BASF
We create chemistry

Termidor® Termiticide/Insecticide: Just the Facts

What is Termidor® Termiticide/Insecticide?

- **America's number one choice** for termite and ant control.
- Pest Management Professionals (PMPs) have relied on Termidor termiticide/insecticide to protect over 8 million homes since it was first introduced in 2000. **Fig. 1**.
- Termidor termiticide/insecticide can be used as a preventive and/or curative solution against subterranean termites and a range of other pests.
- Since 1995, fipronil has been used around the world to control fleas, ticks and other household pests, and used on agricultural crops to protect food supplies from insect damage.

How Termidor Termiticide/Insecticide Works

- Fipronil, the active ingredient in Termidor termiticide/insecticide, is an IRAC Group 2B, phenylpyrazole insecticide, that blocks GABA regulated chloride channels interfering with the insect's central nervous system.
- When used at EPA-approved dilution rates, Termidor termiticide/insecticide's nonrepellent formulation is undetectable to termites' acute sense of smell and taste (Hu 2005).
- Termites are not repelled by Termidor termiticide/insecticide treated zones in and around structures. As termites unknowingly tunnel through treated zones, it allows

  Termidor termiticide/insecticide to start working immediately (Bagneres et al. 2009, Shelton and Grace 2003), and confidently protect a structure within 90 days. **Fig. 2-B**.

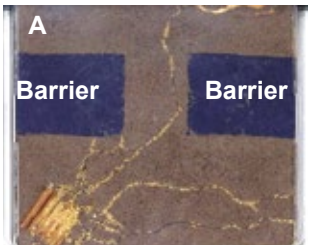

Fig. 2-A. Pyrethroid applications create treatment barriers around structures that termites can detect and avoid. Gaps in the treatment create entry points for termites.

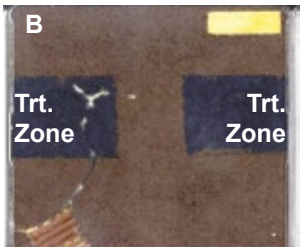

Fig. 2-B. Termidor termiticide/insecticide applications create non-repellent treatment zones around structures, which allow termites to unknowingly forage into these areas, thus acquiring a lethal dose.

BASF internal study. Dr. Philip G. Koehler. UF.

Fig. 1. Termidor termiticide/insecticide delivers peace of mind.

Leading Innovation

At BASF, innovation plays an important role and provides Pest Management Professionals (PMPs) with the most advanced termite treatment products and tools.

2020

2018
- Termidor® HPII High Precision Termiticide

2017
- Termidor® SC Termiticide/Insecticide Our Commitment to stewardship by updating CA Label Changes

2016
- Termidor® Restoration
- Termidor® Foam Termiticide/ Insecticide in CA

2015
- Termidor® SC & 80WG Termiticide/Insecticide
- Supplemental labels:
  - 4 times/year at lower rate
  - Use with non-borate
  - Wood infesting pests

2012
- Termidor® HP High Precision Termiticide
- Termidor® HP High Precision Injection System

2010
- Termidor® Dry Termiticide
- Termidor® Foam Termiticide/ Insecticide

2007
- Perimeter Pest Control
- Termidor® NY

2004
- 10 Year Pledge
- PerimeterPlus Exterior Perimeter Localized Interior (EP/LI)

2002
- Ant control added to label

2000
- U.S. Market Launch
- 5 Year Pledge

1999
- First U.S. registration
- Termidor® SC Termiticide/Insecticide
- Termidor® 80WG Termiticide/Insecticide

1994
USDA/FS Termite Testing Began

Termidor Termiticide/Insecticide Transfer Effect

- When a termite ingests or touches Termidor termiticide/insecticide, the termite becomes a carrier/donor termite capable of transferring Termidor termiticide/insecticide to other recipient termites it contacts.
- These recipient termites in turn become secondary carriers/donors, and through their natural social behaviors they can continue transferring Termidor termiticide/insecticide with detrimental results to the colony (Wang et al. 2013).
- Behavioral studies show Termidor termiticide/insecticide is slow acting (Hu 2005), allowing exposed individual termites time to transfer it within the colony. Termites exposed to Termidor termiticide/insecticide behave normally over a short period of time before showing toxic effects and then dying, which is critical to ensure the Termidor termiticide/insecticide Transfer Effect.

Termite Behavior and Transfer Effect

- Passive transfer: (**Fig. 3.**)
  - Contact between individuals
- Active transfer: (**Fig. 3.**)
  - Mutual grooming
  - Trophallaxis
  - Coprophagy
  - Necrophagy
  - Necrophoresis
  - Cannibalism

Fig. 3.
Termites social behavior.

- Research conducted at Le Centre National de la Recherche Scientifique (CNRS) in France using Carbon 14 radio-labeled fipronil showed the Transfer Effect on termites (Bagneres et al. 2009):
  - **Transfer by Contact**
    Termites that encountered Termidor termiticide/insecticide-treated soil transferred fipronil to other nest mates. When exposed termites were mixed with non-exposed termites, all termites carried the radio labeled fipronil within two days. By four days after exposure, all termites were dead.
  - **Transfer by Ingestion**
    Termites fed filter paper impregnated with radio-labeled fipronil were able to transfer fipronil to non-exposed nest mates via trophallaxis. Feeding on fipronil-treated paper killed 50% of the tested termites within seven days.

Fig. 4. Termidor termicide/insecticide treatment during an EUP study.

Why Termidor Termiticide/Insecticide

- Termidor termiticide/insecticide is one of the most thoroughly tested and reviewed termite control products in history.
- U.S. Department of Agriculture Forest Service (USDA-FS) thoroughly evaluates termiticides for federal and state registration. Finalized results of USDA-FS testing on Termidor termicide/insecticide show:
  - Termidor termiticide/insecticide outperformed all other professional termite control products, providing effective, long-lasting control and protection against termites.
  - Untreated control plots that were placed near Termidor termiticide/insecticide treated plots were also impacted. This had not happened in prior USDA-FS testing.
  - Results support the Transfer Effect of Termidor termiticide/insecticide from exposed to non-exposed termites in untreated areas.
  - One hundred percent termite control (four different site locations) for at least 10 years in concrete slab tests (in some cases 15 years).
  - One hundred percent termite control (four different site locations) for at least five years in ground board tests (96% control through 11 years after treatment).
- Extensive Experimental Use Permit (EUP) field trials with university and private researchers: Four separate EUP studies with 647 subterranean termite infested structures across 22 states had termite-infestations controlled within three months or less of Termidor termiticide/insecticide treatment and were protected from further infestation through five or more years after treatment (end of studies). **Fig. 4**.
- Great treatment efficacy: Retreatment rates for Termidor termiticide/insecticide full conventional and EP/LI treatments are 1% or less. This compares extremely favorably vs. historic retreatment rates for pyrethroids and organophosphates (>20%) and neonicotinoid (>5%) full conventional treatments (Potter and Hillery 2000, 2002, 2003).
- Termidor termiticide/insecticide's active ingredient, fipronil, has a low water solubility, virtually no volatility and binds very tightly to the organic matter and clay in soils (Holmes and Castle 2005). Termidor termiticide/insecticide remains in the soil where it is applied and isn't moved by leaching, even in areas of high precipitation (Keefer and Gold 2014).
- Regardless of the number of termite colonies associated with a structure, a Termidor termiticide/insecticide treatment protects the value of the home and ensures it will remain termite free for years to come.

www.pestcontrol.basf.us

Product Stewardship is everybody's responsibility.
Always read and follow label directions.

BASF
We create chemistry