ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Dexrapid 2 mg/ml solution for injection
(AT, BE, BG, CZ, DE, EL, ES, FR, HU, IE, LT, NL, PL, PT, RO, SI, SK)

Dexrapid vet. 2 mg/ml solution for injection
(DK, FI)

Dexapid vet. 2 mg/ml solution for injection
(SE)

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

1 ml contains
Active substance:
Dexamethasone 2.0 mg
(equivalent to 2.63 mg dexamethasone sodium phosphate)

Excipient:
Benzyl alcohol (E 1519) 15.6 mg

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection
Clear and colourless to almost colourless solution

4. CLINICAL PARTICULARS

4.1 Target species

Horses, cattle, pigs, dogs and cats

4.2 Indications for use, specifying the target species

Horses, cattle, pigs, dogs and cats:
Treatment of inflammatory or allergic conditions.

Horses:
Treatment of arthritis, bursitis or tenosynovitis.

Cattle
Induction of parturition.
Treatment of primary ketosis (acetonemia).

Dogs and cats
Short-term treatment of shock.

4.3 Contraindications

Except in emergency situations, do not use in animals suffering from diabetes mellitus, renal insufficiency, cardiac insufficiency, hyperadrenocorticism, or osteoporosis.
Do not use in viral infections during the viraemic stage or in cases of systemic mycotic infections.
Do not use in animals suffering from gastrointestinal or corneal ulcers, or demodicosis.
Do not administer intra-articularly where there is evidence of fractures, bacterial joint infections and aseptic bone necrosis.
Do not use in known cases of hypersensitivity to the active substance, to corticosteroids and to any other ingredient of the product.

4.4 Special warnings for each target species

None.

4.5 Special precautions for use

Special precautions for use in animals

Response to long-term therapy should be monitored at regular intervals by a veterinary surgeon.
Use of corticosteroids in horses has been reported to induce laminitis. Therefore, horses treated with such preparations should be monitored frequently during the treatment period.
Because of the pharmacological properties of the active ingredient, special care should be taken when the product is used in animals with a weakened immune system.
Except in cases of acetonaemia and induction of parturition, corticosteroid administration is to induce an improvement in clinical signs rather than a cure.
The underlying disease should be further investigated.
In the presence of viral and systemic fungal infections, steroids may worsen or hasten the progress of the disease.
Use of the product in younger or older individuals may be associated with an increased risk of side effects.

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

Dexamethasone and benzyl alcohol can cause hypersensitivity reactions. People with known hypersensitivity to dexamethasone, benzyl alcohol or any of the excipients should avoid contact with the product.
Care should be taken to avoid accidental self-injection. In case of accidental self-injection seek medical advice immediately and show the package leaflet or the label to the physician.
This product may be irritant to the skin, eyes and oral mucosa. Avoid contact with the skin, eyes and oral mucosa. Wash any splashes from skin, eyes and oral mucosa immediately with plenty of water. Seek medical advice if irritation persists.
Adverse effects on the foetus cannot be excluded. Pregnant women should avoid handling the product. Wash hands after use.

4.6 Adverse reactions (frequency and seriousness)

Corticosteroids such as dexamethasone are known to exert a wide range of side effects.
Whilst single high doses are generally well tolerated, they may induce severe side effects upon long-term use and when esters possessing a long duration of action are administered. During medium to long-term use, the dose should therefore generally be kept to the minimum necessary to control symptoms.
Steroids themselves, during treatment, may cause symptoms of Cushing's disease involving significant alteration of fat, carbohydrate, protein and mineral metabolism, e.g. redistribution of body fat, muscle weakness and wastage and osteoporosis may result.

Systematically administered corticosteroids may cause polyuria, polydipsia and polyphagia, particularly during the early stages of therapy. Some corticosteroids may cause sodium and water retention and hypokalaemia upon long-term use. Systemic corticosteroids have caused deposition of calcium in the skin (calcinosis cutis).
Usage of corticosteroids can cause changes in the blood biochemical and haematological parameters. Transient hyperglycaemia can occur.
Dexamethasone therapy suppresses the hypothalamic–pituitary–adrenal axis. Following cessation of treatment, symptoms of adrenal insufficiency extending to adrenocortical atrophy can arise and this may render the animal unable to deal adequately with stressful situations. Consideration should therefore be given to means of minimising these effects in the period following discontinuation or cessation of treatment by dosing to coincide with the time the endogenous cortisol peak (i.e. in the morning with regard to dogs) is usually observed and a gradual reduction of dosage.
Corticosteroids may delay wound healing and the immunosuppressant actions may weaken resistance to or exacerbate existing infections.
Gastrointestinal ulceration has been reported in animals treated with corticosteroids. Gastrointestinal ulceration may be exacerbated in patients given non-steroidal anti-inflammatory drugs and in animals with spinal cord trauma.
Steroids may cause enlargement of the liver (hepatomegaly) with increased serum hepatic enzymes.
Very rarely, hypersensitivity reactions may occur.
Corticosteroid use may increase the risk of acute pancreatitis.
Induction of parturition using corticosteroids may be related to decreased calf viability and increased occurrence of retained foetal membranes in cows. Other possible adverse reactions associated with corticosteroid use include laminitis and reduction in milk yield.

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

Apart from the use of the product to induce parturition in cattle, Dexamethasone is not recommended for use in pregnant animals. Administration of corticosteroids in early gestation is known to have caused foetal abnormalities in laboratory animals. Administration in late pregnancy may cause early parturition or abortion.
Consideration should therefore be given to the therapeutic risks and benefits before use in pregnancy by the appropriate veterinarian.
In induction of parturition in cows, an increased occurrence of retained foetal membranes and possible subsequent metritis and/or reduced fertility may be experienced. Such use of dexamethasone may be associated with reduced viability of the calf.
Using corticosteroids in lactating cows can cause a temporary drop in milk yield.

4.8 Interaction with other medicinal products and other forms of interaction

Because of the possible immunosuppressive effect of corticosteroids, dexamethasone should not be used in combination with vaccines or within two weeks after vaccination.
Dexamethasone should not be given together with other anti-inflammatory substances. Concurrent use with non-steroidal anti-inflammatory drugs may exacerbate gastrointestinal tract ulceration.
Administration of dexamethasone may induce hypokalaemia and hence increase the risk of toxicity from cardiac glycosides.
The risk of hypokalaemia may be increased if dexamethasone is administered together with potassium depleting diuretics.

Concurrent use with anticholinesterase may lead to increased muscle weakness in patients with myasthenia gravis.
Glucocorticoids antagonise the effects of insulin.
Concurrent use with phenobarbital, phenytoin and rifampicin can reduce the effects of dexamethasone.

4.9 Amounts to be administered and administration route

Horses
Intramuscular, intravenous or intraarticular use

Cattle, pigs, dogs and cats
Intramuscular use.
When administering volumes less than 1 ml, a syringe with a suitable graduated scale should be used to ensure that the correct dose is administered.

For the treatment of inflammatory or allergic conditions: the following single doses are advised.

Species	Dosage (i.m.)
horse, cattle, pig	0.06 mg dexamethasone/kg bw (3 ml of product/100 kg bw)
dog, cat	0.1 mg dexamethasone/kg bw (0.5 ml of product/10 kg bw)

In cases of shock in dogs and cats dexamethasone can be administered intravenously, in a dose at least 10 times the clinically advised systemic (i.m.) dose.

Treatment of primary ketosis in cattle (acetonaemia).
0.02-0.04 mg dexamethasone/kg bodyweight corresponding to a dose of 5-10 ml of the product per 500 kg bodyweight given by single intramuscular injection is advocated dependent on the size of the cow and the duration of the signs. Larger dose (up to 0.04 mg dexamethasone/kg) will be required if the signs have been present for some time.

Induction of parturition in cattle
A single intramuscular injection of 0.04 mg dexamethasone /kg bodyweight corresponding to 10 ml of the product per 500 kg bodyweight after day 260 of pregnancy to avoid foetal oversize and mammary oedema in cattle. Parturition will normally occur within 48-72 hours.

For the treatment of arthritis, bursitis or tenosynovitis in the horse
The recommended dose is 1-5 ml of the product. These quantities are not specific and are quoted purely as a guide. Injections into the joint spaces or bursae should be preceded by the removal of an equivalent volume of synovial fluid. In horses producing food intended for human consumption a total dose of 0.06 mg dexamethasone/kg bw should not be exceeded. Strict asepsis is essential.

The rubber stopper can be punctured a maximum of 56 times.

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

High doses of corticosteroids can cause apathy and irritability in the horse. Treatment with high doses may cause thrombosis because of a higher blood clotting tendency. See section 4.6.

4.11 Withdrawal period(s)

Horses
Meat and offal: 8 days
Not authorised for use in mares producing milk for human consumption.

Cattle
Meat and offal: 8 days

Milk: 72 hours

Pigs
Meat and offal: 2 days

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: corticosteroids for systemic use, glucocorticoids.
ATC vet code: QH02AB02.

5.1 Pharmacodynamic properties

Dexamethasone is a fluo-methyl derivative of a corticosteroid with an anti-inflammatory, anti-allergic and immunosuppressive effect. Dexamethasone stimulates gluconeogenesis, which leads to increased blood sugar levels. The relative efficacy of dexamethasone expressed by the anti-inflammatory effect is about 25 times that of hydrocortisone, whereas it has minimal mineralocorticoid activity.

5.2 Pharmacokinetic particulars

The veterinary medicinal product is a short acting dexamethasone preparation with a rapid onset of activity. It contains the disodium phosphate ester of dexamethasone. After intramuscular administration, the ester is rapidly absorbed from the injection site followed by immediate hydrolysation into the parent compound, dexamethasone. The time to reach maximum plasma concentrations of dexamethasone in cattle, horse, pig and dog is within 20 min after administration. Elimination half-life after intravenous and intramuscular administration is similar, ranging between 5-20 hours depending on the animal species. Bioavailability after intramuscular administration is around 100 %.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sodium chloride
Sodium citrate
Benzyl alcohol (E 1519)
Sodium hydroxide (for pH adjustment)
Citric acid monohydrate (for pH adjustment)
Water for injections

6.2 Major incompatibilities

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

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 18 months.
Shelf life after first opening the immediate packaging: 28 days.

6.4 Special precautions for storage

Do not store above 25 °C.
Do not freeze.

Keep the vial in the outer carton in order to protect from light.

6.5 Nature and composition of immediate packaging

Cardboard box with a colourless glass vial type II (Ph. Eur.) with a bromobutyl rubber stopper and an aluminium flip-off cap.

Package size: 100 ml

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

Richter Pharma AG
Feldgasse 19
4600 Wels
Austria

8. MARKETING AUTHORISATION NUMBER(S)

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: {DD/MM/YYYY}.

10 DATE OF REVISION OF THE TEXT

<{DD/MM/YYYY}>

PROHIBITION OF SALE, SUPPLY AND/OR USE