

241-392

10/19/2006

1/13



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OCT 19 2006

Mr. Daniel J. O'Byrne  
BASF  
26 Davis Drive  
Research Triangle Park, NC 27709-3528

Dear Mr. O'Byrne:  
Subject: Phantom® Termiticide-Insecticide  
EPA Reg. No. 241-392  
Submission dated 9/22/06

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comments listed below.

1. On page 2, move the heading "To Contain a Spill" so that it immediately precedes the directions on how to contain a spill.
2. Pre-construction use is acceptable at the 0.25% dilution only. Remove all references to 0.125% dilution from the pre-construction directions.
3. On page 4, in the section on Mixing Small Volumes of Finished Dilution, insert "of Phantom" after 0.75 fl. oz. so that it reads "...0.75 fl. oz. of Phantom per gallon of water..."
4. On page 6, clarify whether the first sentence of the second paragraph under "Post Construction Soil Treatment" is a heading or part of a directive.
5. On page 6, delete from the second paragraph under "Post Construction Soil Treatment" the following sentence:  
"The actual depth of treatment will vary depending on soil type, degree of compaction and location of termite activity."
6. On page 7, revise the second sentence under #3 of the Treated Backfill Method to read as follows:  
"Prior to using this technique near wells or cisterns, consult federal, state, county or local agencies, including the state Wellhead Protection Program, for information regarding approved treatment practices in your area."

2/13

7. On page 7, in the section on "Basements -- Inside Perimeter" delete the sentence "Use rod to treat soil to desired depth."
8. On page 7, review the first sentence on sub-slab injection for clarity and revise if appropriate.

Submit one copy of the revised label for approval prior to releasing the product for shipment. If you have questions, please call Ann Sibold at 703 305-6502.

A copy of the efficacy review is attached.

Sincerely,

*Ann Sibold*  
for Richard Gebken  
Product Manager 10  
Insecticide Branch  
Registration Division (7505P)

3/13



The Chemical Company

ACCEPTED  
with COMMENTS  
In EPA Letter Dated:  
OCT 19 2006

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
241-392



# PHANTOM®

## TERMITICIDE-INSECTICIDE

For sale to, use and storage only by individuals/firms licensed or registered by the state to apply termiticide and/or general pest control products.

**Active Ingredient:**

Chlorfenapyr: 4-bromo-2-(4-chlorophenyl)-1-(ethoxymethyl) 5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile .....	21.45%
<b>Inert Ingredients:</b> .....	<u>78.55%</u>
<b>Total:</b> .....	100.00%

1 gallon contains 2.0 pounds of active ingredient.

EPA Reg. No. 241-392

U.S. Patent No. 5,010,098

EPA Est. No. \_\_\_\_\_

### KEEP OUT OF REACH OF CHILDREN. CAUTION/PRECAUCIÓN

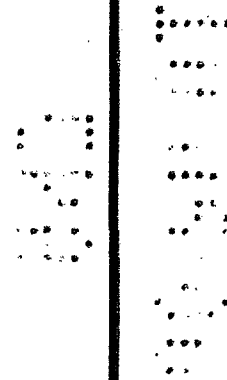
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand this label, find someone to explain it to you in detail.)

See Next Page for Additional Precautionary Statements

For Additional Product Information,  
Visit [www.pestcontrolfacts.com](http://www.pestcontrolfacts.com)

Net contents: \_\_\_\_\_

BASF Corporation  
Agricultural Products  
26 Davis Drive  
Research Triangle Park, NC 27709



### FIRST AID

<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357)**

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

##### CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Causes moderate eye irritation. **DO NOT** get in eyes, on skin, or on clothing. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash clothing before reuse.

##### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for **Category C** on an EPA chemical resistance category selection chart.

##### All pesticide handlers (mixers, loaders and applicators) must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves such as barrier laminate, butyl rubber or nitrile rubber, neoprene, or polyvinyl chloride (PVC), or viton (≥14 mils).
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

In addition, all termiticide handlers must wear a dust/mist filtering respirator (MSHA/NIOSH Approved Number Prefix TC-21C) or a NIOSH approved respirator with any N, R, P or HE filter, when working in a non-ventilated space, including but not limited to crawl-spaces and basements; all termiticide handlers must wear protective eyewear

when working in a non-ventilated space when applying termiticide by rodding or sub-slab injection.

#### User Safety Recommendations

##### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove contaminated clothing. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

##### Environmental Hazards

This pesticide is toxic to aquatic organisms, birds and wildlife. **DO NOT** apply directly to water or to areas where surface water is present or intertidal areas below the mean high water mark. **DO NOT** contaminate water by cleaning of equipment or when disposing of equipment washwaters or rinsate.

##### Physical or Chemical Hazards

**DO NOT** apply this product around electrical equipment due to the possibility of shock hazard.

##### Storage and Disposal

**DO NOT** contaminate water, food, or feed by storage or disposal.

##### To Contain a Spill:

- **Pesticide Storage:** Store in original container in secure dry storage area. **DO NOT** store below 32 degrees F. **DO NOT** store in direct sunlight or heat.

In case of spills, avoid contact and isolate area. To confine spills, dike surrounding area or absorb with sand, cat litter, commercial clay, gel or similar absorbents.

- **Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
- **Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**DIRECTIONS FOR USE**

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at the time of pesticide application.

For sale to, use and storage only by individuals/firms licensed or registered by the state to apply termiticide and/or general pest control products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the structural pest control regulatory agency of your state prior to use of this product.

**USE DIRECTIONS FOR TERMITE CONTROL**

**GENERAL PRECAUTIONS FOR TERMITICIDE APPLICATIONS**

When treating adjacent to an existing structure, the applicator must check the area to be treated, and immediately adjacent areas of the structure for visible and accessible cracks and holes to prevent any leaks or significant exposures to persons occupying the structure. People present or residing in the structure during application must be advised to remove their pets and themselves from the structure if the applicator or residents see any signs of leakage. After application, the applicator is required to check for leaks. All leaks resulting in the deposition of termiticide in locations other than those prescribed on this label must be cleaned up prior to leaving the application site. **DO NOT** allow people or pets to contact contaminated areas or to reoccupy contaminated areas of the structure until the clean up is completed.

All holes drilled in concrete slabs in commonly occupied areas into which termiticide has been applied must be plugged. Plugs must be of a non-cellulose material or covered by an impervious, non-cellulose material. **DO NOT** make treatment beneath slabs or similar floorings until the locations of heat or air conditioning ductwork, vents, water and sewer lines, and electrical lines/conduits are known and identified. Use extreme caution to avoid puncturing and contaminating these utilities.

When treating crawl spaces or plenum-type structures, turn off any air circulation system that moves air from the area to be treated to an untreated interior space of the structure until application has been completed and all **PHANTOM<sup>®</sup> termiticide-insecticide** has been absorbed by the soil.

**DO NOT** contaminate wells or cisterns. Consult the appropriate section of this label as well as state/local specifications for recommended distances of wells from treated area, or if such regulations do not exist, refer to Federal Housing Administration (H.U.D.) Specifications for guidance.

Use anti-backflow or air gap equipment with filling hoses. **DO NOT** contaminate public or private water supplies. Consult state, federal, or local authorities for information regarding the approved treatment practices for areas in close proximity to potable water supplies.

**DO NOT** treat within a distance of one foot out from the drip line of edible plants.

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR PEST CONTROL.**

6/13

## GENERAL INFORMATION

In order to maximize the termite potency of **PHANTOM® termiticide-insecticide** it should be applied in a manner to provide a continuous treated zone to prevent termites from attacking the wood to be protected.

**PHANTOM** is effective on *Reticulitermes* spp. (*R. flavipes*, *R. virginicus*, *R. hageni*, *R. tibialis*, *R. hesperus*), *Coptotermes* spp. (*C. formosanus*), and *Heterotermes* spp. (*H. aureus*).

The objective of soil treatments with **PHANTOM** is to establish a treated zone (horizontal and/or vertical as needed) between the wood and other cellulose material in the structure and the termite population(s) in the soil for the purpose of protecting the structure from termite infestation and/or for controlling existing termite populations. Treatment standards for subterranean termite control may vary due to state/local regulations, treatment procedures, soil types, construction practices and other factors. Follow all federal, state, and local regulations and treatment standards for protection of a structure from subterranean termites. Observe industry good management practices.

Where aerial infestations or above-ground nests are detected within the structure, supplemental treatments to control termites in the structure (see **Above Ground Termite Infestations** section of this label), and/or structural repairs to deprive the termites of a moisture source may be needed.

For advice concerning current control practices, consult resources in structural pest control, state cooperative extension or regulatory agencies.

## MIXING DIRECTIONS

Dilution Table:

Desired Dilution Concentration*	Amount of PHANTOM to make 100 gallons of finished dilution		Amount of PHANTOM to make 1 gallon of finished dilution	
	fl oz	L	fl oz	ml
0.25%	150 fl oz (1.2 gal)	4.4 L	1.5 fl oz	44 ml
0.125%	75 fl oz	2.2 L	0.75 fl oz	22 ml

\*Percentage weight of active ingredient to weight of spray dilution

### For Mixing Small Volumes of Finished Dilution

For termite control operations requiring smaller volumes, use 1.5 fl oz of **PHANTOM** per gallon of water to achieve a 0.25% concentration; use 0.75 fl oz per gallon of water to achieve a 0.125% concentration. Mix the termiticide use dilution in the following manner:

- 1) Fill hand-pressurized or power-operated application equipment with 1/2 to 3/4 of the required amount of water. Filling hose must be equipped with an anti-backflow device or water flow must include an air gap to protect against back siphoning.
- 2) Measure the required amount of **PHANTOM**.

3) Add **PHANTOM** to the sprayer and fill with the remainder of the water.

- 4) Close sprayer and agitate to insure proper suspension.
- 5) Re-agitate sprayer before use if spraying is interrupted.

### For Mixing Large Volumes of Finished Dilution

For dilution quantities greater than one gallon, the amount of **PHANTOM** to add may be determined by multiplying the quantity of **PHANTOM** specified for a particular dilution rate for a one-gallon dilution by the total dilution size. For example to make a 50-gallon dilution of a 0.125% dilution, multiply 50 x 0.75 fl oz = 37.5 fl oz. Then mix 37.5 fl oz of **PHANTOM** to enough water to make a total 50 gallon dilution. For termite control operations requiring 100 gallons of finished dilution, prepare a 0.25% dilution by mixing 1.2 gallons of **PHANTOM** with 98.8 gallons of water; or prepare a 0.125% dilution by mixing 75 fluid ounces (fl oz) of **PHANTOM** with 99.4 gallons of water. Mix the termiticide use dilution in the following manner:

1. Fill the tank with water until it is 1/4 to 1/3 full. Filling hose must be equipped with an anti-backflow device or water flow must include an air gap to protect against back siphoning.
2. Start pump to begin by-pass agitation and place end of treating tool in tank to allow circulation through hose.
3. Add the appropriate amount of **PHANTOM** (see **Dilution Table** above).
4. Add remaining amount of water to the tank.
5. Let pump run and allow recirculation through the hose for 2 or 3 minutes.

### Application Volume

To provide maximum control of and protection against termite infestations, apply the specified volume of **PHANTOM** dilution and active ingredient as set forth in the directions for use. If soil will not accept the labeled application volume, the volume may be reduced provided there is a corresponding increase in concentration so that the amount of active ingredient applied to the soil remains the same. **Note:** Large reductions of application volume reduce the ability to obtain a continuous treated zone. Variance is allowed when volume and concentration are consistent with label directed rates and a continuous treated zone can still be achieved. At reduced application volume; it may be necessary for the applicator to space rod and/or drill holes closer than 12 inches apart to create a continuous treated zone. **DO NOT** treat soil that is water saturated or frozen or in any conditions where run-off or movement from the treatment area (site) is likely to occur. **DO NOT** make outdoor treatments while precipitation is occurring that could result in run-off from the treated area.

### In-line Injection

For proper use of **PHANTOM** with in-line injection equipment refer to the use instructions for the injection equipment. Apply the specified volume of **PHANTOM** dilution and active ingredient as set forth in the **Directions for Use** on this label.

7/13

## PRE-CONSTRUCTION TREATMENT

**DO NOT APPLY AT A LOWER DOSAGE AND/OR CONCENTRATION THAN SPECIFIED ON THIS LABEL FOR APPLICATIONS PRIOR TO INSTALLATION OF THE FINISHED GRADE.**

Prior to each application, applicators must notify the general contractor, construction superintendent, or similar responsible party, of the intended **PHANTOM<sup>®</sup> termiticide-insecticide** application and intended sites of application and instruct the responsible person to notify construction workers and other on site individuals to leave the treatment area and not return until **PHANTOM** has been absorbed into the soil.

### General:

Pre-construction treatments are defined to include treatments made during all phases of construction up to and including installation of the final grade.

### Concrete Slab-on-Ground:

#### Horizontal Treated Zones

Apply a 0.25% dilution of **PHANTOM** to the entire surface of soil or substrate to be covered beneath the concrete slab. This includes the slab under the actual living area, plus carports, porches, basement floors, and any extended entrances. Make this treatment at the rate of 1 gallon finished dilution per 10 square feet. Make these applications using a coarse spray nozzle and low-pressure spray (less than 25 p.s.i.), spraying the dilution evenly and uniformly over the entire area treated.

#### Vertical Treated Zones

Prior to pouring the concrete slab, apply a 0.25% **PHANTOM** dilution along the inside of foundation walls of floating and supported slabs and around plumbing, bath traps, utility services, and other features that will penetrate the slab. Apply 4 gallons of finished dilution per 10 linear feet per foot of depth.

During or soon after completion of the final grading, apply a 0.125% or 0.25% dilution of **PHANTOM** along the outside foundation perimeter at the rate of 4 gallons finished dilution per 10 linear feet, per foot of depth, or if the footing is more than 4 feet below grade, to a minimum depth of 4 feet below grade.

Apply vertical treatments by trenching or trenching and rodding using low pressure spray equipment (less than 25 p.s.i. at the nozzle.

- Rod holes and trenches must not extend below the bottom of the footing.
- Rod holes must be spaced so as to achieve a continuous treated zone but in no case more than 12 inches apart.
- Trenches must be a minimum of 6 inches deep or to the bottom of the footing, whichever is less, and need not be wider than 6 inches. When trenching in sloping (tiered) soil, the trench must be stepped to ensure adequate distribution and to prevent termiticide from

running off. The finished dilution should be mixed with soil as it is replaced in the trench.

### Crawl Spaces:

For the interior areas of crawl spaces, apply a vertical treatment of a 0.25% dilution of **PHANTOM** along the inside foundation perimeter and around all piers and pipes. Apply 4 gallons of finished dilution per 10 linear feet per foot of depth.

During or soon after completion of the final grading, apply a 0.125% or 0.25% dilution of **PHANTOM** along the outside foundation perimeter at the rate of 4 gallons finished dilution per 10 linear feet, per foot of depth, or if the footing is more than 4 feet below grade, to a minimum depth of 4 feet below grade.

Apply by trenching or trenching and rodding using low pressure spray equipment (less than 25 p.s.i. at the nozzle.

- Rod holes and trenches must not extend below the bottom of the footing.
- Rod holes must be spaced so as to achieve a continuous treated zone but in no case more than 12 inches apart.
- Trenches must be a minimum of 6 inches deep or to the bottom of the footing, whichever is less, and need not be wider than 6 inches. When trenching in sloping (tiered) soil, the trench must be stepped to ensure adequate distribution and to prevent termiticide from running off. The finished dilution should be mixed with soil as it is replaced in the trench.

When treating foundations deeper than 4 feet, apply the termiticide as the backfill is being replaced, or if the construction contractor fails to notify the applicator to permit this, treat the foundation to a minimum depth of 4 feet after the backfill has been installed. The applicator must trench and rod into the trench or trench along the foundation walls and around pillars and other foundation elements, at the rate prescribed from grade to a minimum depth of 4 feet. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. However, in no case should a structure be treated below the footing.

### Hollow Block Foundation or Voids:

Hollow block foundations or voids in masonry resting atop the footing may be treated in order to create a continuous treatment zone in the area to be treated. Applicators may drill and treat into voids of masonry elements if not openly accessible. Apply at the rate of 2 gallons of finished dilution per 10 linear feet using a nozzle pressure of 25 p.s.i. or less. When using this treatment, access holes may be drilled below the sill plate and should be as close as possible to the footing as is practical. Treatment of voids in block or rubble foundation walls must be closely examined: Applicators must inspect areas of possible runoff as a precaution against application leakage in the treated areas. Some areas may not be treatable or may require mechanical alteration prior to treatment.

8/13

All leaks resulting in the deposition of **PHANTOM® termiticide-insecticide** in locations other than those prescribed on this label must be cleaned up prior to leaving the application site. **DO NOT** allow people or pets to contact contaminated areas or to reoccupy the contaminated areas of the structure until the clean up is completed.

**Not for use in voids insulated with rigid foam.**

### **POST-CONSTRUCTION SOIL TREATMENT**

#### **General Directions for Soil Treatments:**

**DO NOT** make treatment beneath slabs or similar floorings until the locations of heat or air conditioning ductwork, vents, water and sewer lines, and electrical lines/conduits are known and identified. Use extreme caution to avoid puncturing and contaminating these utilities.

For applications made after the final grade is installed for the purpose of protecting the structure from termite infestation and/or for controlling existing termite populations. The applicator must trench and rod into the trench or trench along the foundation and around pillars and other foundation elements, at a rate prescribed from grade to the top of the footing. When footing is more than four (4) feet below grade, the applicator must trench and rod into the trench or trench along the foundation walls at the rate prescribed to a minimum depth of four (4) feet. The actual depth of treatment will vary depending on soil type, degree of compaction, and location of termite activity. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing; dig a trench alongside the footing taking care not to undermine the footing. However, in no case should a structure be treated below the footing. When soil type and/or conditions make trenching prohibitive, rodding alone may be used with rod holes no more than 12 inches apart.

Exterior concrete structures adjoining the foundation, such as patios, porches and sidewalks, may be drilled followed by treatment by sub-slab injection of the **PHANTOM** dilution in order to complete the exterior perimeter treatment zone along the foundation wall.

**NOTE:** Read and follow the mixing and use directions section of the label if situations are encountered where the soil will not accept the full application volume.

#### **Accessible Crawl Spaces:**

**BEFORE TREATMENT:** Turn off any air circulation system that moves air from area to be treated to an untreated interior space of the structure until application has been completed and all **PHANTOM** has been absorbed by the soil.

For crawl spaces, apply vertical termiticide treatments at the rate of 4 gallons of dilution per 10 linear feet per foot of depth from grade to the top of the footing, or if the footing is more than 4 feet below grade, to a minimum depth of 4 feet. Apply by trenching and rodding into the trench, or trenching. Treat both sides of the foundation and around all piers and pipes.

When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. Read and follow mixing and use directions on this label if situations are encountered where the soil will not accept the full application volume.

1. Rod holes and trenches must not extend below the bottom of the footing.
2. Rod holes must be spaced so as to achieve a continuous treated zone, but in no case more than 12 inches apart.
3. Trenches must be a minimum of 6 inches deep or to the bottom of the footing, whichever is less, and need not be wider than 6 inches. When trenching in sloping (tiered) soil, the trench must be stepped to ensure adequate distribution and to prevent dilution from running off. The **PHANTOM** dilution must be mixed with the soil as it is replaced in the trench.
4. When unsupported termite tubes are present, mechanically destroy each tube and make a horizontal treatment by applying approximately 1 gallon of dilution per square foot, treating an area of no more than 18 inches in diameter where the tubes emerge from the soil.

#### **Inaccessible Crawl Spaces:**

**BEFORE TREATMENT:** Turn off any air circulation system that moves air from the area to be treated to an untreated interior space of the structure until application has been completed and all **PHANTOM** has been absorbed by the soil.

For inaccessible interior areas, such as areas where clearance between floor joists and ground surfaces is insufficient to allow operator access, excavate, if possible, and treat according to the instructions for **Accessible Crawl Spaces** (above). Otherwise, apply one, or a combination of the following two methods.

1. To establish a horizontal treated zone, apply dilution to the soil surface at a rate of 1 gallon of dilution per 10 square feet using low pressure (less than 25 p.s.i. at the treating tool when valve is open) and a coarse application nozzle (e.g. Delavan Type RD **Raindrop®**, RD-7 or larger, or Spraying Systems Co. 8010LP **TeeJet®** or comparable nozzle). For an area that cannot be reached with the application wand, use one or more extension rods to make the application to the soil. **DO NOT** broadcast or power spray with higher pressures.
2. To establish a horizontal treated zone, drill through the foundation wall or through the floor above and treat the soil perimeter at a rate of 1 gallon of dilution per 10 square feet. Drill spacing must be at intervals not to exceed 16 inches; many states have smaller intervals so check state regulations which may apply.



**Slab-on-Ground (Including Monolithic, Floating and Supported Concrete Slabs):**

**EXTERIOR PERIMETER** - Apply by trenching and rodding into the trench or trenching around the foundation at the rate of 4 gallons finished dilution per 10 linear feet per foot of depth, or if the footing is more than 4 feet below grade, to a minimum depth of 4 feet. Trenches must be a minimum of 6 inches deep or to the bottom of the footing and need not be wider than 6 inches. The finished dilution should be mixed with the soil as it is replaced in the trench. Rod holes must be spaced so as to achieve a continuous treated zone but in no case more than 12 inches. However, in no case should the structure be treated below the footing.

**SUB-SLAB INJECTION** - Sub-slab injection treatments can be made from inside the structure or in cases where by drilling through the foundation from the outside as directed below. Prior to making any treatments, locate all heating/air conditioning ducts, vents, water/sewer lines, and electrical lines/conduit.

• **Vertical Drilling/Injection** - To treat under the slab, drill vertically through the slab along the interior perimeter of the foundation, including the garage. Drill holes along all concrete expansion joints, cracks, plumbing, and utility services penetrating the slab. It may be necessary to drill holes along one side of the slab adjacent to an interior partition wall if there is clear evidence of termite activity or damage in the wall. All drill holes through the slab should be spaced so as to achieve a continuous treated zone, but in no case be more than 12 inches apart. Inject **PHANTOM® termiticide-insecticide** finished dilution into the drilled holes at the rate of 4 gallons per 10 linear feet per foot of depth. For best results, application should be made with a lateral dispersal nozzle. All holes in commonly occupied areas into which material has been applied must be plugged. Plugs must be of a non-cellulose material or covered by an impervious, non-cellulose material.

A horizontal treated zone can also be established beneath the slab using the above technique as a grid pattern injection. Otherwise, use the methods described below.

• **Horizontal Drilling/Rodding/Sub-slab Injection From the Exterior of the Foundation** - This technique should be used to treat underneath the slab only when floors or interior design do not allow for vertical drilling. Care must be exercised not to rod into heating ducts, water/sewer lines, and electrical lines/conduits. Horizontal short-rodding practices can be used to establish a continuous treated zone along the inside perimeter of the foundation. Holes should be drilled from outside the foundation at an angle which allows a finished dilution of **PHANTOM** to be deposited below heating ducts, water/sewer lines, and electrical conduits; if present. Horizontal long rodding practices may only be employed to treat areas underneath the slab that are not

accessible by vertical rodding or horizontal short rodding. Long rods exceeding 20 feet should not be used. For all horizontal rodding applications, all drill holes through the foundation should be spaced so as to achieve a continuous treated zone but in no case be more than 12 inches apart. Inject dilution containing **PHANTOM** into the drilled holes at the rate of 4 gallons per 10 linear feet per foot of depth. For best results, make applications with a lateral dispersal nozzle. All holes must be plugged. Plugs must be of a non-cellulose material or covered by an impervious, non-cellulose material.

**Bath Traps:** Treat exposed soil or soil covered with tar or a similar type sealant beneath and around plumbing and/or drain pipe entry areas. Apply **PHANTOM** finished dilution at a minimum of 1 gallon but no more than 4 gallons of dilution per square foot. An access door or inspection portal should be installed, if not already present. After inspection and removal of any wood or cellulose debris, the soil can be treated by rodding or drenching the soil with a 0.125% or 0.25% dilution of **PHANTOM**.

**Buildings on Soil:** In treating areas under wooden floors or other materials, with the exception of concrete or masonry, laying directly on or in close proximity to the soil (such as gymnasium floors, finished family rooms or similar areas converted to living areas where joists are placed on the ground and flooring placed on top), the floor should be drilled on a square-grid pattern, 12 - 18 inches on center, and the dilution containing **PHANTOM** then applied over the soil surface at the rate of 1 gallon dilution per 10 square feet to provide a uniform treated zone. Where there is exposed soil beneath and around plumbing/waste pipe entrances, thoroughly treat using 1 gallon of dilution per 10 square feet to provide a uniform treated zone.

**Basements - Outside Perimeter:** Along the outside of the exterior walls, apply 4 gallons of dilution per 10 linear feet per foot of depth from grade to the top of the footing, or if the footing is more than 4 feet below grade, to a minimum depth of 4 feet. Apply by trenching and rodding into the trench, or trenching. Trenches must be at least 6 inches wide and at least 6 inches deep. When rodding through a trench, apply dilution to the soil with the application rod at 12 inch or less intervals. Use rod to treat soil to desired depth. Use low pressure spray to treat soil as it is replaced into the trench. When trenching in sloping (tiered) soil, the trench must be stepped to ensure adequate distribution and to prevent the dilution from running out of the trench.

**Basements - Inside Perimeter:** If a well or cistern is present, refer to Wells/Cisterns section of this label. To treat under the basement floor slab, drill vertically through the slab along the interior perimeter of the foundation. Drill holes along all concrete expansion joints, cracks, plumbing, and utility services penetrating the slab. Drill holes along both sides of partition foundation walls, and around piers. It may be necessary to drill holes along one side of the slab adjacent to a non-foundation interior partition wall

10/13

if there is clear evidence of termite activity in the wall. All drill holes through the slab should be spaced so as to achieve a continuous treated zone but in no case be more than 12 inches apart. Inject finished dilution containing **PHANTOM® termiteicide-insecticide** into the drilled holes at the rate of 4 gallons per 10 linear feet per foot of depth. For best results, application should be made with a lateral dispersal nozzle. All holes in commonly occupied areas into which material has been applied must be plugged. Plugs must be of a non-cellulose material or covered by an impervious, non-cellulose material.

**Hollow Block Foundation or Voids:** Hollow block foundations or voids in masonry resting atop the footing may be treated. Drill and treat voids in multiple masonry elements of the structure extending from the structure to the soil in order to create a continuous treatment zone in the area to be treated. Applicators may drill and treat into voids of masonry elements if not openly accessible. Apply at the rate of 2 gallons of finished dilution per 10 linear feet of footing using a nozzle pressure of 25 psi or less. When using this treatment, access holes may be drilled below the sill plate and should be as close as possible to the footing as practical. Treatment of voids or block or rubble foundation walls must be closely examined. Applicators must inspect areas of possible runoff as a precaution against application leakage in the treated areas. Some areas may not be treatable or may require mechanical alteration prior to treatment.

All leaks resulting in the deposition of dilution containing **PHANTOM** in locations other than those prescribed on this label must be cleaned up prior to leaving the application site. **DO NOT** allow people or pets to contact contaminated areas or to reoccupy the contaminated areas of the structure until the clean up is completed.

Not for use in voids insulated with rigid foam.

**Foam Applications:** When treating voids with soil below, at least 75% of the gallons of the finished dilution containing **PHANTOM** should be applied as a typical liquid treatment to the soil. The remaining 25% or less gallons may be delivered to appropriate locations using a foam application. The total amount of product applied with the combination of foam and liquid finished dilution should be equivalent to that of the application of liquid finished dilution only.

Foam applications are generally a good supplement to liquid treatments in difficult areas, but may also be used in difficult to access spot or partial treatments. Construction practices, soil subsidence and other factors may make it difficult to create a continuous treatment zone. When necessary, conventional treatments may be supplemented through the use of foam-generating equipment or similar devices to provide a continuous treated zone. Application examples may include; treatment behind veneers, piers, chimney bases, into rubble foundations, into block voids, structural voids, wall voids, under slabs, stoops, porches, or to the soil in inaccessible crawl spaces and other similar voids.

Foam applications to wall voids and stud walls that do not have a soil base should utilize dry foam only (15:1 to 50:1 expansion ratio).

Foam applications to voids above soil should be done with a wet foam (10:1 expansion ratio or less).

**Foam Application Use Directions:** Mix appropriate concentration of **PHANTOM** in water and add the manufacturer's recommended quantity of foam agent to the **PHANTOM** dilution (see table for foaming recommendations). It is highly recommended that applicators use a non-repellent foaming agent with **PHANTOM**. Apply a sufficient volume of **PHANTOM** in foam alone or in combination with liquid dilution to provide a continuous treated zone at the recommended rate for specific application sites.

**Mixing Table for PHANTOM Foam**

PHANTOM Use Dilution	Gallons of Finished Dilution	Foam Expansion Ratio*	Finished Foam (gallons)
0.125% or 0.25%	0.25 (32 fl oz)	10:1	2.5
0.125% or 0.25%	1.0	25:1	25
	1.25	20:1	
	1.68	15:1	
	2.5	10:1	
	5.0	5:1	

\* Add the manufacturer's recommended quantity of foam agent to the **PHANTOM** dilution. It is highly recommended that applicators use a non-repellent foaming agent with **PHANTOM**. Amount of finished dilution can be increased or decreased to allow for a different amount of finished foam at the selected expansion ratio.

**Plenums:**

**BEFORE TREATMENT:** Turn off any air circulation system that moves air from the space to be treated to an untreated interior space of the structure until application has been completed and all of the dilution containing **PHANTOM** has been absorbed by the soil.

For plenum-type structures, apply the dilution at the rate of 4 gallons of dilution per 10 linear feet, per foot of depth of soil to provide a uniform treated zone adjacent to both sides of foundation walls, supporting piers, plumbing and conduits. Create a vertical treated zone by trenching and rodding into the trench or by trenching around the foundation; trench must be about 6 inches wide and at least 6 inches deep. Use a low pressure spray to treat soil which will be replaced into the trench after rodding; mix dilution with the soil as it is being replaced into the trench.

When conditions will not permit trenching or rodding, a surface application adjacent to interior foundation walls may be made, but the treated zone shall not exceed a width of 18 inches, horizontally, from the foundation walls, piers, or pipes. The surface application should be made at a rate of 1 gallon of dilution per 10 square feet as a very coarse spray under low pressure (not to exceed 25 p.s.i. when measured at the treating tool when valve is on)

Follow the instructions below for interior treatment of plenum structures that use a sealed under-floor space to circulate heat and/or cooled air throughout the structure.

1. Remove the sealing fabric and anything on the sealing fabric to expose no more than 18 inches adjacent to all foundation structures, including foundation walls, interior pliers, pipes, and any other structures with soil contact. Follow the instructions listed above for exterior and interior treatment of "Accessible Crawl Spaces".
2. After the finished dilution containing **PHANTOM<sup>®</sup> termiticide-insecticide** has been absorbed by the soil, replace the sealing fabric and anything to be placed on the sealing fabric to its original, pre-treatment position.

**TREATMENT OF STRUCTURES WITH WELLS OR CISTERNS:**  
**DO NOT contaminate wells or cisterns.**

**Structures with Wells/Cisterns Inside Foundations:**  
**DO NOT** apply **PHANTOM** dilution within 5 feet of any well or cistern. Soil within 5 to 10 feet from a well or cistern must only be treated by the backfill method. Treatment of soil adjacent to water pipes within 3 feet of grade must only be done by the backfill method. Infested and/or damaged wood should be replaced or repaired.

**Treated Backfill Method:** Where treatment must be made in difficult situations, such as near wells, cisterns, along fieldstone or rubble walls, and around pipes and utility lines which lead to a well or pond, applications may be made in the following manner:

1. Trench and remove soil to be treated onto heavy plastic sheeting, similar material or into a wheel barrow.
2. Treat the soil at the rate of 4 gallons of dilution per 10 linear feet per foot of depth of the trench, or 1 gallon per 1 cubic foot of soil. Mix the dilution thoroughly into the soil, taking care to prevent runoff or spillage.
3. After the treated soil has absorbed the dilution, replace the soil in the trench. Prior to using this technique near wells or cisterns, applicators may wish to consult federal, state, county, or local agencies, including the state Wellhead Protection Program, for information regarding approved treatment practices in your area.

**Structures with Adjacent Wells/Cisterns and/or Other Bodies of Water:** Applicators must inspect all structures with nearby water sources such as wells, cisterns, surface ponds, streams, and other bodies of water and evaluate, at a minimum, the treatment recommendations listed below prior to making an application.

1. Treatment of soil adjacent to the water pipe(s) should be done according to the backfill method. Prior to treatment, if feasible; expose the water pipe(s) coming from the well to the structure, if the pipe(s) enter the structure within 3 feet of grade.
2. Prior to treatment, applicators are advised to take precautions to limit risk of applying termiticide into subsurface drains that could empty into any bodies of water. These precautions include evaluating whether application of the termiticide to the top of the footer may result

in contamination of the subsurface drain. Factors such as depth to the drain system and soil type and degree of compaction should be taken into account in determining the depth of treatment.

3. When appropriate (i.e. on the side of the structure closest to the water), the treated backfill method (described above) can be used to further minimize off-site movement of termiticide.
4. **DO NOT** apply to drainage systems such as sumps, French drains, leach beds, or other effluent discharge systems.

**Retreatments:** Subsequent to the initial treatment, retreatments for subterranean termites can only be performed if there is clear evidence of reinfestation, or disruption of the treated zone due to construction, excavation, landscaping, and/or evidence of the breakdown of the termiticide treated zone in the soil. Those vulnerable or reinfested areas may be retreated in accordance with application techniques described in this product's labeling. Retreatments may be made as either a spot, partial or complete treatment(s). The timing and type of these retreatments will vary, depending on factors such as termite pressure, soil types, soil conditions and other factors which may reduce the effectiveness of the treated zone. Annual retreatment of the structure is prohibited unless there is clear evidence of reinfestation or if disruption has occurred.

**Above-Ground Termite Infestations:** **PHANTOM** can also provide localized control of southeastern drywood termite (*Incisitermes snyderi*) and subterranean termites in their above-ground galleries, workings or aerial nests within the structure. Apply either a 0.125% or 0.25% dilution by foam and/or liquid injection into galleries, nesting areas and infested voids or channels in damaged wooden members of a structure, or to other locations vulnerable to attack by termites. Locate existing openings, or drill the infested cavity, and inject dilution under low pressure using appropriate treatment tools. Plug treatment holes drilled in commonly occupied areas of structures. Inspect as needed. **DO NOT** reapply more often than every four weeks.

**USE DIRECTIONS FOR GENERAL PEST CONTROL**

**GENERAL INFORMATION**

**PHANTOM** is intended for sale, use and storage only by individuals/firms licensed or registered by the state to apply termiticide and/or general pest control products as a spot or crack and crevice spray for residual pest control.

**Permitted areas of use include:** Inside houses, apartments or other residential structures, meat, poultry & egg processing & packaging plants, the food/feed- and non-food/feed-handling areas of food-handling establishments and commercial, institutional and warehousing establishments.

**Food-handling:** Establishments include places other than private residences where exposed food is held, processed, prepared or served. These include food serv-

ice, manufacturing and processing establishments such as restaurants, cafeterias, supermarkets, mills, processing plants, bakeries, breweries, dairies, meat slaughtering and packing plants and canneries.

Commercial, institutional and warehousing establishments include schools, groceries and supermarkets, restaurants and cafeterias, hotels and motels, hospitals and nursing homes, warehouses and industrial buildings, laboratories, zoos, pet shops, computer facilities, and sewers.

**GENERAL PRECAUTIONS FOR GENERAL PEST CONTROL**

**DO NOT** make general surface or space applications such as for pantry pests in cupboards, cabinets or in containers.

**DO NOT** contaminate food or food contact surfaces.

**DO NOT** apply into heating and air conditioning vents or ducts.

Individuals without proper personal protective equipment should not be in immediate vicinity during application.

**DO NOT** contact treated areas until spray has dried.

Use only in well ventilated conditions. In hospitals and nursing homes, remove patients before treating rooms. Allow treated areas to dry before returning patients to treated rooms.

**DO NOT** apply to aircraft cabins.

**DO NOT** allow for contact to treated areas until spray has dried. Allow treated surfaces to dry before replacing items.

Remove pets and cover or remove pet food/water and fish bowls prior to application.

In zoos, remove animals and cover or remove animal food/water prior to application.

**DO NOT** apply in patient rooms or classrooms while in use.

**DO NOT** apply water-based sprays where electrical short circuits could occur.

**DO NOT** make surface applications to mattresses. Mattress treatments must be confined to the seams, folds and edges only. Remove linens and wash before reuse. Allow to dry before remaking bed.

**MIXING DIRECTIONS**

**Dilution Table:**

Desired Dilution Concentration*	Amount of PHANTOM <sup>®</sup> termiticide-insecticide make 1 gallon of finished dilution		Amount of PHANTOM to make 5 gallons of finished dilution	
	fl oz	ml	fl oz	ml
0.50%	3.0	86	15.0	440
0.25%	1.5	44	7.5	220

\*Percentage weight of active ingredient to weight of spray dilution.

Mix the dilution in the following manner:

1. Fill hand-pressurized or power-operated application equipment with 1/2 to 3/4 of the required amount of water.
2. Measure the required amount of **PHANTOM**.
3. Add **PHANTOM** to the sprayer and fill with the remainder of the water.
4. Close sprayer and agitate to insure proper suspension.
5. Re-agitate material in sprayer before continuing if application is interrupted.

**GENERAL PEST CONTROL**

**PHANTOM** can be used to control many nuisance pests, stored product pests and occasional invaders that infest structures, including:

- ants (acrobat, Argentine, carpenter, odorous house, pavement, pharaoh's, pyramid);
- beetles (Asian lady, confused flour, darkling larva (yellow mealworm), saw-toothed grain);
- bark scorpions;
- bed bugs;
- boxelder bugs;
- centipedes;
- cockroaches\* (American, Asian, brown-banded, German, Oriental, and smokybrown);
- European earwigs;
- house crickets;
- house flies;
- paper wasps\*\*
- pillbugs;
- spiders (black widow, cellar);
- silverfish

\*Not approved for use in California.

\*\***PHANTOM** is not a knockdown agent.

Apply a 0.5% dilution as a coarse, low-pressure spot or crack and crevice spray. Use the 0.25% dilution for light infestations of ants.

For use with low-pressure directed spray or similar application equipment. Use a straw tip or pin tip nozzle for crack and crevice applications. Application shall be limited to a maximum 0.5% concentration.

Spot or crack and crevice treatments of **PHANTOM® termiticide-insecticide** dilution can be made to breeding areas, nesting sites, hiding places, runways, and other places where pests are found or can infest. Apply to surfaces beneath cabinets, spaces between equipment or expansion joints, surfaces behind sinks, lockers, water pipes, cabinets, or other pest hiding areas. Where possible, apply **PHANTOM** directly to ant nest(s) or nesting site(s), ant trails or ant-infested wood or structural voids. Foam applications of **PHANTOM** may be made in voids.

**DO NOT** reapply more often than every four weeks.

**Interior Applications in Non-Food-Handling Areas**

Spot or crack and crevice applications may be made in non-food/feed areas such as garbage rooms, lavatories, floor drains (to sewers), entries, and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets and storage.

**Interior Applications in Food-Handling Areas**

Food-handling areas are areas where food and food products are held, processed, prepared or served. Application in food-handling areas of food-handling establishments is limited to spot or crack and crevice treatments. The food handling area may not be in operation during application. Exposed food must be covered or removed prior to application. After application, all food contact surfaces in the treated areas must be washed with an effective cleaning compound followed by a potable water rinse before resuming food operations. **DO NOT** apply directly to food, food packaging or food contact surfaces.

**Limited Exterior Application to Structures**

Exterior application is limited to spot and crack and crevice treatments where pests enter around doors, windows, eaves, attic vents, and holes in exterior walls where utilities enter. Apply a maximum of 1.2 fl oz of dilution per 2 square feet.

**Disclaimer**

The label instructions for the use of this product reflect the opinion of experts based on research and field use. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the use of, or application of the product contrary to label instructions, all of which are beyond the control of BASF Corporation (BASF). All such risks shall be assumed by the user.

To the extent permitted by law, BASF shall not be responsible for losses or damages resulting from use of this product in any manner not set forth on this label. User assumes all risks associated with the use of this product in any manner not specifically set forth on this label.

BASF warrants only that the material contained herein conforms to the chemical description of the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above. BASF does not make or authorize any agent or representative to make any other warranties, express or implied, and expressly excludes and disclaims all implied warranties of merchantability or fitness for a particular purpose.

Buyer's exclusive remedy and BASF's exclusive liability, whether in contract, tort, negligence, strict liability or otherwise, shall be limited to repayment of the purchase price. In no case shall BASF or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.

BASF makes no other express or implied warranty, including other express or implied warranty of FITNESS or of MERCHANTABILITY. Read the entire directions for use, conditions, disclaimer or warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

**Phantom** is a registered trademark of BASF.  
**Raindrop** is a registered trademark of Delavan Corporation.  
**TeeJet** is a registered trademark of Spraying Systems Company.

© 2006 BASF Corporation  
All rights reserved.

000241-00392.20060702c.NVA 2006-04-155-0201

BASF Corporation  
Agricultural Products  
26 Davis Drive  
Research Triangle Park, NC 27709

