

| Product | Product description | Chemical(s) | How it works | Treatment | Regulated by |
|---------------------------|---|------------------------------|---|--|--------------|
| Advantage | A flea product for dogs and cats. Apply product topically to kill <u>adult fleas</u> within 12 hours. <u>Flea larvae</u> in the environment also killed once exposed to treated pet. Because it does not interfere with egg hatching it may take more than one treatment to control population, or use with a developmental inhibitor. This is a pesticide. | Imidacloprid | Kills by binding postsynaptic nicotinic acetylcholine receptors in insects (causes paralysis) | Once monthly | EPA |
| K9 Advantix | A flea and tick product for dogs only . Apply product topically. Kills <u>adult fleas</u> within 12 hours. <u>Flea larvae</u> in environment are also killed. Repels and kills Deer ticks, American dog ticks, Brown dog ticks, Lone star ticks and mosquitoes. This is a pesticide. | Imidacloprid + Permethrin | Imidacloprid- see Advantage Permethrin- interrupts sodium ion flow in insects and arachnids, causing paralysis and death | Once monthly | EPA |
| Capstar | A pill that can be given whenever <u>adult fleas</u> are seen on pet. Starts to work within 30 minutes and kills ninety percent of fleas within 4 hours. Best when used in combination with Sentinel or Program to break flea life cycle and control populations in your home. Not a pesticide. | Nitenpyram | Interferes with normal nerve transmission in insects by binding and inhibiting insect-specific nicotinic acetylcholine receptors. | Whenever adult fleas are seen, no more than once daily | FDA |
| Program Injectable | A flea product for cats injected by a veterinarian that <u>lasts for 6 months</u> . Recommended in combination with an adulticide flea product such as Capstar. | Lufenuron | Prevents hatching of flea eggs deposited by females who have ingested blood of a treated cat. The female's eggs will be sterile because Lufenuron inhibits chitin formation, which makes up the external skeleton of fleas. | One injection lasts six months | FDA |
| Sentinel | A flavored tablet for dogs that prevents Heartworm disease, the hatching of <u>flea eggs</u> and also controls adult populations of roundworms, whipworms and hookworms. Is recommended in combination with a flea adulticide to break the life cycle. | Lufenuron + Milbemycin oxime | Lufenuron prevents hatching of flea eggs by inhibiting formation of their external skeleton (see above). Milbemycin oxime is believed to act by interfering with invertebrate neurotransmission, which eliminates the tissue stage of heartworm larvae and the adult stage of hookworm, roundworm and whipworm. | Once monthly | FDA |
| Frontline Plus | A flea, tick and chewing lice product for cats that is applied topically. Kills 100% of fleas within 18 hours of application and kills 100% of ticks within 48 hours. Frontline kills <u>adult fleas</u> , <u>flea eggs</u> and <u>flea larvae</u> for up to six weeks. This is a pesticide. | Fipronil + Methoprene | Fipronil disrupts the insect's central nervous system by blocking the passage of chloride ions through the GABA receptor, an inhibitor of the central nervous system. This causes hyperexcitation of the nerves and muscles of the insect. Methoprene is an insect growth regulator that prevents eggs from developing into adult fleas by overloading them with a Juvenile hormone mimic so they die in the immature stage. | Once monthly | EPA |