SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Buprecare 0.3 mg/ml Solution for Injection for Dogs and Cats

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Active substance:

Each ampoule contains:
Buprenorphine 0.3 mg/ml as buprenorphine hydrochloride.

For a full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection.
Clear, colourless solution.

4. CLINICAL PARTICULARS

4.1 Target species

Dogs and cats

4.2 Indications for use, specifying the target species

Dog
Post-operative analgesia.
Potentiation of the sedative effects of centrally-acting agents.

Cat
Post-operative analgesia.

4.3 Contraindications

The product should not be used pre-operatively for caesarean section (see Section 4.7).

Do not use in case of hypersensitivity to the active substance 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

Buprenorphine may occasionally cause significant respiratory depression and, as with other opioid drugs, care should be taken when treating animals with impaired

respiratory function or animals that are receiving drugs that can cause respiratory depression.

Buprenorphine should be used with caution in animals with impaired liver function, especially biliary tract disease, as the substance is metabolised by the liver and its intensity and duration of action may be affected in some animals.

In case of renal, cardiac or hepatic dysfunction, or shock, there may be greater risk associated with the use of the product. The benefit:risk ratio for using the product should be made by the attending vet. Safety has not been fully evaluated in clinically compromised cats.
The safety of buprenorphine has not been demonstrated in animals less than 7 weeks of age, therefore use in such animals should be based on the benefit:risk assessment by the veterinarian.

Repeated administration earlier than the recommended repeat interval suggested in Section 4.9 is not recommended.

The effect of an opioid on head injury is dependent on the type and severity of the injury and the respiratory support supplied. The product should be used in accordance with the benefit:risk assessment of the attending veterinarian.

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

As buprenorphine has opioid-like activity care should be taken to avoid accidental self-injection.

In case of accidental self-injection or ingestion, seek medical advice immediately and show the package leaflet or the label to the physician. Naloxone should be available in case of accidental parenteral exposure.

Following eye contamination or skin contact, wash thoroughly with cold running water, seek medical advice if irritation persists.

4.6 Adverse reactions (frequency and seriousness)

Salivation, bradycardia, hypothermia, agitation, dehydration and miosis can occur in the dog, and rarely hypertension and tachycardia.

Mydriasis and signs of euphoria (excessive purring, pacing, rubbing) commonly occur in cats, and will usually resolve within 24 hours.

Buprenorphine may occasionally cause significant respiratory depression; refer to section 4.5.

When used to provide analgesia, sedation is rarely seen, but may occur at dose levels higher than those recommended**.**

4.7 Use during pregnancy, lactation or lay

Pregnancy:
Laboratory studies in rats have not produced any evidence of a teratogenic effect. However, these studies have shown post-implantation losses and early foetal deaths.

As reproductive toxicity studies have not been conducted in the target species, use only according to the benefit:risk assessment by the responsible veterinarian.

The product should not be used pre-operatively in cases of caesarean section, due to the risk of respiratory depression in the offspring periparturiently, and should only be used post-operatively with special care (see section on lactation below).

Lactation:
Studies in lactating rats have shown that, after intramuscular administration of buprenorphine, concentrations of unchanged buprenorphine in the milk equalled or exceeded that in the plasma. As it is likely that buprenorphine will be excreted in the milk of other species, use is not recommended during lactation. Use only accordingly to benefit:risk assessment by the responsible veterinarian.

4.8 Interaction with other medicinal products and other forms of interaction

Buprenorphine may cause some drowsiness, which may be potentiated by other centrally-acting agents, including tranquillisers, sedatives and hypnotics.

There is evidence in humans to indicate that therapeutic doses of buprenorphine do not reduce the analgesic efficacy of standard doses of an opioid agonist, and that when buprenorphine is employed within the normal therapeutic range, standard doses of opioid agonist may be administered before the effects of the former have ended without compromising analgesia. However, it is recommended that buprenorphine is not used in conjunction with morphine or other opioid-type analgesics, e.g. etorphine, fentanyl, pethidine, methadone, papaveretum or butorphanol.

Buprenorphine has been used with acepromazine, alphaxalone/alphadalone, atropine, dexmedetomidine, halothane, isoflurane, ketamine, medetomidine, propofol, sevoflurane, thiopentone and xylazine. When used in combination with sedatives, depressive effects on heart rate and respiration may be augmented.

4.9 Amounts to be administered and administration route

For intramuscular use.

Species	Post-Operative Analgesia	Sedation
Dog	10–20 microgram per kg (0.3–0.6 ml per 10 kg) repeated if necessary after 3–4 hours with 10 microgram or 5–6 hours with 20 microgram doses.	10–20 microgram per kg (0.3–0.6 ml per 10 kg).
Cat	10–20 microgram per kg (0.3–0.6 ml per 10 kg), repeated if necessary, once, after 2 hours.	

While sedative effects are present by 15 minutes after administration, analgesic activity becomes apparent after approximately 30 minutes. To ensure that analgesia is present during surgery and immediately on recovery, the product should be administered preoperatively as part of premedication.

When administered for potentiation of sedation or as part of premedication, the dose of other centrally-acting agents, such as acepromazine or medetomidine, should be reduced. The reduction will depend on the degree of sedation required, the individual animal, the type of other agents included in premedication and how anaesthesia is to

be induced and maintained. It may also be possible to reduce the amount of inhalational anaesthetic used. Animals administered opioids possessing sedative and analgesic properties may show variable responses. Therefore, the responses of individual animals should be monitored and subsequent doses should be adjusted accordingly. In some cases repeat doses may fail to provide additional analgesia. In these cases, consideration should be given to using a suitable injectable NSAID.

An appropriately graduated syringe must be used to allow accurate dosing.

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

When administered at overdose to dogs, buprenorphine may cause lethargy. At very high doses, bradycardia and miosis may be observed.

In toxicological studies of buprenorphine hydrochloride in dogs, biliary hyperplasia was observed after oral administration for one year at dose levels of 3.5 mg/kg/day and above. Biliary hyperplasia was not observed following daily intramuscular injection of dose levels up to 2.5 mg/kg/day for 3 months. This is well in excess of any clinical dose regimen in the dog.

In case of overdosage, supportive measures should be instituted and if appropriate, naloxone or respiratory stimulants may be used. However, dose levels many times higher than those indicated above have been used without serious side effects.

Naloxone may be of benefit in reversing reduced respiratory rate and respiratory stimulants such as Doxapram are also effective in man. Because of the prolonged duration of effect of buprenorphine in comparison to such drugs, they may need to be administered repeatedly or by continuous infusion.

Volunteer studies in man have indicated that opiate antagonists may not fully reverse the effects of buprenorphine.

Please also refer to sections 4.5 and 4.6 of this SPC.

4.11 Withdrawal period(s)

Not applicable.

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Opioid analgesics, oripavine derivatives
ATCvet code: QN02AE01

5.1 Pharmacodynamic properties

In summary buprenorphine is a potent, long-acting analgesic acting at opiate receptors in the central nervous system.

Buprenorphine exerts its analgesic effect via high affinity binding to various subclasses of opiate receptors, particularly μ, in the central nervous system. At clinical dose levels for analgesia, buprenorphine demonstrates high efficacy and binds to opiate receptors with high affinity, such that its dissociation from the receptor site is slow, as demonstrated in *in vitro* studies. This property of buprenorphine could

account for its longer duration of activity when compared to morphine. In circumstances where excessive opiate agonist is already bound to opiate receptors, buprenorphine can exert a narcotic antagonistic activity as a consequence of its high-affinity opiate receptor binding, such that an antagonistic effect on morphine equivalent to naloxone has been demonstrated.

5.2 Pharmacokinetic particulars

Buprenorphine is rapidly absorbed after intramuscular injection in various animal species and man. The substance is highly lipophilic and the volume of distribution in body compartments is large. In the cat, pharmacological effects occur within 30 minutes after injection and peak effects are usually observed at about 1–1.5 hours. Following intramuscular administration to cats, the mean terminal half-life was 6.3 hours and the clearance was 23 ml/kg/min, however, there was considerable inter-cat variability in pharmacokinetic parameters.

No relevant pharmacokinetic data are available in the dog.

Combined pharmacokinetic and pharmacodynamic studies in cats have demonstrated a marked delay between plasma concentrations and analgesic effect. Plasma concentrations of buprenorphine should not be used to formulate individual animal dosage regimens, which should be determined by monitoring of the patient's response.

The major route of excretion in all species except the rabbit (where urinary excretion predominates) is the faeces. Buprenorphine undergoes N-dealkylation and glucuronide conjugation by the intestinal wall and the liver and its metabolites are excreted via the bile into the gastro-intestinal tract.

In tissue distribution studies carried out in rats and rhesus monkeys, the highest concentrations of drug-related material were observed in liver, lung and brain. Peak levels occurred rapidly and declined to low levels by 24 hours after dosing.

Protein binding studies in rats have shown that buprenorphine is highly bound to plasma proteins, principally to alpha and beta globulins.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Glucose, anhydrous
Hydrochloric acid
Water for injection

6.2 Incompatibilities

None known.

6.3 Shelf life

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

The product does not contain an antimicrobial preservative. Use immediately after opening the ampoule. Any solution remaining in an ampoule following withdrawal of the required dose should be discarded.

6.4 Special precautions for storage

Do not store above 25°C.
Protect from light.
Do not refrigerate or freeze.

6.5 Nature and composition of immediate packaging

Presented in 1 ml clear Type I glass, snap ampoules, in boxes of five.

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 products should be disposed of in accordance with local requirements

7. MARKETING AUTHORISATION HOLDER

Ecuphar NV
Legeweg 157-i
8020 Oostkamp
Belgium

8. MARKETING AUTHORISATION NUMBER

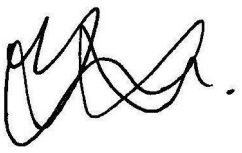
Vm 32742/4024

9. DATE OF FIRST AUTHORISATION

28 May 2008

10. DATE OF REVISION OF THE TEXT

August 2022



Approved: 11 August 2022