

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Stronghold 15 mg spot-on solution for cats and dogs ≤ 2.5 kg
Stronghold 30 mg spot-on solution for dogs 2.6–5.0 kg
Stronghold 45 mg spot-on solution for cats 2.6–7.5 kg
Stronghold 60 mg spot-on solution for cats 7.6–10.0 kg
Stronghold 60 mg spot-on solution for dogs 5.1–10.0 kg
Stronghold 120 mg spot-on solution for dogs 10.1–20.0 kg
Stronghold 240 mg spot-on solution for dogs 20.1–40.0 kg
Stronghold 360 mg spot-on solution for dogs 40.1–60.0 kg

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each single-dose (pipette) delivers:

Active substance:

Stronghold 15 mg for cats and dogs	6% w/v solution	selamectin	15 mg
Stronghold 30 mg for dogs	12% w/v solution	selamectin	30 mg
Stronghold 45 mg for cats	6% w/v solution	selamectin	45 mg
Stronghold 60 mg for cats	6% w/v solution	selamectin	60 mg
Stronghold 60 mg for dogs	12% w/v solution	selamectin	60 mg
Stronghold 120 mg for dogs	12% w/v solution	selamectin	120 mg
Stronghold 240 mg for dogs	12% w/v solution	selamectin	240 mg
Stronghold 360 mg for dogs	12% w/v solution	selamectin	360 mg

Excipients:

Butylated hydroxytoluene 0.08%.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Spot-on solution.

Colourless to yellow solution.

4. CLINICAL PARTICULARS

4.1 Target species

Dogs and cats.

4.2 Indications for use, specifying the target species

Cats and dogs:

- **Treatment and prevention of flea infestations** caused by *Ctenocephalides* spp. for one month following a single administration. This is as a result of the adulticidal, larvicidal and ovicidal properties of the product. The product is ovicidal for 3 weeks after administration. Through a reduction in the flea population, monthly treatment of pregnant and lactating animals will also aid in the prevention of flea infestations in the litter up to seven weeks of age. The product can be used as part of a treatment strategy for flea allergy dermatitis and through its ovicidal and

larvicidal action may aid in the control of existing environmental flea infestations in areas to which the animal has access.

- **Prevention of heartworm disease** caused by *Dirofilaria immitis* with monthly administration. Stronghold may be safely administered to animals infected with adult heartworms, however, it is recommended, in accordance with good veterinary practice, that all animals 6 months of age or more living in countries where a vector exists should be tested for existing adult heartworm infections before beginning medication with Stronghold. It is also recommended that dogs should be tested periodically for adult heartworm infections, as an integral part of a heartworm prevention strategy, even when Stronghold has been administered monthly. This product is not effective against adult *D. immitis*.
- **Treatment of ear mites** (*Otodectes cynotis*).

Cats:

- Treatment of biting lice infestations (*Felicola subrostratus*)
- Treatment of adult roundworms (*Toxocara cati*)
- Treatment of adult intestinal hookworms (*Ancylostoma tubaeforme*).

Dogs:

- Treatment of biting lice infestations (*Trichodectes canis*)
- Treatment of sarcoptic mange (caused by *Sarcoptes scabiei*)
- Treatment of adult intestinal roundworms (*Toxocara canis*).

4.3 Contraindications

Do not use in animals under 6 weeks of age.

Do not use in cats that are suffering from concomitant disease, or are debilitated and underweight (for size and age).

4.4 Special warnings for each target species

Animals may be bathed 2 hours after treatment without loss of efficacy.

Do not apply when the animal's hair coat is wet. However, shampooing or soaking the animal 2 or more hours after treatment will not reduce the efficacy of the product.

For ear mite treatment, do not apply directly to the ear canal.

It is important to apply the dose as indicated to minimise the quantity that the animal can lick off. If significant licking does occur, a brief period of hypersalivation may rarely be observed in cats.

4.5 Special precautions for use

Special precautions for use in animals

This veterinary medicinal product is to be applied to the skin surface only. Do not administer orally or parenterally.

Keep treated animals away from fires and other sources of ignition for at least 30 minutes or until the hair coat is dry.

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

This product is highly flammable; keep away from heat, sparks, open flames or other sources of ignition.

Do not smoke, eat or drink while handling the product.

Wash hands after use and wash off any product in contact with the skin immediately with soap and water. If accidental eye exposure occurs, flush the eyes immediately with water and seek medical advice immediately and show the package leaflet or the label to the physician.

Avoid direct contact with treated animals until the application site is dry. On the day of treatment, children must not handle treated animals and the animals should not be permitted to sleep with their owners, especially children. Used applicators should be disposed of immediately and not left within the sight or reach of children.

People with sensitive skin or known allergy to veterinary medicinal products of this type should handle the veterinary medicinal product with caution.

Other precautions

Do not allow treated animals to bathe in water courses until at least two hours after treatment administration.

4.6 Adverse reactions (frequency and seriousness)

Use of the veterinary medicinal product in cats has on rare occasions been associated with a mild transient alopecia at the site of application. On very rare occasions transient focal irritation may also be observed. The alopecia and irritation are normally self-resolving, but symptomatic therapy may be applicable in some circumstances.

On rare occasions in cats and dogs, application of the veterinary medicinal product may produce a local temporary clumping of the hair at the application site and/or an occasional appearance of a small quantity of a white powder. This is normal and will disappear typically within 24 hours of treatment administration and does not affect either the safety or efficacy of the veterinary medicinal product.

Very rarely, as with other macrocyclic lactones, reversible neurological signs, including seizures, have been observed after use of the veterinary medicinal product in both dogs and cats.

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

Stronghold can be used in breeding, pregnant and lactating cats and dogs.

4.8 Interaction with other medicinal products and other forms of interaction

In extensive field testing no interactions between Stronghold and routinely used veterinary medicinal products or medical or surgical procedures were observed.

4.9 Amounts to be administered and administration route

Stronghold should be administered as a single application of a single dose delivering a minimum of 6 mg/kg selamectin. When concurrent infestations or infections in the same animal are to be treated with the veterinary medicinal product, only one application of the recommended 6 mg/kg dose should be administered at any one time. The appropriate length of the treatment period for individual parasites is specified below.

Administer in accordance with the following table:

Cats (kg)	Pipette cap colour	mg of selamectin dispensed	Potency (mg/ml)	Administered volume (nominal pipette size, ml)
≤ 2.5	Rose	15	60	0.25
2.6–7.5	Blue	45	60	0.75
7.6–10.0	Taupe	60	60	1.0
> 10		Appropriate combination of pipettes	60	Appropriate combination of pipettes

Dogs (kg)	Pipette cap colour	mg of selamectin dispensed	Potency (mg/ml)	Administered volume (nominal pipette size, ml)
≤ 2.5	Rose	15	60	0.25
2.6–5.0	Violet	30	120	0.25
5.1–10.0	Brown	60	120	0.5
10.1–20.0	Red	120	120	1.0
20.1–40.0	Green	240	120	2.0
40.1–60.0	Plum	360	120	3.0
> 60		Appropriate combination of pipettes	60/120	Appropriate combination of pipettes

Flea treatment and prevention (cats and dogs)

Following administration of the veterinary medicinal product, the adult fleas on the animal are killed, no viable eggs are produced, and larvae (found only in the environment) are also killed. This stops flea reproduction, breaks the flea lifecycle and may aid in the control of existing environmental flea infestations in areas to which the animal has access.

For the prevention of flea infestations, the veterinary medicinal product should be administered at monthly intervals throughout the flea season, starting one month before fleas become active. Through a reduction in the flea population, monthly treatment of pregnant and lactating animals will aid prevention of flea infestations in the litter up to seven weeks of age.

For use as part of a treatment strategy for flea allergy dermatitis the veterinary medicinal product should be administered at monthly intervals.

Prevention of heartworm disease (cats and dogs)

The veterinary medicinal product may be administered year-round or at least within one month of the animal's first exposure to mosquitoes and monthly thereafter until the end of the mosquito season. The final dose must be given within one month after the last exposure to mosquitoes. If a dose is missed and a monthly interval between dosing is exceeded then immediate administration of the veterinary medicinal product and resumption of monthly dosing will minimise the opportunity for the development of adult heartworms. When replacing another heartworm preventive veterinary medicinal product in a heartworm disease prevention programme, the first dose of the veterinary medicinal product must be given within a month of the last dose of the former medication.

Treatment of roundworm infections (cats and dogs)

A single dose of the veterinary medicinal product should be administered.

Treatment of biting lice (cats and dogs)

A single dose of the veterinary medicinal product should be administered.

Treatment of ear mites (cats)

A single dose of the veterinary medicinal product should be administered.

Treatment of ear mites (dogs)

A single dose of the veterinary medicinal product should be administered. Loose debris should be gently removed from the external ear canal at the time of treatment. A further veterinary examination 30 days after treatment is recommended as some animals may require a second treatment.

Treatment of hookworm infections (cats)

A single dose of the veterinary medicinal product should be administered.

Treatment of sarcoptic mange (dogs)

For complete elimination of the mites, a single dose of the veterinary medicinal product should be administered for two consecutive months.

Method and route of administration:

Spot-on use.

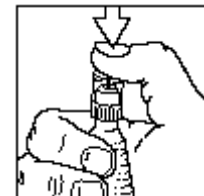
Apply to the skin at the base of the neck in front of the shoulder blades.

How to apply:

Remove the Stronghold pipette from its protective package



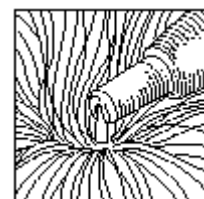
Holding the pipette upright, firmly depress the cap to puncture the applicator seal, then remove the cap



Part the hair at the base of your animal's neck in front of the shoulder blades to expose a small area of skin



Apply the tip of the Stronghold pipette directly to the skin without massaging. Squeeze the pipette firmly to empty the contents in one spot. Avoid contact between the product and your fingers.



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

Stronghold was administered at 10 times the recommended dose, and no undesirable effects were observed. The veterinary medicinal product was administered at 3 times the recommended dose to cats and dogs infected with adult heartworms and no undesirable effects were observed. The veterinary medicinal product was also administered at 3 times the recommended dose to breeding male and female cats and dogs, including pregnant and lactating females nursing their litters and at 5 times the recommended dose to ivermectin-sensitive Collies, and no undesirable effects were observed.

4.11 Withdrawal period(s)

Not applicable.

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: antiparasitic products, insecticides and repellents, macrocyclic lactones.
ATCvet code: QP54AA05.

5.1 Pharmacodynamic properties

Selamectin is a semi-synthetic compound of the avermectin class. Selamectin paralyses and/or kills a wide range of invertebrate parasites through interference with their chloride channel conductance causing disruption of normal neurotransmission. This inhibits the electrical activity of nerve cells in nematodes and muscle cells in arthropods leading to their paralysis and/or death.

Selamectin has adulticidal, ovicidal and larvicidal activity against fleas. Therefore, it effectively breaks the flea life cycle by killing adults (on the animal), preventing the hatching of eggs (on the animal and in its environment) and by killing larvae (environment only). Debris from selamectin-treated pets kills flea eggs and larvae not previously exposed to selamectin and thus may aid in the control of existing environmental flea infestations in areas to which the animal has access.

Activity has also been demonstrated against heartworm larvae.

5.2 Pharmacokinetic particulars

Following spot on administration selamectin is absorbed from the skin reaching maximum plasma concentrations approximately 1 and 3 days after administration in cats and dogs respectively. Following absorption from the skin selamectin distributes systemically and is slowly eliminated from plasma as manifested in detectable plasma concentrations in dogs and cats 30 days after administration of a single topical dose at 6 mg/kg. The prolonged persistence and slow elimination of selamectin from plasma is reflected in the terminal elimination half-life values of 8 and 11 days in cats and dogs respectively. The systemic persistence of selamectin in plasma and the lack of extensive metabolism provide effective concentrations of selamectin for the duration of the inter-dosing interval (30 days).

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Butylated hydroxytoluene
Dipropylene glycol methyl ether
Isopropyl alcohol

6.2 Major incompatibilities

Not applicable.

6.3 Shelf life

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

6.4 Special precautions for storage

Do not store above 30 °C. Store in the unopened foil package in a dry place.

6.5 Nature and composition of immediate packaging

Stronghold is available in packs of three pipettes (all pipette sizes), six pipettes (all pipette sizes except 15 mg selamectin), or fifteen pipettes (15 mg selamectin pipette size only). The veterinary medicinal product is in translucent polypropylene single-dose pipettes in an aluminium and aluminium/PVC blister overwrap. The pipettes are colour coded as follows:

Pipettes with rose caps contain 0.25 ml of 6% w/v solution and deliver 15 mg of selamectin
Pipettes with blue caps contain 0.75 ml of 6% w/v solution and deliver 45 mg of selamectin
Pipettes with taupe caps contain 1.0 ml of 6% w/v solution and deliver 60 mg of selamectin
Pipettes with violet caps contain 0.25 ml of 12% w/v solution and deliver 30 mg of selamectin
Pipettes with brown caps contain 0.5 ml of 12% w/v solution and deliver 60 mg of selamectin
Pipettes with red caps contain 1.0 ml of 12% w/v solution and deliver 120 mg of selamectin
Pipettes with green caps contain 2.0 ml of 12% w/v solution and deliver 240 mg of selamectin
Pipettes with plum caps contain 3.0 ml of 12% w/v solution and deliver 360 mg of selamectin.

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.

Stronghold should not enter water courses as this may be dangerous for fish and other aquatic organisms. Containers and residual contents should be disposed of along with collected domestic refuse to avoid contamination of any water courses.

7. MARKETING AUTHORISATION HOLDER

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

8. MARKETING AUTHORISATION NUMBER(S)

EU/2/99/014/001-016

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 25/11/1999.

Date of last renewal: 01/10/2009.

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.