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Termites: How to Identify and Control Them

Does termite damage worry you? If so, you are not alone. Every year termites cause billions of dollars in structural damage, and property owners spend over two billion dollars to treat them. This fact sheet focuses on how you, as a consumer, can identify and help protect your property from termites through effective prevention measures and appropriate use of termite treatments.

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How do I Know if I Have Termites?

The first step in prevention is to be on the alert for termites. Termites rarely emerge from soil, mud tubes, or food sources through which they are tunneling. Most people are not aware they have termites until they see a swarm or come across damage during construction. Some of the ways to discover if you have termites are listed below:

- Examine, by probing, exposed wood for hollow spots (using a flathead screwdriver or similar tool).
- Identify termite swarms (sometimes ant swarms are mistaken as termites).

Ants



- front wings longer than the hind wings
- antennae bent at ninety degree angle

Termites



- wings are roughly equal in length
- antennae are straight; may droop

The most common form of termite in most of the United States is the [native subterranean termite](#). EXIT Other, less common, types of termites include the smaller [drywood termite](#) EXIT and the invasive [Formosan termite](#).

How Can I Prevent Termite Infestation?

Make the Structure Less Attractive to Termites

During construction, use a concrete foundation and leave a ventilation space between the soil and wood. Cover exposed wood surfaces with a sealant or metal barrier.

Maintain the Termite Prevention Features

- After construction, keep the soil around the foundation dry through proper grading and drainage (including maintenance of gutters and downspouts).
- Reduce openings that offer termites access to the structure (filling cracks in cement foundations as well as around where utilities pass through the wall with cement, grout, or caulk).
- Fix leaks immediately.
- Keep vents free from blockage, including plants.
- Ensure that trees and shrubs are not planted too close to the structure and do not allow them to grow against exposed wood surfaces.
- Do not pile or store firewood or wood debris next to the house.
- Inspect periodically to help ensure that termite colonies do not become established.

What are the Different Types of Termite Treatments?

Non-Chemical Treatments

Some ways to keep termites out do not involve the application of insecticides. For example:

- One such method is a physical barrier, typically incorporated during construction.
- Steel mesh and sands of particular sizes have been shown to perform effectively as physical barriers.
- Biological control agents (nematodes and fungi) have demonstrated some success, particularly in laboratory settings.

Because these methods do not involve the application of an insecticide, EPA does not regulate them.

Chemical Treatments

Before a company can sell or distribute any pesticide in the United States, other than certain [minimum risk pesticides](#), EPA must review studies on the pesticide to determine that it will not pose unreasonable risks to human health or the environment. Once we have made that determination, we will license or register that pesticide for use in strict accordance with label directions. The pesticides used for the prevention or treatment of termite infestations are called termiticides and must demonstrate the ability to provide structural protection before we register them. In most cases, termiticide application can only be properly performed by a trained pest management professional.

Approved treatments include:

- Liquid soil-applied termiticides.
- Termite baits.
- Building materials impregnated with termiticides.
- Wood treatments.

Two common forms of treatment are conventional barrier treatments and termite baits.

Conventional Barrier Treatments

The most common technique for treating termite infestations is the soil-applied barrier treatment. Termiticides used for barrier treatments must be specifically labeled for that use.

If conducted improperly, these treatments can cause contamination of the home and surrounding drinking water wells and will not protect against termites. For that reason, it is important to hire a pest management professional who is licensed and trained to take proper precautions. The most common active ingredients found in conventional termiticides are:

- [Acetamiprid](#)
- [Bifenthrin](#)
- [Chlorantraniliprole](#)
- [Chlorfenapyr](#)
- [Cyfluthrin](#)
- [Cypermethrin](#)
- [Esfenvalerate](#)
- [Fipronil](#). Also see [general fact sheet on fipronil \(PDF\)](#) (3 pp, 390.9 K, [About PDF](#)) EXIT
- [Imidacloprid](#). Also see [general fact sheet on imidacloprid \(PDF\)](#) (3 pp, 405.8 K) EXIT
- [Permethrin](#). Also see [general fact sheet on permethrin](#) EXIT

Also see our Web page on [pyrethroids and pyrethrins](#) for general information on the pesticides in this class and our reevaluation process for them.

Termite Baits

In recent years, several bait systems have been introduced to help reduce the overall use of insecticides and their impact on human health and the environment. These systems rely on cellulose baits that contain a slow-acting insecticide.

The most common active ingredients found in termite baits are:

- [Diflubenzuron](#) - inhibits insect development.
- [Hexaflumuron](#)- first active ingredient registered as a reduced-risk pesticide. It is used as part of a termite inspection, monitoring, and baiting system. Also see [general fact sheet \(PDF\)](#) (3 pp, 248.46 K) EXIT
- [Hydramethylnon \(PDF\)](#) (5 pp, 150.66 K) EXIT - insecticide used to control ants, cockroaches, crickets, and termites. (Also see information on [hydramethylnon regulatory status](#).)
- [Lufenuron](#)- an insect growth regulator used to control termites and fleas.
- [Noviflumuron \(PDF\)](#) (6 pp, 97.8 K)- disrupts termite growth and activity.

Wood Treatment

- [Borates](#) - commonly used as a spray on application during new home construction to protect wood.

Are Pesticides Used Against Termites Safe?

As the federal agency responsible for regulating all pesticides, including termiticides, sold, applied, or distributed in the United States, EPA must ensure that the pesticide, when used according to label directions, meets current safety standards to protect human health and the environment. To make such determinations, we require more than 100 different scientific studies and tests from applicants. Most states also review the pesticide label to ensure that it complies with federal labeling requirements and any additional state restrictions of use.

Many termiticides are highly toxic, making it critical to follow label directions with added care. Pest management professionals have the knowledge, expertise, and equipment as required by the label, which minimizes risks and maximizes effectiveness.

How do I Handle a Termite Infestation?

- **Choose a pest control company carefully** - Firms offering termite services must be licensed by your state. Ask to see the company's license and, if you have any concerns, call your [state pesticide regulatory agency](#) EXIT . Please read our [Citizen's Guide to Pest Control](#)

[& Safety](#) for more tips on how to choose a company that will do a good job.

- **Read the pesticide product label** - The label tells you exactly how the product is to be used and provides information on potential risks. If the label does not include directions to control termites and protect the structure, then the product is not intended to protect the structure against termites and should not be applied. If you wish to see a copy of the product label, ask the company representative for a copy.
- **Be aware of the how soon you can return to the treated residence** - The time required before the residence can be reoccupied will vary by product and will be indicated on product labels. Make sure the applicator has told you when you are allowed to reenter the building.

What if Something Goes Wrong?

To register a complaint concerning a pesticide misapplication, contact your [state pesticide regulatory agency](#) EXIT . You may also want to call the [National Pesticide Information Center's \(NPIC\)](#) EXIT toll-free hotline at 1-800-858-7378. NPIC provides experts who can answer a broad range of questions concerning pesticide-related issues, such as product use and health effects.

What is the Government's Role in Termite Control?

- [EPA's Office of Pesticide Programs](#) provides information and tools to federal, state, local agencies and the public on termite control.
 - Our rigorous [pesticide review process](#) is designed to ensure that registered termiticides used according to [label directions](#) and precautions can effectively treat termite infestations with minimal risk.
 - We serve as a source of information about pesticide and non-pesticide controls to the general public, news media, and state and local agencies.
 - We encourage termite prevention efforts.
 - We have stringent standards for the registration and use of termite control products.
 - We require a minimum number of years of proven effectiveness and certain label statements before we register termite products (See [Pesticide Registration Notice 96-7](#) and [OCSPP Harmonized Test Guidelines 810.3600 and 810.3800](#) for more information.)
 - Products that only claim to kill termites have not demonstrated the ability to protect structures against termites. These products are only intended to kill termites that directly contact the pesticide, not the whole infestation.
- The U.S. Department of Agriculture has several termite research and control programs.
 - Provides invaluable [research on different termite control treatments and technologies](#).
 - The U.S. Forest Service provides [research support related to termites](#).
 - They publish [news and events](#) for the public on termites and termite control.
 - The National Invasive Species Information Center has information on [Formosan Subterranean Termites](#).
 - USDA funds Louisiana State University [termite programs](#) on termites and [Formosan Subterranean Termites](#).
- [State and local government agencies](#) EXIT play a critical role in termite control by:
 - regulating (licensing) pest control companies and testing pest management professionals
 - providing consumer advice and information sheets on various structural pests

Where Can I Get More Information?

National Pesticide Information Center (NPIC)

Tel: 1-800-858-7378

[E-mail](#)

[NPIC's website](#) EXIT

[Termite Resource Guide](#) EXIT

[State Pesticide Regulatory Agencies](#) EXIT

[State Cooperative Extension Service Offices](#)

EPA's Office of Pesticide Programs

[Ask a question](#)

LAST UPDATED ON JUNE 16, 2017