

**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.

For the full list of excipients, see section 6.1.

## 3. PHARMACEUTICAL FORM

Suspension for injection.

Opaque white to light brown suspension.

## 4. CLINICAL PARTICULARS

### 4.1 Target species

Pigs

### 4.2 Indications for use, specifying the 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.

### 4.3 Contraindications

Do not use in cases of hypersensitivity to ceftiofur or other  $\beta$ -lactam antibiotics, or to any of the excipients.

### 4.4 Special warnings for each target species

None.

### 4.5 Special precautions for use

#### Special precautions for use in animals

For systemically administered broad spectrum cephalosporins (3<sup>rd</sup> and 4<sup>th</sup> 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 more narrow spectrum 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, cephalosporins 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 this 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.

#### **4.6 Adverse reactions (frequency and seriousness)**

Occasionally, transient local swelling may occur following intramuscular injection.

Mild tissue reactions at the injection site, such as small areas (less than 6 cm<sup>2</sup>) of discolouration and small cysts have been observed for up to 42 days after injection. Resolution has been observed at 56 days post-injection. In very rare cases anaphylactic type reactions may occur following administration of the product.

The frequency of adverse reactions is defined using the following convention:

- very common (more than 1 in 10 animals treated displaying adverse reaction(s))
- common (more than 1 but less than 10 animals in 100 animals treated)
- uncommon (more than 1 but less than 10 animals in 1,000 animals treated)
- rare (more than 1 but less than 10 animals in 10,000 animals treated)
- very rare (less than 1 animal in 10,000 animals treated, including isolated reports).

#### **4.7 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 in both species. 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.

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

None known.

#### **4.9 Amounts to be administered and administration route**

Intramuscular use.

Dose of 5 mg ceftiofur/kg bodyweight (equivalent to 1 ml of Naxcel per 20 kg bodyweight) 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, bodyweight should be accurately determined to avoid under-dosing. It is recommended to limit injection volumes to a maximum of 4 ml.

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

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 4.6 (Adverse reactions).

#### **4.11 Withdrawal period(s)**

Meat and offal: 71 days.

### **5. PHARMACOLOGICAL PROPERTIES**

Pharmacotherapeutic group: Antibacterials for systemic use, third-generation cephalosporins.  
ATCvet code: QJ01DD90.

#### **5.1 Pharmacodynamic properties**

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<sub>90</sub> values (<0.2 µg/ml) for the target bacteria isolated in clinical studies for at least 158 hours.

#### **5.2 Pharmacokinetic particulars**

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.

### **6. PHARMACEUTICAL PARTICULARS**

#### **6.1 List of excipients**

Oily vehicle (vegetable origin):  
Triglycerides, medium chain  
Cottonseed oil.

#### **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: 2 years.  
Shelf life after first opening the container: 28 days.

### **6.4 Special precautions for storage**

Do not store above 25 °C.

### **6.5 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 aluminium cap.

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**

Zoetis Belgium SA  
Rue Laid Burniat 1  
1348 Louvain-la-Neuve  
BELGIUM

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

EU/2/05/053/001–002

## **9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of first authorisation: 19/05/2005.  
Date of last renewal: 26/05/2010.

## **10. DATE OF REVISION OF THE TEXT**

Detailed information on this veterinary medicinal product is available on the website of the European Medicines Agency (<http://www.ema.europa.eu/>).

## **PROHIBITION OF SALE, SUPPLY AND/OR USE**

Not applicable.

## 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Naxcel200 mg/ml suspension for injection for cattle

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

One ml contains:

**Active substance:**

Ceftiofur (as crystalline free acid) 200 mg.

For the full list of excipients, see section 6.1.

## 3. PHARMACEUTICAL FORM

Suspension for injection.

Opaque white to light brown suspension.

## 4. CLINICAL PARTICULARS

### 4.1 Target species

Cattle.

### 4.2 Indications for use, specifying the 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.

### 4.3 Contraindications

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

### 4.4 Special warnings for each target species

None.

### 4.5 Special precautions for use

#### Special precautions for use in animals

For systemically administered broad spectrum cephalosporins (3<sup>rd</sup> and 4<sup>th</sup> 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 other antimicrobials. Increased use, including use of the product deviating from the instructions given in the 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, cephalosporins 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 case 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 this 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 serious reactions and require urgent medical attention.

#### **4.6 Adverse reactions (frequency and seriousness)**

Visible swellings have been noted at the injection site in about two thirds of treated animals, two days after injection in field conditions. These reactions will resolve within a maximum of 23 days. Injection site swellings may result in mild to moderate pain in some animals in the initial days following injection.

In very rare cases, sudden death has been reported following administration of the product. In such cases, death has been attributed to intra-vascular administration of the product or anaphylaxis.

The frequency of adverse reactions is defined using the following convention:

- very common (more than 1 in 10 animals treated displaying adverse reaction(s))
- common (more than 1 but less than 10 animals in 100 animals treated)
- uncommon (more than 1 but less than 10 animals in 1,000 animals treated)
- rare (more than 1 but less than 10 animals in 10,000 animals treated)
- very rare (less than 1 animal in 10,000 animals treated, including isolated reports).

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

Pregnancy:

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 in both species. No specific studies have been conducted in pregnant cows. Use only accordingly to the benefit-risk assessment by the responsible veterinarian.

Lactation:

This veterinary medicinal product can be used during lactation.

Fertility:

No specific studies have been conducted in breeding cattle. Use only accordingly to the benefit-risk assessment by the responsible veterinarian.

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

None known.

#### **4.9 Amounts to be administered and administration route**

Single subcutaneous injection of 6.6 mg ceftiofur/kg bodyweight (equivalent to 1 ml of Naxcel per 30 kg bodyweight) administered at the base of the ear.

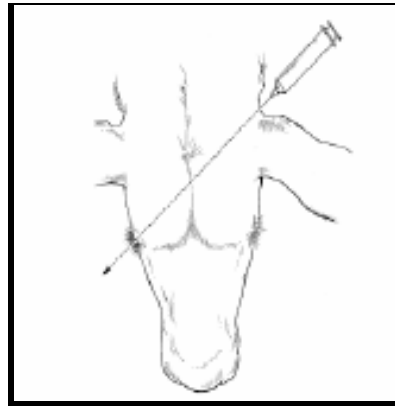
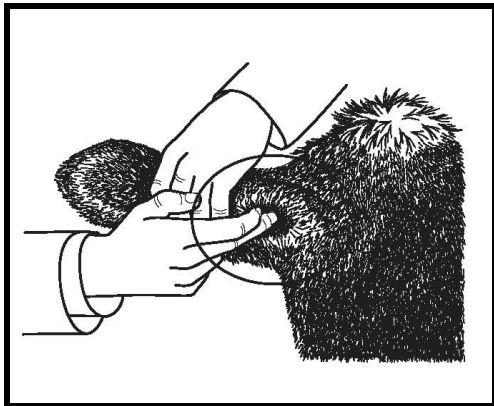
To ensure a correct dosage, bodyweight should be accurately determined to avoid under-dosing. It is recommended to limit injection volumes to a maximum of 30 ml per injection site.

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].

<p>Figure 1. Injection location for the subcutaneous administration of Naxcel at the posterior aspect of the ear where it attaches to the head (base of ear)</p>	<p>Figure 2. Subcutaneous administration of Naxcel 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.</p>
--	--



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

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

In cattle, although Naxcel 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.

#### 4.11 Withdrawal period(s)

Meat and offal: 9 days.

Milk: zero days.

It is essential that Naxcel is only administered subcutaneously at the base of ear location in non-edible tissue, as described in section 4.9, in order to comply with the meat withdrawal period.

## 5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Antibacterials for systemic use, third-generation cephalosporins.  
ATCvet code: QJ01DD90.



## **5.1 Pharmacodynamic properties**

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.

## **5.2 Pharmacokinetic particulars**

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 0.2µg/ml and 1µg/ml of ceftiofur and its active metabolites are maintained for at least 7 and 4 days, respectively.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Oily vehicle (vegetable origin):  
Triglycerides, medium chain  
Cottonseed oil.

### **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: 2 years.  
Shelf life after first opening the vial: 28 days.

### **6.4 Special precautions for storage**

Do not store above 25 °C.

### **6.5 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.

**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**

Zoetis Belgium SA  
Rue Laid Burniat 1  
1348 Louvain-la-Neuve  
BELGIUM

**8. MARKETING AUTHORISATION NUMBER(S)**

EU/2/05/053/003

**9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of first authorisation: 08/10/2009.

Date of last renewal: 26/05/2010.

**10. DATE OF REVISION OF THE TEXT**

Detailed information on this veterinary medicinal product is available on the website of the European Medicines Agency (<http://www.ema.europa.eu>).

**PROHIBITION OF SALE, SUPPLY AND/OR USE**

Not applicable.

**ANNEX II**

- A. MANUFACTURER RESPONSIBLE FOR BATCH RELEASE**
- B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE**
- C. STATEMENT OF THE MRLs**

## A. MANUFACTURER RESPONSIBLE FOR BATCH RELEASE

Name and address of the manufacturer responsible for batch release

Zoetis Belgium SA  
Rue Laid Burniat 1  
1348 Louvain-la-Neuve  
BELGIUM

## B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY OR USE

Veterinary medicinal product subject to prescription.

## C. STATEMENT OF THE MRLs

The active substance in Naxcel is an allowed substance as described in table 1 of the annex to Commission Regulation (EU) No 37/2010:

Pharmacologically active substance	Marker residue	Animal species	MRLs	Target tissues	Other provisions	Therapeutic classification
Ceftiofur	Sum of all residues retaining the betalactam structure expressed as desfuroyl-ceftiofur	All mammalian food producing species	1,000 µg/kg 2,000 µg/kg 2,000 µg/kg 6,000 µg/kg 100 µg/kg	Muscle Fat Liver Kidney Milk	For porcine species the fat MRL relates to 'skin and fat in natural proportions'	Anti-infectious agents / Antibiotics

The excipients listed in section 6.1 of the SPC are either allowed substances for which table 1 of the annex to Commission Regulation (EU) No 37/2010 indicates that no MRLs are required or are considered as not falling within the scope of Regulation (EC) No 470/2009 when used as in this veterinary medicinal product.

**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 for pigs  
ceftiofur

### 2. STATEMENT OF ACTIVE SUBSTANCES

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

Excipient:  
Oily vehicle (vegetable origin).

### 3. PHARMACEUTICAL FORM

Suspension for injection.

### 4. PACKAGE SIZE

100 ml  
50 ml

### 5. TARGET SPECIES

Pigs.

### 6. INDICATION(S)

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.

### 7. METHOD AND ROUTE(S) OF ADMINISTRATION

Intramuscular use.

5mg ceftiofur/kg bodyweight (equivalent to 1ml of Naxcel per 20kg bodyweight) 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, bodyweight should be accurately determined to avoid under-dosing. It is recommended to limit injection volumes to a maximum of 4ml.

Read the package leaflet before use.

**8 WITHDRAWAL PERIOD(S)**

Withdrawal period(s):  
Meat and offal: 71 days.

**9. SPECIAL WARNING(S), IF NECESSARY**

Read the package leaflet before use.

**10. EXPIRY DATE**

EXP {month/year}  
Once broached, use within 28 days.

**11. SPECIAL STORAGE CONDITIONS**

Do not store above 25 °C.

**12. SPECIAL PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCT OR WASTE MATERIALS, IF ANY**

Disposal: read package leaflet.

**13. THE WORDS “FOR ANIMAL TREATMENT ONLY” AND CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE, IF APPLICABLE**

For animal treatment only. To be supplied only on veterinary prescription.

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

Keep out of the sight and reach of children.

**15. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

Zoetis Belgium SA  
Rue Laid Burniat 1  
1348 Louvain-la-Neuve  
BELGIUM

**16. MARKETING AUTHORISATION NUMBER(S)**

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



**17. MANUFACTURER'S 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 for pigs  
ceftiofur

**2. STATEMENT OF ACTIVE SUBSTANCES**

Ceftiofur (as crystalline free acid) 100 mg/ml,  
Oily vehicle (vegetable origin).

**3. PHARMACEUTICAL FORM**

Suspension for injection

**4. PACKAGE SIZE**

100 ml

**5. TARGET SPECIES**

Pigs.

**6. INDICATION(S)**

**7. METHOD AND ROUTE(S) OF ADMINISTRATION**

IM

Read the package leaflet before use.

**8. WITHDRAWAL PERIOD(S)**

Withdrawal period(s):  
Meat and offal: 71 days.

**9. SPECIAL WARNING(S), IF NECESSARY**

Read the package leaflet before use.

**10. EXPIRY DATE**

EXP {month/year}

Once broached, use by .....

**11. SPECIAL STORAGE CONDITIONS**

Do not store above 25 °C.

**12. SPECIAL PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCT OR WASTE MATERIALS, IF ANY**

**13. THE WORDS “FOR ANIMAL TREATMENT ONLY” AND CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE, IF APPLICABLE**

For animal treatment only. To be supplied only on veterinary prescription.

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

**15. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

Zoetis Belgium SA  
Rue Laid Burniat 1  
1348 Louvain-la-Neuve  
BELGIUM

**16. MARKETING AUTHORISATION NUMBER(S)**

EU/2/05/053/001

**17. MANUFACTURER’S 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 100 mg/ml suspension for injection for pigs  
ceftiofur

**2. QUANTITY OF THE ACTIVE SUBSTANCE(S)**

Ceftiofur 100 mg/ml

**3. CONTENTS BY WEIGHT, BY VOLUME OR BY NUMBER OF DOSES**

50 ml

**4. ROUTE(S) OF ADMINISTRATION**

IM

Read the package leaflet before use.

**5. WITHDRAWAL PERIOD(S)**

Withdrawal period(s):  
Meat and offal: 71 days.

**6. BATCH NUMBER**

Lot {number}

**7. EXPIRY DATE**

EXP {month/year}  
Once broached, use by ...

**8. THE WORDS "FOR ANIMAL TREATMENT ONLY"**

For animal treatment only.

## **PARTICULARS TO APPEAR ON THE OUTER PACKAGE**

**Cardboard box**

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

Naxcel 200 mg/ml suspension for injection for cattle  
ceftiofur

### **2. STATEMENT OF ACTIVE SUBSTANCES**

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

Excipient:  
Oily vehicle (vegetable origin).

### **3. PHARMACEUTICAL FORM**

Suspension for injection

### **4. PACKAGE SIZE**

100 ml

### **5. TARGET SPECIES**

Cattle.

### **6. INDICATION(S)**

Treatment of acute interdigital necrobacillosis (*Panaritium*, foot rot).

Treatment of acute post-partum (puerperal) metritis in cases where treatment with another antimicrobial has failed.

### **7. METHOD AND ROUTE(S) OF ADMINISTRATION**

Subcutaneous use.

Single subcutaneous injection of 6.6 mg ceftiofur/kg bw (equivalent to 1ml of Naxcel per 30 kg bw) administered at the base of the ear.

It is recommended to limit injection volumes to a maximum of 30 ml per injection site.

Take appropriate precautions to avoid intra-arterial or intravenous injection.

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

Read the package leaflet before use.

**8. WITHDRAWAL PERIOD(S)**

Withdrawal period(s):

Meat and offal: 9 days.

Milk: zero days.

Naxcel must only be administered at the base of ear location in non-edible tissue in order to comply with the withdrawal period.

**9. SPECIAL WARNING(S), IF NECESSARY**

Read the package leaflet before use.

**10. EXPIRY DATE**

EXP {month/year}

Once broached, use by.....

**11. SPECIAL STORAGE CONDITIONS**

Do not store above 25 °C.

**12. SPECIAL PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCTS OR WASTE MATERIALS, IF ANY**

Disposal: read package leaflet.

**13. THE WORDS “FOR ANIMAL TREATMENT ONLY” AND CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE, IF APPLICABLE**

For animal treatment only. To be supplied only on veterinary prescription.

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

Keep out of the sight and reach of children.

**15. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

Zoetis Belgium SA  
Rue Laid Burniat 1  
1348 Louvain-la-Neuve  
BELGIUM

**16. MARKETING AUTHORISATION NUMBER(S)**

EU/2/05/053/003

**17. MANUFACTURER'S BATCH NUMBER**

Lot {number}

**PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGE**

**Vial of 100ml**

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

Naxcel 200 mg/ml suspension for injection for cattle  
ceftiofur

**2. STATEMENT OF ACTIVE SUBSTANCES**

Ceftiofur (as crystalline free acid) 200 mg/ml  
Oily vehicle (vegetable origin).

**3. PHARMACEUTICAL FORM**

Suspension for injection

**4. PACKAGE SIZE**

100 ml

**5. TARGET SPECIES**

Cattle.

**6. INDICATION(S)**

**7. METHOD AND ROUTE(S) OF ADMINISTRATION**

SC  
Read the package leaflet before use.

**8. WITHDRAWAL PERIOD(S)**

Withdrawal period(s):  
Meat and offal: 9 days.  
Milk: zero days.  
Read the package leaflet before use.

**9. SPECIAL WARNING(S), IF NECESSARY**

Read the package leaflet before use.



**10. EXPIRY DATE**

EXP

Once broached, use by...

**11. SPECIAL STORAGE CONDITIONS**

Do not store above 25 °C.

**12. SPECIAL PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCTS OR WASTE MATERIALS, IF ANY**

Disposal: read package leaflet.

**13. THE WORDS “FOR ANIMAL TREATMENT ONLY” AND CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE, if applicable**

For animal treatment only. To be supplied only on veterinary prescription.

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

**15. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

Zoetis Belgium SA  
Rue Laid Burniat 1  
1348 Louvain-la-Neuve  
BELGIUM

**16. MARKETING AUTHORISATION NUMBER(S)**

EU/2/05/053/003

**17. MANUFACTURER’S BATCH NUMBER**

Lot {number}

## **B. PACKAGE LEAFLET**

**PACKAGE LEAFLET:**  
**Naxcel 100 mg/ml suspension for injection for pigs**

**1. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER AND OF THE MANUFACTURING AUTHORISATION HOLDER RESPONSIBLE FOR BATCH RELEASE IN THE EEA, IF DIFFERENT**

Marketing authorisation holder and manufacturer responsible for batch release:

Zoetis Belgium SA  
Rue Laid Burniat 1  
1348 Louvain-la-Neuve  
BELGIUM

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

Naxcel 100 mg/ml suspension for injection for pigs  
ceftiofur

**3. STATEMENT OF THE ACTIVE SUBSTANCE(S) AND OTHER INGREDIENTS**

One ml contains:

**Active substance:**

Ceftiofur (as crystalline free acid)      100 mg,

**Excipients:**

Oily vehicle (vegetable oil).

**4. INDICATION(S)**

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 ceftiofur or other  $\beta$ -lactam antibiotics, or to any of the excipients.

**6. ADVERSE REACTIONS**

Occasionally, transient local swelling may occur following intramuscular injection.

Mild tissue reactions at the injection site, such as small areas (less than 6 cm<sup>2</sup>) of discolouration and small cysts have been observed for up to 42 days after injection. Resolution has been observed at 56 days post-injection.

In very rare cases anaphylactic type reactions may occur following administration of the product.

The frequency of adverse reactions is defined using the following convention:

- very common (more than 1 in 10 animals treated displaying adverse reaction(s))

- common (more than 1 but less than 10 animals in 100 animals treated)
- uncommon (more than 1 but less than 10 animals in 1,000 animals treated)
- rare (more than 1 but less than 10 animals in 10,000 animals treated)
- very rare (less than 1 animal in 10,000 animals treated, including isolated reports).

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 inform your veterinary surgeon.

## **7. TARGET SPECIES**

Pigs.

## **8. DOSAGE FOR EACH SPECIES, ROUTE(S) AND METHOD OF ADMINISTRATION**

Intramuscular use.

Dose of 5 mg ceftiofur/kg bodyweight (equivalent to 1 ml of Naxcel per 20 kg bodyweight) 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, bodyweight should be accurately determined to avoid under-dosing. It is recommended to limit injection volumes to a maximum of 4 ml. Use of the product should be based on susceptibility testing and take into account official and local antimicrobial policies.

## **10. WITHDRAWAL PERIOD(S)**

Meat and offal: 71 days.

## **11. SPECIAL STORAGE PRECAUTIONS**

Keep out of the sight and reach of children.  
Do not store above 25 °C.  
Shelf-life after first opening the container: 28 days.  
Do not use this veterinary medicinal product after the expiry date which is stated on the label after EXP.

## **12. SPECIAL WARNING(S)**

### Special precautions for use in animals:

Whenever possible, cephalosporins should only be used based on susceptibility testing.

For systemically administered broad spectrum cephalosporins (3<sup>rd</sup> and 4<sup>th</sup> 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 more narrow spectrum 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 this 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. 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 (symptoms, emergency procedures, 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 6 (Adverse reactions).

Incompatibilities:

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

**13. SPECIAL PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCT OR WASTE MATERIALS, IF ANY**

Ask your veterinary surgeon how to dispose of medicines no longer required. These measures should help to protect the environment.

**14. DATE ON WHICH THE PACKAGE LEAFLET WAS LAST APPROVED**

Detailed information on this product is available on the website of the European Medicines Agency (<http://www.ema.europa.eu/>).

**15. OTHER INFORMATION**

Naxcel is available in 50 ml or 100 ml vials. Not all pack sizes may be marketed.



- uncommon (more than 1 but less than 10 animals in 1,000 animals treated)
- rare (more than 1 but less than 10 animals in 10,000 animals treated)
- very rare (less than 1 animal in 10,000 animals treated, including isolated reports).

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 inform your veterinary surgeon.

## 7. TARGET SPECIES

Cattle.

## 8. DOSAGE FOR EACH SPECIES, ROUTE(S) AND METHOD OF ADMINISTRATION

Single subcutaneous injection of 6.6 mg ceftiofur/kg bodyweight (equivalent to 1 ml of Naxcel per 30 kg bodyweight) administered at the base of the ear.

## 9. ADVICE ON CORRECT ADMINISTRATION

To ensure a correct dosage, bodyweight should be accurately determined to avoid under-dosing. 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 (2.54cm) long, 16 gauge].

Figure 1. Injection location for the subcutaneous administration of Naxcel at the posterior aspect of the ear where it attaches to the head (base of ear).

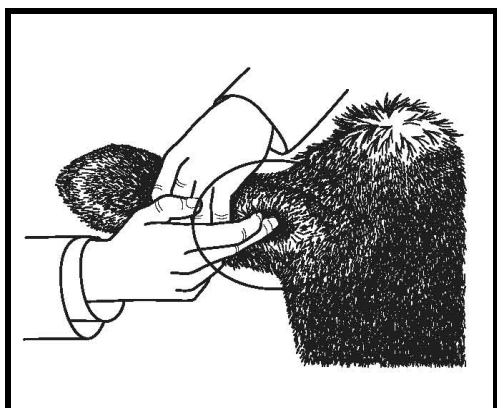
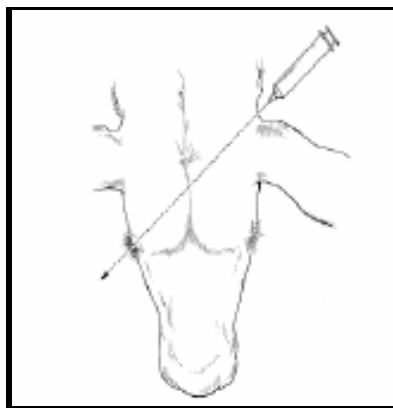


Figure 2. Subcutaneous administration of Naxcel at the posterior aspect of the ear where it attaches to the head (base of ear). Diagram of the head showing the direction for the base of the ear injections administered toward the animal's opposite eye.



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

#### **10. WITHDRAWAL PERIOD(S)**

Meat and offal: 9 days.

Milk: zero days.

It is essential that Naxcel 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 °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 container: 28 days.

#### **12. SPECIAL WARNING(S)**

##### Special precautions for use in animals:

Whenever possible, cephalosporins should only be used based on susceptibility testing.

For systemically administered broad spectrum cephalosporins (3<sup>rd</sup> and 4<sup>th</sup> 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 other 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 case 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 this 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. 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 accordingly to the benefit-risk assessment by the responsible veterinarian.



Overdose (symptoms, emergency procedures, antidotes):

In cattle, although Naxcel 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.

Incompatibilities:

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

**13. SPECIAL PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCT OR WASTE MATERIALS, IF ANY**

Ask your veterinary surgeon how to dispose of medicines no longer required. These measures should help to protect the environment.

**14. DATE ON WHICH THE PACKAGE LEAFLET WAS LAST APPROVED**

Detailed information on this product is available on the website of the European Medicines Agency (<http://www.ema.europa.eu/>).

**15. OTHER INFORMATION**

Naxcel is available in 100 ml vials.