



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division  
475 R.M. Way, S.W.  
Washington, D.C. 20460

EPA Reg. Number:  
67760-31

Date of Issuance:  
7/28/99

Term of Issuance:  
Conditional

Name of Pesticide Product:  
Cyren 2 TC

NOTICE OF PESTICIDE:  
 Registration  
 Reregistration

Under FIFRA, as amended

Name and Address of Registrant (include ZIP Code):

Cheminova, Inc.  
1700 Route 23, Suite 210  
Wayne, N.J. 07470

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA Section 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA Section 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA Section 4.
2. Make the following label changes before you release the product for shipment:
  - a. Revise the EPA Registration Number to read, "EPA Reg. No. 67760-31"
3. Submit one copy of the revised final printed label before releasing the product for shipment.

Signature of Approving Official:

Dennis McNeilly  
Insecticide-Rodenticide Branch

Date:

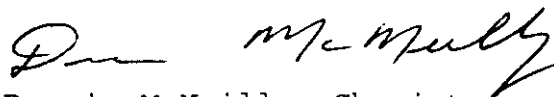
July 28, 1999

A stamped copy of the label is enclosed for your records.

If the conditions enumerated above are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Please contact me on (703) 308-5404 if you have questions regarding this registration.

Sincerely,



Dennis McNeilly, Chemist  
Insecticide-Rodenticide Branch  
Registration Division (7505C)

Enclosure 1) Stamped Label

# CYREN™ 2 TC

## Specialty Termiticide / Insecticide Concentrate

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

When used for general pest control purposes, this product is to be applied only by or under the supervision of commercial applicators responsible for pest control programs.

**ACCEPTED**  
JUL 28 1991  
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 67760-31

- NO NAPHTHALENE ODOR -

**Active Ingredient:**

Chlorpyrifos: Phosphorothioic acid, O, O-diethyl O-(3,5,6-trichloro-2-pyridinyl ester)..... 24.7%

**Inert Ingredients:** ..... 75.3%

**Total** ..... 100.0%

This product contains 2 pounds of Chlorpyrifos per gallon.

KEEP OUT OF REACH OF CHILDREN

**CAUTION** **PRECAUCION**

AL USUARIO: Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle  
TO THE USER: If you do not understand the label, find someone to explain it to you in detail

**Harmful if swallowed, inhaled or absorbed through skin**

Avoid breathing vapor or spray mist Avoid contact with skin, eyes or clothing Wash thoroughly with soap and water after handling Remove contaminated clothing and wash clothing before reuse

IN CASE OF MEDICAL EMERGENCY, CALL TOLL FREE, DAY OR NIGHT, 800-228-5635, Ext. 153

EPA Reg. No. 67760-\_\_\_\_\_  
EPA Est. No. \_\_\_\_\_

Net Contents \_\_\_\_\_

Cyren is a trademark of Cheminova Agro.  
Product of Denmark

Manufactured By:  
**CHEMINOVA, INC.**  
1700 Route 23, Suite 210  
Wayne, NJ 07470



**PRECAUTIONARY STATEMENTS**  
Hazards to Humans and Domestic Animals

**CAUTION****PRECAUCION**

Harmful if swallowed, inhaled or absorbed through skin.  
Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

All pesticide handlers (mixers, loaders, applicators) must wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves. In addition, all pesticide handlers must wear a respiratory protection device\* when working in a non-ventilated space; all pesticide handlers must wear protective eyewear (i.e. goggles, or a face shield or safety glasses with front, brow and temple protection) when working in a non-ventilated space or when applying termiticide by rodding or sub-slab injection.

\* Dust/mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C.

**USER SAFETY RECOMMENDATIONS**

Wash thoroughly with soap and water after handling. Before removing gloves wash them with soap and water. Remove contaminated clothing and wash clothing before reuse. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or spray mist. Follow the manufacturer's instruction for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**FIRST AID****Organophosphorus Pesticide**

In case of poisoning, call a physician or Poison Control Center immediately. Have person lie down and keep quiet.

**If swallowed:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

**If on skin:** Wash with plenty of soap and water. Get medical attention.

**If in eyes:** Flush with plenty of water. Call a physician if irritation persists.

**If inhaled:** Remove to fresh air if symptoms of cholinesterase appear. If not breathing, give artificial respiration. Get medical attention.

**Note to physician:** **Chlorpyrifos** is a cholinesterase inhibitor affecting the central and peripheral nervous systems and producing cardiac and respiratory depression. **Antidote:** Administer atropine sulphate in large doses. TWO to FOUR mg intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5 to 10 minute intervals until sign of antipinization appear. 2-PAM chloride is a pharmacological antidote and may be administered as an adjunct to, but not a substitute for atropine, which is a symptomatic, and often lifesaving antidote. DO NOT GIVE MORPHINE OR TRANQUILIZERS. At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Continued absorption of **Chlorpyrifos** may occur and relapse may occur after initial improvement; VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds, fish and aquatic invertebrates. Birds feeding in treated areas may be killed. Clean up spilled product to reduce exposure to wildlife. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

### SUBTERRANEAN USE

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 they 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 clean up is complete.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Storage:** Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Avoid storing above 122F for extended periods of time. Storage below 40F may result in formation of crystals. If product crystallizes, store at 55-75F and shake occasionally to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

**Container Disposal for Non-Refillable Containers:** Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and/or crush rinsed empty container and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Or/

Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Container Disposal for Refillable Containers:** Do not break open any seals or cables! Pump out all possible product. Replace the dust cap in the one-way valve. Do not rinse the container. Return the empty container to a collection site designated by CHEMINOVA or your distributor. If drum has been damaged or the seals broken, please contact CHEMINOVA at 1-800-548-6113 for instructions.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**Notice:** Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" elsewhere on this label.

Do not tank mix this product with products containing dichlorvos (DDVP). Do not formulate this product into other end-use products.

### GENERAL INFORMATION

#### **Subterranean Termites**

**Cyren 2 TC** Termiticide / Insecticide concentrate is used to establish a barrier in the soil and in construction elements which is lethal to termites. In order to provide an effective barrier between the wood in the structure and termite colonies in the soil, disperse the chemical emulsion so as to avoid untreated gaps in the barrier.

It is important that the service technicians are trained regarding the current control practices including trenching, rodding, sub-slab injection and low pressure spray applications. These techniques must be correctly employed to prevent or control infestations by **subterranean termite** species of *Reticulitermes*, *Zootermopsis*, *Heterotermes* and *Coptotermes*. Choice of appropriate procedures includes consideration of such variable factors as the design of the structure, water table, soil type, soil compaction, grade conditions and the location and type of domestic water supplies. The biology and behavior of the involved termite species are important factors to be known as well as suspected location of the colony and severity of the infestation within the structure to be protected. For advice concerning current control practices for specific local conditions, consult resources in structural pest control.

**General Use Precautions**

Contamination of public and private water supplies must be avoided by these minimum precautions:

1. Use anti-backflow equipment or procedures to prevent siphonage of pesticides back into water supplies.
2. Do not treat soil that is water saturated or frozen. Do not treat outdoors while precipitation (rain, sleet) is occurring.
3. Consult Federal, state and local specifications for information regarding approved treatment practices in your area.
4. 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.
5. Do not contaminate wells or cisterns.
6. All nonessential wood and cellulose containing materials, including scrap wood and form boards, should be removed from around foundation walls, crawl spaces, and porches. This does not include existing structural soil contact wood that has been treated.

**STRUCTURES WITH WELLS / CISTERNS INSIDE FOUNDATIONS**

Structures that contain wells or cisterns, either in use or in useable condition, within the foundation of a structure can only be treated using the following techniques:

1. Do not treat soil while it is beneath or within the foundation or along the exterior perimeter of a structure that contains a well or cistern. The treated backfill method must be used if soil is removed and treated outside / away from the foundation. The treated backfill technique is described as follows:

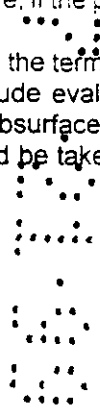
**Excavation/Treated Backfill Technique**

- a. Trench and remove soil to be treated onto heavy plastic sheeting or similar material or into a wheelbarrow.
  - b. Treat the soil at the rate of 4 gallons of dilute emulsion per 10 linear feet per foot of depth of the trench, or 1 gallon of dilution per 1.0 cubic foot (See "Rate Determination Guidelines"). An initial treatment using a 0.75-1.0% dilution will provide effective, optimum long term residual control. Mix thoroughly into the soil taking care to contain the liquid and prevent runoff or spillage.
  - c. After the treated soil has absorbed the diluted emulsion, replace the soil into the trench.
2. Treat infested and/or damaged wood in place using an injection technique such as is described in "Control of Wood Infesting Insects" section of this label.

**STRUCTURES WITH ADJACENT WELLS / CISTERNS AND/OR OTHER WATER BODIES**

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. 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 the risk of applying the termiticide into subsurface drains that could empty into any body of water. These precautions include evaluating whether application of 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 water side of the structure), the treated backfill technique (described above) can also be used to minimize off-site movement of termiticide.

### RATE DETERMINATION GUIDELINES

Consult the local extension agent or state entomologist for application recommendations.

An initial treatment using a 0.75 - 1.0% dilution will provide effective, optimum long term residual control. The 0.75% rate may also be used when making follow-up or spot treatments with no reinspection restriction.

A 2.0% dilution may be used to protect utility poles and fence posts.

**Table 1: Dilution Directions**

Gallons of Finished Dilution Desired	CYREN 2 TC Needed			
	0.5%	0.75%	1.0%	2.0%
1	2.7 fl oz	4 fl oz	5.3 fl oz	10.7 fl oz
5	13.3 fl oz	20 fl oz	26.7 fl oz	53.4 fl oz
10	26.7 fl oz	40 fl oz	53.4 fl oz	107 fl oz
24	0.5 gallon	3 quarts	1 gallon	2 gallons
48	1 gallon	1.5 gallons	2 gallons	4 gallons
97	2 gallons	3 gallons	4 gallons	8 gallons

### MIXING DIRECTIONS

It is important that the termiticide dilution be uniformly mixed in the spray tank before and during treatment. The initial mixing will be enhanced by agitation, circulation through treating hose, and the filling process. By-pass, jet, or mechanical agitation will ensure that the dilution remains uniformly mixed during application.

Mix the termiticide use dilution in the following manner:

1. Fill tank 1/4 to 1/3 full.
2. Start pump to begin by-pass agitation and place end of treating tool in tank to allow circulation through hose.
3. Add appropriate amount of **Cyren 2 TC**.
4. Add remaining amount of water.
5. Let pump run and allow recirculation through the hose for 2 to 3 minutes.

### APPLICATION VOLUME

To provide maximum control and protection against termite infestation, apply the specified volume of the finished water emulsion and active ingredient as set forth in the **Directions for Use** section of this label. 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 barrier. Variance is allowed when volume and concentration are consistent with label directed rates and a continuous barrier can still be achieved.

### PRECONSTRUCTION SUBTERRANEAN TERMITE TREATMENT

TO MAINTAIN THE BENEFITS OF **CYREN 2 TC** AND TO HELP BUILD A BETTER BARRIER DO NOT APPLY AT A LOWER DOSAGE AND/OR CONCENTRATION THAN SPECIFIED ON THIS LABEL FOR APPLICATIONS PRIOR TO INSTALLATION OF THE FINISHED GRADE.

Effective preconstruction treatment for **Subterranean Termite** prevention requires the establishment of vertical and/or horizontal chemical barriers between wood in the structure and the termite colonies in the soil. To meet FHA termite proofing requirements, follow the latest edition of Housing and Urban Development (HUD) Minimum Property Standards. Follow state and local regulations to meet minimum treatment standards for preventive preconstruction treatments.

Prior to each application, applicators must notify the general contractor, construction superintendent or similar responsible party of the intended termiticide application and intended sites of application, and instruct the responsible person to notify construction workers and other individuals to leave the area to be treated during application and until the termiticide is absorbed into the soil.

All holes drilled in construction elements for preconstruction treatments should be securely plugged following the application.

See "Rate Determination Guidelines" and "Table 1" for dilution directions.

1. For **horizontal barriers**, applications shall be made using a low pressure spray (not to exceed 50 psi when measured at the treating tool to minimize exposure and potential for drift) after grading is completed and prior to pouring the slab.

a. For a **0.75% rate**, apply 1 gallon of dilution per 10 square feet, or use 4 fluid ounces of **Cyren 2 TC** per 10 square feet in sufficient water (no less than ½ gallon or more than 2 gallons) to provide thorough and continuous coverage of the area being treated (See Application Volume section).

For a **1.0% rate**, apply 1 gallon of dilution per 10 square feet, or use 5.3 fluid ounces of **Cyren 2 TC** per 10 square feet in sufficient water (no less than ½ gallon or more than 2 gallons) to provide thorough and continuous coverage of the area being treated (See Application Volume section).

If the fill is washed gravel or other coarse material, it is important that a sufficient amount of dilution be used to reach the soil substrate beneath the coarse fill.

b. If concrete slabs cannot be poured over the soil the same day it has been treated, a vapor barrier should be placed over the treated soil to prevent disturbance of the termiticide barrier.

2. For **vertical barriers**, apply the 0.75-1.0% dilution at a rate of 4 gallons per 10 linear feet per foot of depth. Establish vertical barriers in areas such as around the base of foundations, plumbing lines, backfilled soil against foundation walls and other areas which may warrant more than just a horizontal barrier.

a. 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.

b. Trenches need not be wider than 6 inches. Treat soil with the dilution as it is being replaced in the trench.

For a **0.75% rate**, apply 4 gallons of dilution per 10 linear feet per foot of depth or a 16 fluid ounces of **Cyren 2 TC** per 10 linear feet per foot of depth from grade to top of footing in sufficient water (not less than 2 gallons or more than 8 gallons) to ensure complete coverage.

For a **1.0% rate**, apply 4 gallons of dilution per 10 linear feet per foot depth or 21.2 fluid ounces of **Cyren 2 TC** per 10 linear feet per foot of depth from grade to top of footing in sufficient water (not less than 2 gallons or more than 8 gallons) to ensure complete coverage.



c. **Hollow block foundations or voids of masonry** can be treated to make a complete chemical barrier especially if the soil was not treated prior to pouring the footing. Apply the dilution at a rate of 2 gallons per 10 linear feet so that it reaches the top of the footing.

d. For **crawl spaces**, establish a vertical barrier on both sides of the foundation and around all piers and areas where underground utilities exist in the soil. **Do not apply the dilution to the entire surface area intended as the crawl space.**

**3. Plenum type structures** which use a sealed underfloor space to circulate heated and/or cooled air throughout the structure, apply the dilution at the rate of 4 gallons per 10 linear feet per foot of depth. Soil adjacent to both sides of foundation walls, supporting piers, plumbing and conduits should be treated by trenching or rodding (where soil conditions permit) to a depth of 6 inches or, if less shallow, to the top of the footing. When conditions will not permit trenching or rodding, surface application adjacent to interior foundation walls may be made but the treated strip shall not exceed a width of 18 inches, horizontally, from foundation walls, piers or pipes. Surface application is made at a rate of 1 gallon per 10 square feet as a very coarse spray under low pressure (not to exceed 20 p.s.i. when measured at the treating tool). After soil treatment, a continuous vapor barrier of at least 6 mil. polyethylene film or other suitable vapor barrier must be installed on the ground surface over the entire subfloor area and on the inside of the plenum walls, in accordance with the recommended practices for plenum type structures. When treating plenums, turn off the air circulation system of the structure until application has been completed and all the termiticide has been absorbed by the soil.

## POSTCONSTRUCTION TREATMENTS

### Soil Treatments in Areas Without Concrete Slab

For applications made after the final grade is installed, the applicator must trench and rod into the trench, or along the foundation walls and around pillars and other foundation elements at the rate prescribed, from grade to the top of footing. When the footing is more than 4 feet below grade, the applicator must trench and rod along the foundation walls at the rate prescribed to a minimum depth of 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. However, in no case should a structure be treated below the footing.

See "Rate Determination Guidelines" and "Table 1" for dilution directions.

**Precaution:** Do not apply dilution until location of heat or air conditioning ducts, vents, water and sewer lines and electrical conduits are known and identified. Extreme caution must be taken to avoid contamination of these structural elements and airways.

All holes drilled in construction elements of living areas of home for postconstruction treatment must be plugged. Plugs must be of a non-cellulose material or covered by an impervious, non-cellulose material.

**1. Slab-On-Ground Construction:** Applications may be made using techniques such as sub-slab injection, rodding and/or trenching. Injectors should not extend beyond the tops of the footings.

a. Treat along the outside of the foundation to form a continuous termiticide barrier in the soil.

**For shallow foundations**, 1 foot or less, dig a narrow trench approximately 6 inches wide along the outside of the foundation walls. Do not dig below the bottom of the footings. For foundations with exposed footings, dig a trench along side of footing, taking care not to undermine the footing. The dilution should be applied to the trench and mixed with the soil as it is replaced in the trench.

**For a 0.75% rate**, apply 4 gallons of dilution per 10 linear feet or use 16 fluid ounces of **Cyren 2 TC** per 10 linear feet in sufficient water (not less than 2 gallons or more than 8 gallons) to provide thorough and complete coverage of the area being treated (See "Application Volume" section).

**For a 1.0% rate**, apply 4 gallons of dilution per 10 linear feet or use 21.2 fluid ounces of **Cyren 2 TC** per 10 linear feet in sufficient water (not less than 2 gallons or more than 8 gallons) to provide thorough and complete coverage of the area being treated (See "Application Volume" section).

**For foundations with footings deeper than 1 foot**, apply the dilution at a rate of 4 gallons per 10 linear feet per foot of depth.

**b. When treating cracks and expansion joints in the slab**, along sidewalks or patios adjacent to the exterior foundation wall or other areas where holes are to be drilled to form a continuous termiticide barrier, the holes should be spaced at intervals up to 24 inches depending on soil type.

Hard, dry soils typically allow good lateral (horizontal) dispersion. However, they may be slow in absorption or downward movement. Care must be taken when injecting through slabs into areas with this type of soil. Low pressures should be considered in this situation. This will help to avoid backsplashing from the injection hole, backflow from cracks and expansion joints, and unwanted emergence of the termiticide dilution from adjacent drill holes. A slow, low pressure application using the proper volume of termiticide dilution will allow soil to absorb the liquid and provide an adequate vertical barrier. The wider drill hole spacings (18 to 24 inches) can usually be used in this situation. Sand, loam, or gravel backfill materials are commonly found under slab foundations. The type of fill, amount of settling that has occurred, moisture content, etc., will determine drill hole spacing and amount of termiticide dilution to be injected through each hole. Highly absorptive soils or those with large pore spaces (gravel, coarse sand) will afford rapid downward (vertical) movement and limited lateral (horizontal) distribution of the termiticide dilution. In this situation, consider using a lateral dispersion tip on the sub-slab injector and place the drill holes closer together (12 to 18 inches).

**For a 0.75-1.0% rate**, apply 4 gallons of dilution per 10 linear feet.

**c.** It may be necessary to treat along one side of the interior partition walls if there are cracks in the slab, plumbing entry points, existing termite infestations, or other conditions which would make treatment appropriate.

**d. To complete the termiticide barrier under slab foundations**, it may be necessary to drill and treat near plumbing and electrical entry ways, cracks, or other areas where termites might enter the structure. In this instance, one or more holes should be drilled in the slab as close to the entry point as is practical and termiticide placed in the fill. As a general rule, 3 to 5 gallons of dilution per entry point will usually give adequate coverage, however, the use of directional or lateral dispersion tips or foam delivery systems can give adequate coverage with lower volumes. Location of the drill hole in relation to the entry point, type of soil fill, presence or absence of a vapor barrier, application pressure and other considerations will affect the coverage and volume of termiticide needed to form a complete barrier. Precautions must be taken to avoid drilling into plumbing or electrical conduit.

**e.** When necessary, drill through the foundation walls from the outside and force the dilution just beneath the slab either along the inside of the foundation or along all the cracks and expansion joints and other critical areas.

**f. Bath traps:** Exposed soil or soil covered with tar or a similar type sealant beneath and around plumbing and/or drain pipe entry areas may be treated with a 0.75-1.0% dilution of **Cyren 2 TC**. An access door or inspection vent should be cut and installed, if not already present. After inspection and removal of any wood or cellulose debris, the soil can be treated by rodding or trenching the soil. A one square foot bath trap will usually require about 3 to 5 gallons of dilution for thorough and complete coverage.

## 2. HOLLOW BLOCK FOUNDATIONS OR VOIDS IN MASONRY

### Not for use in voids insulated with rigid foam

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 barrier in the area to be treated. Apply at the rate of 2 gallons of emulsion per 10 linear feet of footing using a nozzle pressure of less than 25 p.s.i. When using this treatment, access holes must 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 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 termiticide in locations other than those prescribed on this label must be cleaned up prior to leaving 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.

**3. BASEMENTS:** Apply at a rate of 4 gallons of dilution per 10 linear feet per foot of depth. Where footings are greater than 1 foot of depth from the grade to the top of the footing, application may be made by trenching and/or rodding at a rate of 4 gallons of dilution per 10 linear feet per foot of depth. Treat outside of foundation walls, and if necessary beneath the basement floor along the inside of foundation walls, along cracks in basement floors, along interior load bearing walls, around sewer pipes, conduits and piers.

**4. CRAWL SPACES:** For a 0.75 - 1.0% rate, apply 4 gallons of dilution per 10 linear feet per foot of depth in accessible crawl spaces and 1 gallon of dilution per 10 square feet in inaccessible crawl spaces using techniques described below (4b). Treat both sides of foundation and around all piers and pipes.

**a. Accessible Crawl Spaces:** Apply vertical termiticide barriers at the rate of 4 gallons of emulsion 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 foundation and around all piers and pipes. Where physical obstructions, such as concrete walkways adjacent to foundation elements, prevent trenching, treatment may be made by rodding alone. When soil type and/or conditions make trenching prohibitive, rodding may be used. 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 the mixing and use direction section of the 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 chemical barrier 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 termiticide from running off. The emulsion must be mixed with the soil as it is replaced in the trench.

4) When treating crawl spaces, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil.

**b. Inaccessible Crawl Spaces:** For inaccessible interior areas, such as areas where there is insufficient clearance between floor joists and ground surfaces to allow operator access, excavate if possible, and treat according to the instructions for accessible crawl spaces. Otherwise, apply one or a combination of the following two methods:

1) To establish a horizontal barrier, apply to the soil surface 1 gallon emulsion per 10 square feet overall using a nozzle pressure of less than 25 p.s.i. 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 by the application wand, use one or more extension rods to make the application to the soil. Do not broadcast or powerspray with higher pressures.

2) To establish a horizontal barrier, drill through the foundation wall or through the floor above and treat the soil perimeter at a rate of 1 gallon emulsion 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.

When treating crawl spaces, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil.

In the presence of unsupported termite tubes, mechanically destroy each tube and apply approximately 1 pint of 0.5 to 1.0% dilution to an area of no more than 18 inches in diameter where the tubes emerged from the soil.

**5. PLENUM TYPE STRUCTURES** which use a sealed underfloor space to circulate heated and/or cooled air within structure, apply the 0.75-1.0% dilution at the rate of 4 gallons per 10 linear feet per foot of depth. Soil adjacent to both sides of foundation walls, supporting piers, plumbing and conduits should be treated by trenching or rodding (where soil conditions permit) to a depth of 6 inches or to the top of the footing. When conditions will not permit trenching or rodding, a surface application adjacent to the interior foundation walls may be made, but treated strip shall not exceed a width of 18 inches, horizontally, from the foundation piers or pipes. Surface application is made at a rate of 1 gallon per 10 square feet as a very coarse spray under low pressure (not to exceed 20 p.s.i. when measured at the treating tool). In order to properly calculate the amount of termiticide dilution needed, use the following guideline: A strip 18 inches wide and 6 feet 8 inches long is equal to 10 square feet. Before treatment, a barrier of at least 6 mil. polyethylene film or other suitable vapor barrier must be present on this ground surface over the entire subfloor area in accordance with recommended practices for plenum type structures. Install a new vapor barrier if barrier is absent or deteriorated. The vapor barrier film on the ground and foundation walls must be folded back from the areas to be treated prior to treatment and replaced immediately following treatment, as soon as termiticide has been absorbed by the soil. Structures should be ventilated during application and until treatment is dry, using methods other than the air circulation system of the structure. When treating plenums, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil.

**6. APPLICATION USING FOAM GENERATING EQUIPMENT:** **Cyren 2 TC** has been specially formulated to provide a thick spreading foam when combined with conventional foaming agents and applied through foam generating equipment or similar machines capable of producing foam with or without additives. This type of treatment with a rich foaming product like **Cyren 2 TC** is ideal for providing adequate coverage and producing the required barrier in hard to treat sites such as, but not limited to, filled porches, chimney bases, soil under slabs and treatment of wall voids. Foam treatments may help provide control in areas of repeated infestation.

**Foam Treatment Recommendations:** Refer to label of foaming adjuvant for proper amount of material to add per gallon of diluted **Cyren 2 TC**. The following provides the amount of **Cyren 2 TC** required for a given area and volume range of the prefoamed termiticide dilution necessary for application of the product.

**For a 0.75% rate,** apply 16 fluid ounces of **Cyren 2 TC** per 10 linear feet using no less than 2 gallons, or more than 8 gallons, of prefoamed dilution.

**For a 1.0% rate,** apply 21.2 fluid ounces of **Cyren 2 TC** per 10 linear feet using no less than 2 gallons, or more than 8 gallons, of prefoamed dilution.

**7. APPLICATION IN CONJUNCTION WITH THE USE OF TERMITICIDE BAITING SYSTEMS:**

The use of a baiting system along with applying a continuous barrier with **Cyren 2 TC** provides for an integrated pest management approach and protection of the treated structure. Applications of **Cyren 2 TC** may be made that are consistent with any of the Postconstruction Treatment methods described on this label. Follow the directions for the bait product for proper placements. Avoid direct contact of baits with **Cyren 2 TC**.

### RETREATMENT STATEMENT

Retreatment for **Subterranean Termites** can only be performed if there is a clear evidence of reinfestation or disruption of the barrier due to construction, excavation or landscaping and/or evidence of breakdown of the termiticide barrier in the soil. These vulnerable or reinfested areas may be retreated in accordance with the application techniques described in this product's labeling. 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 barrier. Annual retreatment of the structure is prohibited unless there is clear evidence that reinfestation or barrier disruption has occurred.

### UNDERGROUND UTILITY CABLE AND CONDUITS

**Preventative Treatment for Use Only in Guam, Hawaii, and other Pacific Islands:** Use a 1.0-2.0% dilution (See "Rate Determination Guidelines" and "Table 1" for dilution directions). After digging the trench, place approximately 6 inches of backfill or sand at the bottom and apply 2 gallons of the dilution per 10 linear feet. Allow to dry then replace the cable backfill. Cover with an additional 6 inches of backfill or sand and apply another 2 gallons of emulsion per 10 linear feet. Finish filling trench with untreated soil.

Wherever cables emerge from the soil to enter poles, light frames, etc., treat the soil around the cable and pole or frame to establish a continuous 6 inch chemical barrier.

A continuous 6 inch chemical barrier must be established around the cable to insure protection from termite attack.

### UTILITY POLES AND FENCE POSTS

**Preventative Treatment:** Use a 1.0 - 2.0% dilution (See "Rate Determination Guidelines" and "Table 1" for dilution directions). After pole or post hole has been dug, mix the dilution with the soil as it is being replaced to a depth of approximately 10 inches. Place pole or post on top of this layer. The remaining soil fill and termiticide dilution should be mixed while backfilling the hole. The treated soil zone around the post or pole should be treated at a rate of 4 gallons of dilution per 10 cubic feet of soil.

**Remedial Treatment:** To control existing infestations or to prevent infestation of posts and poles already in place, use a 1.0-2.0% dilution. The termiticide dilution should be injected into termite galleries or channels in the wood. For maximum protection, injection sites should be at or below grade.

Posts or poles may also be treated by rodding down the base of the structure. Rod holes should be placed approximately 3 inches away from the pole and about 6 inches apart. Inject approximately 12 fluid ounces of dilution per foot of depth into each rod hole.

It may be appropriate to use one or both treatment techniques depending upon the specific circumstances at the work site, e.g. soil type.

### CONTROL OF WOOD INFESTING INSECTS

#### Dosage and Mixing Directions:

**Cyren 2 TC** is recommended for use as an aqueous emulsion containing 0.5 - 1.0% chlorpyrifos. See "Table 1" for dilution directions.

#### Recommendation:

When spraying overhead interior living areas of homes, apartment buildings, etc., cover surfaces below the area being sprayed with plastic sheeting or other material. Contact with treated surfaces should be avoided until spray has dried. Cover or remove exposed foods before treatment. Do not use in structures housing animals which are intended for or which produce products to be used for food purposes. Do not use for above ground control of wood infesting insects in food areas of food handling establishments, restaurants or other areas where food is commercially prepared or processed.

To control wood infesting insects such as **Powderpost Beetles** (*Lyctidae*), **False Powderpost Beetles** (*Bostrichidae*), **Deathwatch Beetles** (*Anobiidae*), **Old House Borers** (*Cerambycidae*) and **Ambrosia Beetles** (*Scolytidae*) in homes and other structures, treatments may be applied either as a coarse spray or by brushing the product onto targeted surfaces. Use a sufficient amount of spray to cover the area to the point of wetness but avoid runoff. Use the following guidelines to determine appropriate rates of application:

**New Wood**, (typically less than 10 years of age) apply approximately 1 gallon of dilution per 150 square feet as a coarse spray.

**Old Wood**, (typically greater than 10 years of age) apply approximately 1 gallon of dilution per 100 square feet as a coarse spray.

**Treatment Directions**

For control of **Carpenter Ants** in homes and other structures, apply dilution around doors and windows and other places where **Carpenter Ants** enter the premises and where they crawl and hide. Also spray into cracks and crevices or through openings or small newly drilled holes into wall voids where these ants or their nests are present. Use a sufficient amount of coarse spray to cover area to the point of wetness but avoid runoff.

For control of **Termites** (localized areas of infested wood in structures), apply dilution to voids and channels in damaged wood and in spaces between members of a structure and between wood and foundations where termite infestation is likely to occur. Application may be made to inaccessible areas by drilling, and then injecting the emulsion. Use a sufficient amount of spray to cover the area to the point of wetness but avoiding runoff. Treatment of localized areas is intended to kill workers and winged reproductive forms of termites in the treated areas and to prevent reinfestations for a temporary period. This type of application is not intended to be a substitute for soil treatment or mechanical alteration to control subterranean termites.

If utilizing equipment such as Actisol® or Micro-Injector®, insert tip into crack, crevice, channels in damaged wood or wall opening; actuate the release of product for only 1 to 5 seconds and then fill void with a continuous flow of air, being extremely careful to only apply in void.

**PEST CONTROL ON OUTSIDE SURFACES AND AROUND BUILDINGS**

To control **Ants, Bees, Carpenter Ants, Clover Mites, Cockroaches, Crickets, Earwigs, Hornets, Millipedes, Scorpions, Spiders, Ticks, Wasps, and Yellowjackets.**

**Outside surfaces:** Apply **Cyren 2 TC** termiticide as a residual spray to outside surfaces of buildings including porches, decks, fences, landscape timbers, window frames, eaves, patios, garages, storage sheds, refuse dumps and other areas where pests congregate or have been observed. Treatment may be repeated as needed to maintain effectiveness.

**Perimeter sprays:** To help prevent infestation of buildings, treat a band of soil and vegetation 6 to 10 feet around and adjacent to the building. Also, treat the building foundation to a height of 2 to 3 feet where pests are active and may find entrance. **Scorpions** may be controlled by removing accumulations of lumber, firewood, and other materials serving as harborage sites. Before stacking firewood or lumber, apply **Cyren 2 TC** as a localized spray to surfaces immediately below such materials. Broadcast sprays outdoors may assist in reducing pests migrating from surrounding areas.

**Dosage and Mixing Instructions:** Use Cyren 2 TC mixed as a 0.25 - 0.5% dilution as indicated in the following table:

Gallons of Finished Dilution Desired	CYREN 2 TC Needed	
	0.25% Solution	0.5% Solution
1	1.3 fl oz	2.6 fl oz
5	6.7 fl oz	13.3 fl oz
10	13.3 fl oz	26.6 fl oz
24	1 quart	½ gallon
48	½ gallon	1 gallon
97	1 gallon	2 gallons

Small amounts of solution mixed at 0.5% - 1.0% termiticide rates remaining in the spray tank can be diluted as indicated in the following table and used to treat outside surfaces or perimeter areas:

Concentration of Termiticide Dilution	Amount of Water to Add to Each Gallon of Termiticide Dilution to Provide a 0.25% Spray	Amount of Water to Add to Each Gallon of Termiticide Dilution to Provide a 0.5% Spray
0.5%	1 gallon	none
0.75%	2 gallons	½ gallon
1.0%	3 gallons	1 gallon

### **WARRANTY DISCLAIMER**

Cheminova warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. CHEMINOVA MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

### **INHERENT RISKS OF USE**

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornados, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Cheminova or the seller. All such risks shall be assumed by the Buyer.

### **LIMITATION OF REMEDIES**

The exclusive remedy for losses or damages resulting from handling or use of this product (including claims based on contract, negligence, strict ability, or other legal theories), shall be limited to, at Cheminova's election, one of the following:

- 1) Refund the purchase price paid by buyer or user for product bought, or
- 2) Replacement of amount of product used.

Cheminova shall not be liable for losses or damages resulting from handling or use of this product unless Cheminova is promptly notified of such loss or damage in writing. In no case shall Cheminova be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Cheminova or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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Actisol is a registered trademark of AgrEvo.

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