Whenever possible, the veterinary medicinal product should only be used based on susceptibility testing. When considering the treatment strategy, it is appropriate to consider improvement of the herd management practice and use supporting treatment with suitable local products (e.g. disinfectants).
Do not use as prophylaxis in cases of retained placenta.

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

Penicillins and cephalosporins such as ceftiofur may cause hypersensitivity in people and in animals following injection, inhalation, ingestion or skin contact. Hypersensitivity to penicillins may lead to cross reactions to cephalosporins and vice versa. Allergic reactions to these substances may occasionally be serious.
People with known hypersensitivity to penicillins and cephalosporins should avoid contact with the veterinary medicinal product.

Avoid contact with skin or eyes. In the event of contact, wash with clean water.
If you develop symptoms following exposure such as a skin rash or persistent eye irritation, you should seek medical advice and show the package leaflet or the label to the physician. Swelling of the face, lips or eyes or difficulty with breathing are more serious symptoms and require urgent medical attention.

Special precautions for the protection of the environment:

Not applicable.

### 3.6 Adverse events

Cattle:

| | |
|---|---|
| Very common (>1 animal / 10 animals treated): | Injection site swelling[1], Injection site pain[2] |
| Very rare (<1 animal / 10,000 animals treated, including isolated reports): | Anaphylaxis, Sudden death[3] |

[1]Visible two days after injection in about two thirds of treated animals and resolving within a maximum of 23 days.
[2]Mild to moderate in the initial days following injection.
[3]Following accidental intra-vascular administration or anaphylaxis.

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 mice have not produced any evidence of teratogenic, foetotoxic or maternotoxic effects. Laboratory studies in rats have shown no evidence of teratogenic effects but maternotoxic (soft faeces) and foetotoxic (reduced foetal weight) effects were observed. No effects on the reproductive performance were observed. No specific studies have been conducted in pregnant cows and breeding cattle. Use only according to the benefit-risk assessment by the responsible veterinarian.
This veterinary medicinal product can be used during lactation.

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

None known.

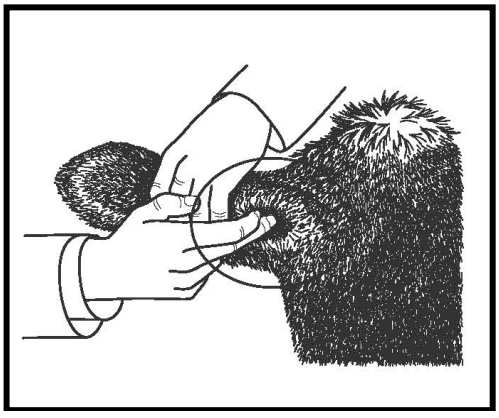
### 3.9 Administration routes and dosage

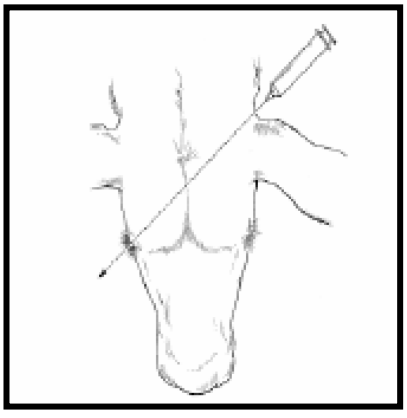
Single subcutaneous injection of 6.6 mg ceftiofur/kg body weight (equivalent to 1 ml of the veterinary medicinal product per 30 kg body weight) administered at the base of the ear.
To ensure a correct dosage, body weight should be determined as accurately as possible.
It is recommended to limit injection volumes to a maximum of 30 ml per injection site.

Shake the bottle vigorously for 30 seconds, or until all visual settlement has been resuspended.

Base of the ear administration:
• Administer in the posterior part of the ear base (see Figure 1).
• Hold the syringe and insert the needle behind the animal's ear so the needle and syringe point in the direction of an imaginary line that would pass through the head toward the animal's opposite eye (see Figure 2).
• Take appropriate precautions to avoid intra-arterial or intravenous injection, such as restraining appropriately the animal (chute or head restraint for example) and using appropriate needles [1 inch (2.54 cm) long, 16 gauge].

| Figure 1. Injection location for the subcutaneous administration of the veterinary medicinal product at the posterior aspect of the ear where it attaches to the head (base of ear). | | Figure 2. Subcutaneous administration of the veterinary medicinal product at the posterior aspect of the ear where it attaches to the head (base of ear). Diagram of the head showing the direction for the base of the ear injections administered toward the animal's opposite eye. |
|---|---|---|





If clinical signs have not improved 48 hours after treatment, the diagnosis and treatment of the condition should be re-evaluated.

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

In cattle, although the veterinary medicinal product has not been specifically tested for overdoses, no signs of systemic toxicity related to ceftiofur have been observed following 55 mg/kg parenteral daily overdoses of ceftiofur sodium for five days.

### 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

Meat and offal: 9 days.
Milk: Zero days.
It is essential that the veterinary medicinal product is only administered subcutaneously at the base of ear location in non-edible tissue, as described in section 3.9, in order to comply with the meat withdrawal period.

## 4. PHARMACOLOGICAL INFORMATION

### 4.1 ATCvet code: QJ01DD90

### 4.2 Pharmacodynamics

Ceftiofur is a third-generation cephalosporin antibiotic, which is active against many Gram-positive and Gram-negative pathogens. Ceftiofur inhibits the bacterial cell wall synthesis, thereby exerting bactericidal properties.

In cattle, ceftiofur is active against the following micro-organisms which are involved in acute post-partum (puerperal) metritis: *Escherichia coli*, *Arcanobacterium pyogenes* and *Fusobacterium necrophorum*; and interdigital necrobacillosis: *Bacteroides* spp., *Fusobacterium necrophorum*, *Porphyromonas* spp. and *Prevotella* spp.

Desfuroylceftiofur is the principal active metabolite. It has an antimicrobial activity similar to that of ceftiofur against the target pathogens.

### 4.3 Pharmacokinetics

Ceftiofur is well absorbed in cattle following base of the ear injection. After administration, ceftiofur is quickly metabolised to desfuroylceftiofur, the principal active metabolite. Protein binding of ceftiofur and its major metabolite is high, approximately 70% – 90%. One hour after a single administration, plasma concentrations are greater than 1 µg/ml. Maximum concentrations in plasma (about 5 µg/ml) occurred from 12 hours following administration. Total plasma concentrations above 0.2 µg/ml and 1 µg/ml of ceftiofur and its active metabolites are maintained for at least 7 and 4 days, respectively.

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

### 5.3 Special precautions for storage

Do not store above 25 °C.

### 5.4 Nature and composition of immediate packaging

Cardboard box with one type I glass vial of 100 ml with a chlorobutyl-isoprene rubber stopper and an aluminium cap.

### 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

Zoetis Belgium

## 7. MARKETING AUTHORISATION NUMBER(S)

EU/2/05/053/003

## 8. DATE OF FIRST AUTHORISATION

Date of first authorisation: 19/05/2005.

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

{DD/MM/YYYY}

## 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).

## 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**

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Naxcel 100 mg/ml suspension for injection.

## 2. STATEMENT OF ACTIVE SUBSTANCES

Ceftiofur 100 mg/ml.

## 3. PACKAGE SIZE

100 ml
50 ml

## 4. TARGET SPECIES

Pigs.

## 5. INDICATIONS

## 6. ROUTES OF ADMINISTRATION

Intramuscular use.

## 7. WITHDRAWAL PERIODS

Withdrawal period:
Meat and offal: 71 days.

## 8. EXPIRY DATE

Exp. {mm/yyyy}
Once broached use within 28 days.

## 9. SPECIAL STORAGE PRECAUTIONS

Do not store above 25 °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

Zoetis Belgium

## 14. MARKETING AUTHORISATION NUMBERS

EU/2/05/053/001 (100 ml)
EU/2/05/053/002 (50 ml)

## 15. BATCH NUMBER

Lot {number}

**PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGE**

**VIAL OF 100 ML**

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Naxcel 100 mg/ml suspension for injection.

## 2. STATEMENT OF ACTIVE SUBSTANCES

Ceftiofur 100 mg/ml.

100 ml

## 3. TARGET SPECIES

Pigs.

## 4. ROUTES OF ADMINISTRATION

IM
Read the package leaflet before use.

## 5. WITHDRAWAL PERIODS

Withdrawal period:
Meat and offal: 71 days.

## 6. EXPIRY DATE

Exp. {mm/yyyy}
Once broached use by…

## 7. SPECIAL STORAGE PRECAUTIONS

Do not store above 25 °C.

## 8. NAME OF THE MARKETING AUTHORISATION HOLDER

Zoetis Belgium

## 9. BATCH NUMBER

Lot {number}

**MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS**

**VIAL OF 50 ML**

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Naxcel

## 2. QUANTITATIVE PARTICULARS OF THE ACTIVE SUBSTANCES

Ceftiofur 100 mg/ml.

50 ml

## 3. BATCH NUMBER

Lot {number}

## 4. EXPIRY DATE

Exp. {mm/yyyy}
Once broached use by...

**PARTICULARS TO APPEAR ON THE OUTER PACKAGE**

**CARDBOARD BOX**

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Naxcel 200 mg/ml suspension for injection.

## 2. STATEMENT OF ACTIVE SUBSTANCES

Ceftiofur 200 mg/ml.

## 3. PACKAGE SIZE

100 ml

## 4. TARGET SPECIES

Cattle.

## 5. INDICATIONS

## 6. ROUTES OF ADMINISTRATION

Subcutaneous use.

## 7. WITHDRAWAL PERIODS

Withdrawal period:
Meat and offal: 9 days.
Milk: Zero days.

## 8. EXPIRY DATE

Exp. {mm/yyyy}
Once broached use within 28 days.

## 9. SPECIAL STORAGE PRECAUTIONS

Do not store above 25 °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

Zoetis Belgium

## 14. MARKETING AUTHORISATION NUMBERS

EU/2/05/053/003

## 15. BATCH NUMBER

Lot {number}

**PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGE**

**VIAL OF 100 ML**

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Naxcel 200 mg/ml suspension for injection.

## 2. STATEMENT OF ACTIVE SUBSTANCES

Ceftiofur 200 mg/ml.

100 ml

## 3. TARGET SPECIES

Cattle.

## 4. ROUTES OF ADMINISTRATION

SC
Read the package leaflet before use.

## 5. WITHDRAWAL PERIODS

Withdrawal period:
Meat and offal: 9 days.
Milk: Zero days.

## 6. EXPIRY DATE

Exp. {mm/yyyy}
Once broached use by…

## 7. SPECIAL STORAGE PRECAUTIONS

Do not store above 25 °C.

## 8. NAME OF THE MARKETING AUTHORISATION HOLDER

Zoetis Belgium

## 9. BATCH NUMBER

Lot {number}

# B. PACKAGE LEAFLET

# PACKAGE LEAFLET

## 1. Name of the veterinary medicinal product

Naxcel 100 mg/ml suspension for injection for pigs

## 2. Composition

One ml contains:

**Active substance:**
Ceftiofur (as crystalline free acid) 100 mg.

Opaque white to light brown suspension.

## 3. Target species

Pigs.

## 4. Indications for use

Treatment of bacterial respiratory disease associated with *Actinobacillus pleuropneumoniae*, *Pasteurella multocida*, *Haemophilus parasuis* and *Streptococcus suis*.
Treatment of septicaemia, polyarthritis or polyserositis associated with *Streptococcus suis* infection.

## 5. Contraindications

Do not use in cases of hypersensitivity to the active substance, to other beta-lactam antibiotics or to any of the excipients.

## 6. Special warnings

Special precautions for safe use in the target species:
Whenever possible, the veterinary medicinal product should only be used based on susceptibility testing.

For systemically-administered broad-spectrum cephalosporins (3rd and 4th generation, such as ceftiofur), it should be reflected that these are to be reserved for the treatment of clinical conditions which have responded poorly, or are expected to respond poorly, to less critical antimicrobials. Increased use, including use of the product deviating from the instructions given above, may increase the prevalence of bacteria resistant to ceftiofur. Official, national and regional antimicrobial policies should be taken into account when the product is used.
When considering the treatment strategy, it is appropriate to consider improvement of the herd management practice and use supporting treatment with suitable local products (e.g. disinfectants).

Special precautions to be taken by the person administering the veterinary medicinal product to animals:
Penicillins and cephalosporins such as ceftiofur may cause hypersensitivity in people and in animals following injection, inhalation, ingestion or skin contact. Hypersensitivity to penicillins may lead to cross reactions to cephalosporins and vice versa. Allergic reactions to these substances may occasionally be serious.

People with known hypersensitivity to penicillins and cephalosporins should avoid contact with the veterinary medicinal product.
Avoid contact with skin or eyes. In the event of contact, wash with clean water.
If you develop symptoms following exposure such as a skin rash or persistent eye irritation, you should seek medical advice and show the package leaflet or the label to the physician. Swelling of the face, lips or eyes or difficulty with breathing are more serious symptoms and require urgent medical attention.

Pregnancy and fertility:
No specific studies have been conducted in pregnant or lactating sows, or in breeding pigs. Use only according to the benefit-risk assessment by the responsible veterinarian.

Overdose:
Owing to the low toxicity of ceftiofur in pigs overdoses do not typically lead to any clinical signs, other than transient local swellings as described in section 7 (Adverse events).

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

## 7. Adverse events

Pigs:

| |
|---|
| Very common (>1 animal / 10 animals treated): |
| Injection site swelling[1], Injection site skin discolouration[2,3], Injection site blister[2] |
| Very rare (<1 animal / 10,000 animals treated, including isolated reports): |
| Anaphylactic-type reaction |

[1]Transient; following intramuscular injection.
[2]Have been observed for up to 42 days after injection and resolution has been observed at 56 days post injection.
[3]Less than 6 $cm^2$.

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 authorization holder or the 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, routes and method of administration

Intramuscular use.

Dose of 5 mg ceftiofur/kg body weight (equivalent to 1 ml of the veterinary medicinal product per 20 kg body weight) administered once in the neck by intramuscular injection.

## 9. Advice on correct administration

Shake bottle vigorously for 30 seconds, or until all visual settlement has been resuspended.
To ensure a correct dosage, body weight should be determined as accurately as possible.
It is recommended to limit injection volumes to a maximum of 4 ml.

## 10. Withdrawal periods

Meat and offal: 71 days.

## 11. Special storage precautions

Keep out of the sight and reach of children.

Do not store above 25 °C.
Do not use this veterinary medicinal product after the expiry date which is stated on the carton and vial label after Exp. The expiry date refers to the last day of that month.
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/2/05/053/001-002

Cardboard box containing 1 glass vial of 50 ml or 100 ml.

Not all pack sizes may be marketed.

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

{DD/MM/YYYY}

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 and manufacturer responsible for batch release:
Zoetis Belgium
Rue Laid Burniat 1
1348 Louvain-La-Neuve
Belgium

Local representatives and contact details to report suspected adverse reactions:

**België/Belgique/Belgien**
Tél/Tel: +32 (0) 800 99 189
pharmvig-belux@zoetis.com

**Република България**
Тел: +359 888 51 30 30
zoetisromania@zoetis.com

**Česká republika**
Tel: +420 257 101 111
infovet.cz@zoetis.com

**Danmark**
Tlf: +45 70 20 73 05
adr.scandinavia@zoetis.com

**Deutschland**
Tel: +49 30 2020 0049
tierarzneimittelsicherheit@zoetis.com

**Eesti**
Tel: +370 610 05088
zoetis.estonia@zoetis.com

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# PACKAGE LEAFLET

## 1. Name of the veterinary medicinal product

Naxcel 200 mg/ml suspension for injection for cattle

## 2. Composition

One ml contains:

**Active substance:**
Ceftiofur (as crystalline free acid) 200 mg.

Opaque white to light brown suspension.

## 3. Target species

Cattle.

## 4. Indications for use

Treatment of acute interdigital necrobacillosis in cattle also known as panaritium or foot rot.
Treatment of acute post-partum (puerperal) metritis in cattle, in cases where treatment with another antimicrobial has failed.

## 5. Contraindications

Do not use in cases of hypersensitivity to the active substance, to other beta-lactam antibiotics or to any of the excipients.

## 6. Special warnings

Special precautions for safe use in the target species:
Whenever possible, the veterinary medicinal product should only be used based on susceptibility testing.

For systemically-administered broad-spectrum cephalosporins (3$^{rd}$ and 4$^{th}$ generation, such as ceftiofur), it should be reflected that these are to be reserved for the treatment of clinical conditions which have responded poorly, or are expected to respond poorly, to less critical antimicrobials. Increased use, including use of the product deviating from the instructions given above, may increase the prevalence of bacteria resistant to ceftiofur. Official, national and regional antimicrobial policies should be taken into account when the product is used.
When considering the treatment strategy, it is appropriate to consider improvement of the herd management practice and use supporting treatment with suitable local products (e.g. disinfectants).
Do not use as prophylaxis in cases of retained placenta.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:
Penicillins and cephalosporins such as ceftiofur may cause hypersensitivity in people and in animals following injection, inhalation, ingestion or skin contact. Hypersensitivity to penicillins may lead to cross reactions to cephalosporins and vice versa. Allergic reactions to these substances may occasionally be serious.

People with known hypersensitivity to penicillins and cephalosporins should avoid contact with the veterinary medicinal product.
Avoid contact with skin or eyes. In the event of contact, wash with clean water.
If you develop symptoms following exposure such as a skin rash or persistent eye irritation, you should seek medical advice and show the package leaflet or the label to the physician. Swelling of the face, lips or eyes or difficulty with breathing are more serious symptoms and require urgent medical attention.

Pregnancy and fertility:
No specific studies have been conducted in pregnant cows or in breeding cattle. Use only according to the benefit-risk assessment by the responsible veterinarian.

Overdose:
In cattle, although the veterinary medicinal product has not been specifically tested for overdoses, no signs of systemic toxicity related to ceftiofur have been observed following 55 mg/kg parenteral daily overdoses of ceftiofur sodium for five days.

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): |
| Injection site swelling[1], Injection site pain[2] |
| Very rare (<1 animal / 10,000 animals treated, including isolated reports): |
| Anaphylaxis, Sudden death[3] |

[1]Visible two days after injection in about two thirds of treated animals and resolving within a maximum of 23 days.
[2]Mild to moderate in the initial days following injection.
[3]Following accidental intra-vascular administration or anaphylaxis.

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 authorization holder or the 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, routes and method of administration

Single subcutaneous injection of 6.6 mg ceftiofur/kg body weight (equivalent to 1 ml of the veterinary medicinal product per 30 kg body weight) administered at the base of the ear.

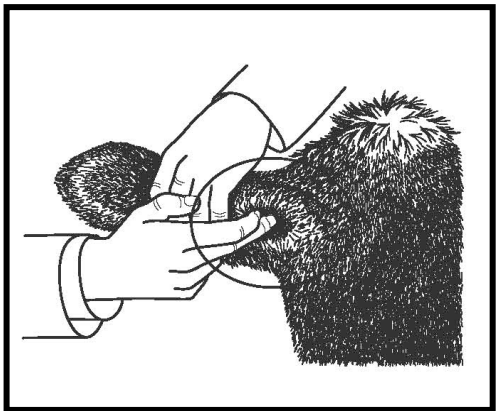
## 9. Advice on correct administration

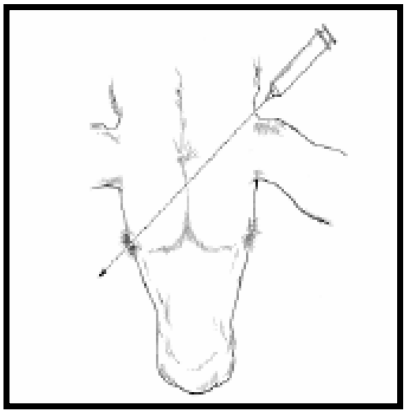
To ensure a correct dosage, body weight should be determined as accurately as possible.
It is recommended to limit injection volumes to a maximum of 30 ml per injection site.
Shake the bottle vigorously for 30 seconds, or until all visual settlement has been resuspended.

Base of the ear administration:

- Administer in the posterior part of the ear base (see Figure 1).
- Hold the syringe and insert the needle behind the animal's ear so the needle and syringe point in the direction of an imaginary line that would pass through the head toward the animal's opposite eye (see Figure 2).
- Take appropriate precautions to avoid intra-arterial or intravenous injection, such as restraining appropriately the animal (chute or head restraint for example) and using appropriate needles [1 inch (2.54 cm) long, 16 gauge].

| Figure 1. Injection location for the subcutaneous administration of the veterinary medicinal product at the posterior aspect of the ear where it attaches to the head (base of ear). | | Figure 2. Subcutaneous administration of the veterinary medicinal product at the posterior aspect of the ear where it attaches to the head (base of ear). Diagram of the head showing the direction for the base of the ear injections administered toward the animal's opposite eye. |
|---|---|---|





If clinical signs have not improved 48 hours after treatment, the diagnosis and treatment of the condition should be re-evaluated.

## 10. Withdrawal periods

Meat and offal: 9 days.
Milk: Zero days.

It is essential that the veterinary medicinal product is only administered subcutaneously at the base of ear location in non-edible tissue, in order to comply with the meat withdrawal period.

## 11. Special storage precautions

Keep out of the sight and reach of children.

Do not store above 25 ℃.
Do not use this veterinary medicinal product after the expiry date which is stated on the carton and vial label after Exp. The expiry date refers to the last day of that month.
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/2/05/053/003

Cardboard box containing 1 glass vial of 100 ml.

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

{DD/MM/YYYY}

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 and manufacturer responsible for batch release:
Zoetis Belgium
Rue Laid Burniat 1
1348 Louvain-La-Neuve
Belgium

Local representatives and contact details to report suspected adverse reactions:

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