1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Xylapan 20 mg/ml Solution for Injection

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:
Active substances:
Xylazine (as hydrochloride) 20.0 mg

Excipients:

Qualitative composition of excipients and other constituents	**Quantitative composition if that information is essential for proper administration of the veterinary medicinal product**
Methyl Parahydroxybenzoate (E218)	0.65 mg
Propyl Parahydroxybenzoate (E216)	0.35 mg
Sodium Chloride	
Water for Injections	

Clear, colourless solution for injection.

3. CLINICAL INFORMATION

3.1 Target species

Cattle, horses, dogs and cats.

3.2 Indications for use for each target species

All cases where sedation is required in cattle, horses, dogs and cats including:

1. Handling fractious animals, e.g. for transportation.
2. Medical examinations, e.g. x-ray examination, removal of bandages, examination of the teats, penis and oral cavity.
3. Premedication for minor superficial operations, painful manipulative procedures and local or regional anaesthesia.
4. Elimination of defaecation when examining and treating the vagina, uterus and hindquarters.

3.3 Contraindications

Do not use in cases of hypersensitivity to the active substance or to any of the excipients.
Do not use:
- in the latter stages of pregnancy except at parturition.
- when pulmonary disease is present or suspected.
- in mechanical complications of the alimentary tract in the cat and dog such as obstruction of the oesophagus, torsion of the stomach, or hernia.
- in cases of diabetes mellitus.

3.4 Special warnings

Cattle:

In recumbent cattle, tympany should be prevented by maintaining sternal recumbency. For operations in lateral or dorsal recumbency it is advisable to lower the head in order to avoid aspiration of saliva or ruminal fluid. When high doses are to be employed, the animals should be fasted for some hours before hand. It must be noted that the swallowing reflex is reduced during the period when the action of the drug is at its peak.

After dose levels 3 and 4 cattle are likely to remain drowsy for several hours and should be kept in the shade. In case of accidental overdose leading to respiratory failure, cold water douches and artificial respiration are indicated.

In cattle, xylazine causes ruminal amotility, inhibits eructation, and induces dysphagia. For these reasons ruminants heavily sedated with it should previously have had their food and water withheld and should be maintained in sternal recumbency with their head and neck lowered following treatment.

Horses:
Following intravenous injection in horses there is a transient rise followed by a fall of blood pressure.

With horses, the usual precautions required in their handling should always be observed even when a high dose of the veterinary medicinal product has been given.

Dogs and cats:
In the event of respiratory failure, manual compression of the thorax is usually sufficient to restore normal respiration. Pain may be felt on administration in some cats and dogs.

An emetic effect can occur. Therefore, the animal should be fasted for 12 hours before application. A previous administration of atropine is recommended. Bradycardia, partial heart block and arterial hypotension may occur.

See also section 3.6.

3.5 Special precautions for use

Special precautions for safe use in the target species:

The use of Xylazine should be carefully considered in cases of:

1. Cardiac aberrations.
2. Arterial hypotension/shock.
3. Renal or hepatic impairment.

In larger animals, xylazine is not an ideal sedative for caesarean sections because of its oxytocic effect which impedes uterine suturing.
Sedated animals should remain under supervision until normal, and they should be segregated to avoid bullying by others.
See also section 3.10.

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

- In case of accidental ingestion or self-injection, seek medical advice immediately and show the package leaflet or the label to the physician but DO NOT DRIVE as sedation and changes in blood pressure may occur.
- Avoid skin, eye or mucosal contact.
- Wash the exposed skin immediately after exposure with large amounts of water.
- Remove contaminated clothes that are in direct contact with skin.

- In the case of accidental contact of the veterinary medicinal product with eyes, rinse abundantly with fresh water. If symptoms occur, seek the advice of a physician.
- If pregnant women handle the veterinary medicinal product, special caution should be observed not to self-inject as uterine contractions and decreased foetal blood pressure may occur after accidental systemic exposure.

Advice to doctors:
- Xylazine is an alpha2-adrenoreceptor agonist, symptoms after absorption may involve clinical effects including
- dose-dependent sedation, respiratory depression, bradycardia, hypotension, a dry mouth, and hyperglycaemia. Ventricular arrhythmias have also been reported. Respiratory and haemodynamic symptoms should be treated symptomatically.

Special precautions for the protection of the environment:

Not applicable.

3.6 Adverse events

Horses:

Very rare (<1 animal / 10 000 animals treated, including isolated reports):	Hypertension[1], hypotension[1] Bradycardia, arrythmia Respiratory depression Hyperglycaemia Polyuria Excitation (paradoxal) Hypothermia[2], hyperthermia[2]

[1] Transient, following intravenous injection
[2] Impaired thermoregulation

Cattle:

Very rare (<1 animal / 10 000 animals treated, including isolated reports):	Hypothermia[1], hyperthermia[1] Salivation Rumen atony, ruminal tympany Bradycardia, arrythmia, hypotension Respiratory depression Hyperglycaemia Polyuria Excitation (paradoxal)

[1] Impaired thermoregulation

Dogs and cats:

Very rare (<1 animal / 10 000 animals treated, including isolated reports):	Vomiting[1] Bradycardia, arrythmia, hypotension Respiratory depression Hyperglycaemia Polyuria Excitation (paradoxal)

	Hypothermia[2], hyperthermia[2]

[1] Before complete sedation, if the stomach is full
[2] Impaired thermoregulation

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 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

Pregnancy:

Do not use in the first trimester of pregnancy (no information is available on safety in this period). The veterinary medicinal product is contraindicated for use at the latter stages of pregnancy except at parturition.

3.8 Interaction with other medicinal products and other forms of interaction

Analeptics will shorten the period or reduce the depth of sedation. See also section 3.9.

3.9 Administration routes and dosage

For intravenous, intramuscular and subcutaneous use.
To ensure a correct dosage, body weight should be determined as accurately as possible.

It should be noted that dosage and routes of administration vary widely between species.
Animals being treated should be kept in a warm and quiet environment while under the influence of the veterinary medicinal product. Mixing of xylazine with other agents in the same syringe is not advised.

Cattle:
The veterinary medicinal product is given by intramuscular injection taking precautions against contamination. Syringes and needles must be sterilised before use. Clean area of injection site and swab with spirit.

The dose is 5 to 30 mg xylazine (0.25 to 1.5 ml of the veterinary medicinal product) per 100 kg bodyweight, according to the degree of sedation required. Very fractious animals may require higher dose rates, not exceeding 15 mg/50 kg (Dose rate 4):

Dose	mg/50 kg	ml/50 kg
1	2.5	0.125
2	5.0	0.25
3	10.0	0.50
4	15.0	0.75

Dose 1: Sedation with slight decrease of muscle tone. The ability to stand is maintained.
Dose 2: Sedation, marked decrease of muscle tone and some analgesia. The animal usually remains standing, but may lie down.
Dose 3: Deep sedation, further decrease of muscle tone and a useful degree of analgesia. The animal lies down.
Dose 4: Very deep sedation, a profound decrease of muscle tone and a useful degree of analgesia. The animal lies down.

The animal should not be disturbed until the veterinary medicinal product has taken its full effect. The first effects are usually seen within five minutes of injection and the maximum effect is produced 10 minutes later. There is no struggling or excitement during induction or recovery.

If the required depth of sedation is not achieved, it is unlikely that repetition of the dose will prove more effective. It is advisable to allow complete recovery, repeating the procedure with a higher dose after 24 hours.
When major surgical treatment is carried out using this veterinary medicinal product, additional local anaesthesia should be employed.

Horses:
The veterinary medicinal product is given by slow intravenous injection, taking from one to two minutes. Dosage, depending upon the degree of sedation required and the response of the animal, is 3-5 ml/100 kg (60 - 100 mg/100 kg) bodyweight.
Nervous or highly excitable horses generally require a larger dose.
Experience has shown that older horses and those that have undergone severe physical exertion before treatment respond more readily to the veterinary medicinal product.
Depending on dosage, light to deep sedation with individually variable analgesia is obtained. The horse does not become recumbent.
Animals should not be disturbed until the veterinary medicinal product has taken its full effect. This is usually obtained within five minutes of intravenous injection and lasts for approximately 20 minutes. If the required depth of sedation is not achieved, it is unlikely that repetition of the dose will prove more effective. It is advisable to allow complete recovery, repeating the procedure using the veterinary medicinal product at a higher dose rate after 24 hours.
For painful operations, additional local or regional anaesthesia should be used.
The veterinary medicinal product can also be administered to horses as pre-medication for operations on the recumbent animal using chloral hydrate or barbiturates.

Cats:
The veterinary medicinal product is given intramuscularly at a dose rate of 3.0 mg/kg (0.15 ml/kg).
The effect is adequate for procedures that are not associated with any considerable degree of pain. Pre-medication with atropine is advantageous.
When used in conjunction with ketamine, the veterinary medicinal product pre-medication eliminates muscular stiffness during anaesthesia and maintains sedation throughout the recovery period.
Barbiturate anaesthesia should not be induced until sedation is deepest, i.e. about 20 minutes after administration of the veterinary medicinal product. Under these conditions, the dose of barbiturate required is reduced by 1/4 to 1/2.

Dogs:
The veterinary medicinal product is given intramuscularly at a dose rate of 1-3 mg/kg (0.05 - 0.15 ml/kg). Other routes of administration may be used, but the effect is less predictable.
Good sedation is usually achieved at the lower end of the dose range given above, but excitable or vicious animals require a larger dose. The effect is adequate for procedures that are not associated with any considerable degree of pain.
For painful procedures, the veterinary medicinal product may be used in combination with a local anaesthetic. Pre-medication with atropine may be advantageous.
When used for pre-anaesthetic medication, the veterinary medicinal product reduces the dose required, in the case of barbiturates, by about 1/4 to 1/2.

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

In case of accidental overdose leading to respiratory failure, cold water douches and artificial respiration are indicated. Atropine may be used to reverse bradycardia and hypotension.
Doxapram may be used to reverse respiratory depression. Alpha-2 receptor antagonists such as yohimbine, tolazoline and atipamezole are specific antagonists to xylazine.

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.

For administration by a veterinarian or under their direct supervision.

3.12 Withdrawal periods

Cattle and horses:
Meat and offal: One day.
Milk: Zero hours.

4. PHARMACOLOGICAL INFORMATION

4.1 ATCvet code : QN05CM92A

4.2 Pharmacodynamics

Xylazine is a potent alpha-2 adrenergic agonist. The primary pharmacodynamic effects following intravenous or intramuscular administration are sedation, analgesia and muscle relaxation. Secondary pharmacodynamic effects are short-lived increase of the arterial pressure followed by a longer period of hypotension and bradycardia (in horses arrhythmias, atrioventricular blocks). Mydriasis, impaired thermoregulation, respiratory depression, hyperglycaemia, hypoinsulinaemia, polyuria, prolonged intestinal transit time, inhibition of reticuloruminal contractions, salivation (cattle only) and emesis (dogs and cats only) were also observed. In horses, effects of xylazine persisted for 2 to 4 hours whereas in ruminants some effects (hyperthermia, hyperglycaemia, ruminal atony, prostration) persist up to 36 hours.

4.3 Pharmacokinetics

Following intravenous administration Xylazine is rapidly distributed in various tissues. About 70% is eliminated via kidney and 30% via faeces with a biological half-life of 2 to 3 hours. After intravenous or intramuscular administration to horses and dogs at recommended dose levels, xylazine is rapidly and extensively distributed with a distribution half-life of 1 to 6 minutes and an apparent volume of distribution of 1.9 to 2.7 l/kg bw. The compound is rapidly eliminated with an elimination half-life of 22 to 58 minutes and this is probably related to an intensive metabolism rather than to a rapid renal excretion. The major metabolites are present as glucuronide conjugates in excreted urine.

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: 4 years.
Shelf-life after first opening the immediate packaging: 12 days.

5.3 Special precautions for storage

Do not store above 25 °C.

5.4 Nature and composition of immediate packaging

Cardboard box containing 10 ml or 50 ml Type I, clear glass vials with a 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

Vetoquinol S.A.

7. MARKETING AUTHORISATION NUMBER(S)

VPA10521/036/001

8. DATE OF FIRST AUTHORISATION

01/10/2000

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

24/07/2026

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).