

**CAUTION**

Harmful if swallowed. Contact with skin can cause toxic symptoms. Avoid breathing vapors or spray mist. In case of contact with skin, wash with soap and water. Avoid contamination of feed and foodstuffs. Keep out of the reach of children.

This product is toxic to fish, shrimp, crab, birds and other wildlife. Birds and other wildlife feeding on treated areas may be killed. Keep out of lakes, streams, ponds, tidal marshes and estuaries. Shrimp and crab may be killed at applications recommended on this label. Do not apply where these are important resources. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment, or disposal of wastes. Apply this product only as specified on this label.

**DO NOT USE, POUR, SPILL OR STORE NEAR HEAT OR OPEN FLAME.**

**ANTIDOTE**

**EXTERNAL** — In case of spillage on skin, wash promptly with soap and water.

**INTERNAL** — Emetic of one tablespoonful mustard in tumbler of water. Call a physician.

**CONTAINER DISPOSAL (FOR DRUM LABELS ONLY)**

Do not reuse empty container. Rinse equipment and containers and dispose of wastes by burying in noncroplands away from water supplies. Containers should be disposed of by punching holes in them and burying with wastes or by burning. Keep away from smoke.

**TANK CAR AND TANK TRUCK CLEANING**  
(For tank cars and tank trucks)

Wash thoroughly with kerosene.  
Collect washings and use in formulations.  
Steam tank thoroughly and dry.

**DIRECTIONS FOR USE**

For use only in repackaging of products bearing EPA-approved FIFRA Registrations.

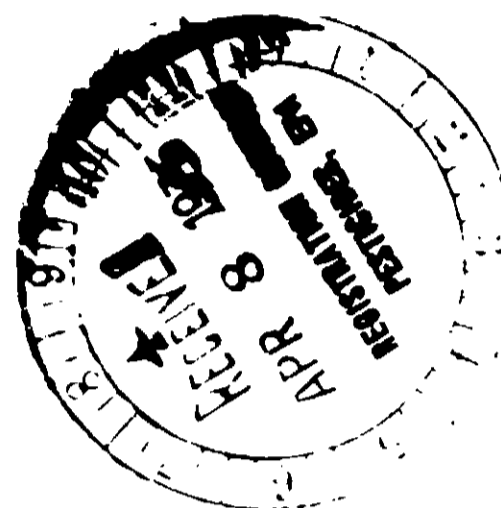
For registered uses of this product, specimen labels and directions for use, see Velsicol Bulletin No. 502-32 "Chlordane Federal Label Acceptances."

**NOTE:** Any variation in your product's labeling text or art work from that included in Bulletin No. 502-32 may result in the need for additional data to support registration.

**NOTICE**

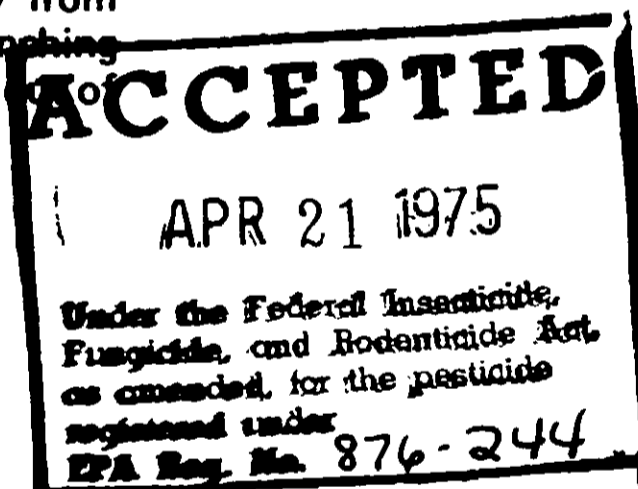
Because Velsicol Chemical Corporation has no control over storage, handling, and conditions of use, which are of critical importance, Velsicol Chemical Corporation makes no representation or warranty, either express or implied, for results or residues greater than any tolerance which may be established by appropriate governmental agencies, due to misuse, improper handling or storage of this material. Nor does Velsicol Chemical Corporation assume any responsibility for injury to persons, crops, animals, soil or property arising out of misuse, improper handling or storage of this material.

# VELSICOL® CHLORDANE 4 EC



EMULSIFIABLE CONCENTRATE  
FOR REPACKAGING OF AN INSECTICIDE

Contains 4 Lbs. Chlordane Per Gallon



**ACTIVE INGREDIENTS:**

Technical chlordane*	45.3%
Petroleum distillate	49.7%
INERT INGREDIENTS	5.0%

TOTAL 100.0%

Equivalent to 27.2% Octachloro-4, 7-methanotetrahydroindane and 18.1% related compounds.

E.P.A. Reg. No. 876-244-AA

E.P.A. Est. No. 876-TN-1

NET CONTENTS:

**CAUTION**

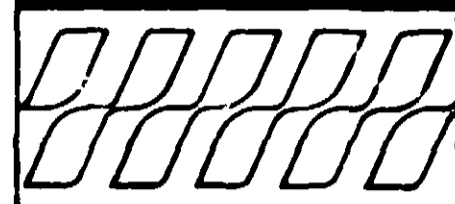
**KEEP OUT OF REACH OF CHILDREN**

See Left Panel for Antidote and Additional Precautionary Statements

**VELSICOL CHEMICAL CORPORATION**

341 E. Ohio Street, Chicago, Illinois 60611

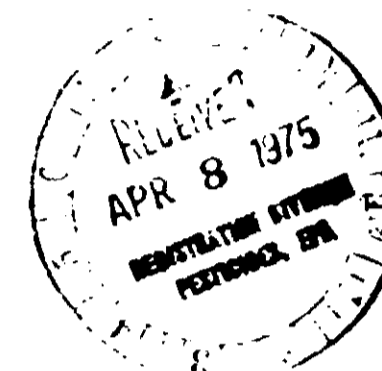
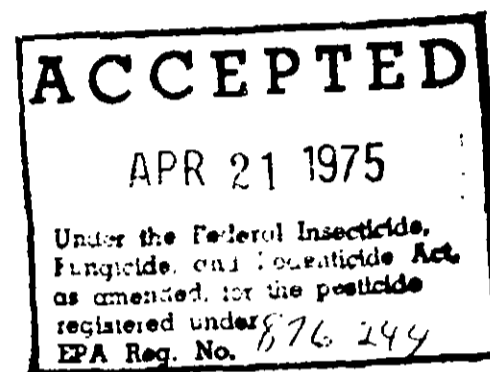
**BULLETIN**



**VELSICOL**  
AGRICULTURAL CHEMICALS

**Bulletin No. 502-32**  
**March 1975**

(Supersedes Bulletin No. 01-053-501  
Dated August 1971)



### CHLORDANE FEDERAL LABEL REGISTRATIONS

Following is a summary of chlordane sample labels based on Federal label acceptances as of the above date. Velsicol technicians will be glad to cooperate with formulators in securing their chlordane label registrations.

**NOTICE:** Because Velsicol Chemical Corporation has no control over storage, handling, and conditions of use, which are of critical importance, Velsicol Chemical Corporation makes no representation or warranty, either express or implied, for results or residues greater than any tolerance which may be established by appropriate governmental agencies, due to misuse, improper handling or storage of this material. Nor does Velsicol Chemical Corporation assume any responsibility for injury to persons, crops, animals, soil or property arising out of misuse, improper handling or storage of this material.

## CHLORDANE LABEL INFORMATION

### STANDARD PRECAUTIONARY STATEMENTS

The following precautionary and label statements are required for all products containing chlordane. These statements will vary slightly, as indicated, with the concentration, type and flammability of the formulation.

#### WARNING<sup>a</sup> (CAUTION)<sup>b</sup>

Harmful if swallowed. (If signal word is CAUTION — if signal word is WARNING — use may be fatal if swallowed.) Contact with skin can cause toxic symptoms. Avoid breathing vapor<sup>c</sup>, dust<sup>d</sup> or spray mist<sup>e</sup>. In case of contact with skin, wash with soap and water. Avoid contamination of feed or foodstuffs. Keep out of the reach of children.

This product is toxic to fish, shrimp, crab, birds and other wildlife. Birds and other wildlife feeding on treated areas may be killed. Keep out of lakes, streams, ponds, tidal marshes and estuaries. Shrimp and crab may be killed at applications recommended on this label. Do not apply where these are important resources. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning

of equipment, or disposal of wastes. Apply this product only as specified on this label.

**DO NOT USE, POUR, SPILL OR STORE NEAR HEAT OF OPEN FLAME<sup>f</sup>.**

#### ANTIDOTE

External — In case of spillage on skin, wash promptly with soap and water.

Internal — Emetic of 1 tablespoonful mustard in tumbler of water. Call a physician.

**CONTAINER DISPOSAL (FOR DRUM LABELS ONLY)**  
Do not reuse empty container. Rinse equipment and containers and dispose of wastes by burying in non-croplands away from water supplies. Containers should be disposed of by punching holes in them and burying with wastes or by burning. Keep out of smoke.

#### DIRECTIONS FOR USE

Refer to the following pages for specific crops, insects and use directions.

#### DISCLAIMER STATEMENT

See statement at bottom of cover.

<sup>a</sup> For formulations containing 72% or more technical chlordane.

<sup>b</sup> For formulations containing less than 72% technical chlordane.

<sup>c</sup> All formulations.

<sup>d</sup> Dust, wettable powder and granular formulations.

<sup>e</sup> Liquid and wettable powder formulations.

<sup>f</sup> Flammable formulations only.

### INFORMATION REQUIRED ON CENTER (FRONT) PANEL

#### PRODUCT NAME

#### INGREDIENT STATEMENTS

**Chlordane 45% Emulsifiable Concentrate**  
(Contains 4 lb. technical chlordane per gallon)

Active Ingredients:	
Technical Chlordane*	45.3%
Petroleum Distillate	49.7%
Inert Ingredients***	5.0%
Total	100.0%

\*Equivalent to 27.2% Octachloro-4,7-methanotetrahydroindane and 18.1% related compounds.

**Chlordane 72%\*\* Emulsifiable Concentrate**  
(Contains 8 lb. technical chlordane per gallon)

Active Ingredients:	
Technical Chlordane*	72%
Petroleum Distillate	21%
Inert Ingredients***	7%
Total	100%

\*Equivalent to 43% Octachloro-4,7-methanotetrahydroindane and 29% related compounds.

**Chlordane 72%\*\* Emulsifiable Concentrate for Use in Water or Liquid Fertilizer**  
(Contains 8 lb. technical chlordane per gallon)

Active Ingredients:	
Technical Chlordane*	73.01%
Kerosene	16.99%
Inert Ingredients***	10.00%
Total	100.00%

\*Equivalent to 43.81% Octachloro-4,7-methanotetrahydroindane and 29.20% related compounds.

**Chlordane 40% Wettable Powder**

Active Ingredient:	
Technical Chlordane*	40%
Inert Ingredients	60%
Total	100%

\*Equivalent to 24% Octachloro-4,7-methanotetrahydroindane and 16% related compounds.

**Chlordane 33.3% Granules**

Active Ingredient:	
Technical Chlordane*	33.3%
Inert Ingredients	66.7%
Total	100.0%

\*Equivalent to 19.98% Octachloro-4,7-methanotetrahydroindane and 13.32% related compounds.

**Chlordane 25% Granules**

Active Ingredient:	
Technical Chlordane*	25%
Inert Ingredients	75%
Total	100%

\*Equivalent to 15% Octachloro-4,7-methanotetrahydroindane and 10% related compounds.

**Chlordane 20%\*\* Oil Concentrate**  
(Contains approximately 1.5 lb. technical chlordane per gallon)

Active Ingredients:	
Technical Chlordane*	20%
Petroleum Distillate	80%
Total	100%

\*Equivalent to 12% Octachloro-4,7-methanotetrahydroindane and 8% related compounds.

**Chlordane 10% Dust or Granules**

Active Ingredient:	
Technical Chlordane*	10%
Inert Ingredients	90%
Total	100%

\*Equivalent to 8% Octachloro-4,7-methanotetrahydroindane and 4% related compounds.

**Chlordane 5% Dust or Granules**

Active Ingredient:	
Technical Chlordane*	5%
Inert Ingredients	95%
Total	100%

\*Equivalent to 3% Octachloro-4,7-methanotetrahydroindane and 2% related compounds.

\*\*The percent chlordane may vary slightly from the figures shown, depending on the density of the solvent used to make the formulation. See Chlordane Formulation Guide.  
\*\*\*Use actual % emulsifier(s) by weight. See Chlordane Formulation Guide.

E.P.A. Reg. No.  
E.P.A. Establishment No.  
NET CONTENTS  
WARNING (CAUTION where applicable)  
**KEEP OUT OF REACH OF CHILDREN**

See left (side, back) panel for Antidote and Additional Precautionary Statements.

Manufacturer's (Formulator's, Distributor's) Name and Address.

**REGISTERED USES OF CHLORDANE**

The following is a list of currently registered uses of chlordane as of the date of this bulletin.

Regulations require that tolerances for residues of chlordane must be established by the Environmental Protection Agency for all raw agricultural commodities used as food or feed.

In the tables below tolerances are listed for crops where they have been established. In cases where registrations have been extended (based on the fact that tolerances for chlordane have been applied for) are indicated by Etx. NF means that the use is a non-food or feed use and tolerances are not required.

**The following amounts of Chlordane formulations are equivalent to 1 lb. technical Chlordane:**

1 qt. 45% Emulsifiable Concentrate	4 lb. 25% granules
1 pt. 72% Emulsifiable Concentrate(s)	2.5 lb. 40% Wettable Powder
2 3 gal. 20% Oil Concentrate (approx. 11 pt.)	10 lb. 10% Dust or Granules
3 lb. 33.3% granules	20 lb. 5% Dust or Granules

**AGRICULTURAL USES**

Where a range of rates is given, use the higher rate of chlordane on muck or highly organic soils.

Where row treatment is desirable, application should be made at planting time using suitable row equipment.

A 7-10 inch band is recommended for control of white grubs in vegetables; row treatment of corn should be in a 7-inch band. Minimum rates should be based on no less than a 7-inch band.

FIELD CROPS

Crop	Tolerance (ppm)	Insect	Rate (lb. a.i./acre)		Directions and Limitations
			Broadcast	Row	
Corn (field and sweet)	0.3	Corn rootworm (Northern and Southern) Cornfield ants Corn root aphids	2.0	1.0	<p>Make preplant broadcast or row application (where applicable) only. Do not make foliar application.</p> <p>Apply to soil after plowing and disc or incorporate into soil immediately.</p> <p>Use sufficient water for thorough coverage of soil surface.</p> <p>Do not harvest within 12 weeks of application.</p>
		Seed corn beetle Seed corn maggot White grubs Wireworms	2.5-4.0	2.0	
		Cutworms	2.5-4.0	—	
		Asiatic garden beetle larvae White-fringed beetle larvae	2.5-5.0	—	
		Japanese beetle larvae	5.0-10.0	—	
Cotton	Ext.	Boll weevil	1.0	—	<p>Apply as dust or spray. When applying as a spray, make application in sufficient water to give good coverage.</p> <p>May be applied by air using 3-10 gallons of water per acre.</p> <p>Do not allow spray to drift onto any other crops.</p> <p>Do not apply after bolls open.</p> <p>Do not graze treated fields with dairy animals or animals being finished for slaughter.</p> <p>Do not feed treated forage to livestock.</p> <p><i>For boll weevils:</i> Make application at 4-5 day intervals.</p> <p><i>For fleahoppers, darkling beetles, fall armyworms, sand wireworms, tarnished plant bugs and thrips:</i> Apply at cotton treating schedules.</p> <p><i>For grasshoppers:</i> Application is limited to hatching areas when nymphs are young.</p> <p><i>For wireworms and false wireworms:</i> Make preplant soil treatment only.</p>
		Cotton fleahoppers Darkling beetle Fall armyworms Sand wireworms Tarnished plant bug Thrips	0.5-1.5	—	
		Grasshoppers	1.0	—	
		Wireworms False wireworms	4.0-5.0	—	
		Wireworms	2.5-5.0	—	
Flax	Ext.	Wireworms	2.5-5.0	—	<p>Make preplant soil treatment only.</p> <p>Do not use treated straw for feed.</p>

## FIELD CROPS

Crop	Tolerance (ppm)	Insect	Rate (lb. a.i./acre)		Directions and Limitations						
			Broadcast	Row							
Soybeans	Ext.	Seed corn maggot White grubs Wireworms	2.5-5.0	—	Make preplant soil application only. Do not make foliar application. Apply to soil after plowing and disc or incorporate into soil immediately. Use sufficient water for thorough coverage of soil surface. Do not graze or feed treated forage or vines to livestock.						
						Tobacco	NF	White grubs Wireworms	2.5-4.0	2.0	Make preplant broadcast or row application (where applicable) only. Do not make foliar application. Apply to soil after plowing and disc or incorporate into soil immediately. Use sufficient water for thorough coverage of soil surface.
									Cutworms	2.5-4	
		Green June beetle larvae	3.0-4.0	—							

## FIELD CROPS

Crop	Tolerance (ppm)	Insect	Application Rate	Directions and Limitations
Tobacco (transplant)	NF	Cutworms Wireworms	1/8 - 1/4 pint (1/8 - 1/4 lb. a.i.) in 50-100 gallons of water. Use 200-300 gallons of solution per acre.	

## FIELD CROPS — SEED TREATMENT

Crop	Tolerance (ppm)	Insect	Rate	Directions and Limitations
Corn (field)	0.3	Seed corn beetle Seed corn maggot Southern corn rootworm Wireworms	2 oz. a.i. per bushel of seed.	Do not use treated seed for food, feed or oil purposes. Treated seeds should be labeled as follows: This seed treated with chlordane. Do not use for food, feed or oil purposes. <i>For planter box use:</i> Seeds should be cleaned and well cured before treatment. Mix directly with seed and use in planters designed to give correct dosages.
Cotton Rice Small grains (oats, rye, wheat)	Ext.	False wireworm Seed corn maggot Wireworms		
Sorghum	Ext.	False wireworm Kafir ant Seed corn maggot		
Soybeans	Ext.	Seed corn maggot Wireworms		

## FRUIT AND BERRY CROPS

Crop	Tolerance (ppm)	Insect	Rate (lb. a.i./acre)	Directions and Limitations
Apples Apricots Cherries Nectarines Pears Plums Prunes Quinces Blackberries Grapes Huckleberries Loganberries Raspberries Strawberries Grapefruit Kumquats Limes Oranges Tangelos Tangerines Pineapples	0.3	Ants	1.5-2.0	<p>Make preplant soil application only. Do not make foliar application.</p> <p>Use sufficient water for thorough coverage of soil surface.</p> <p>Do not apply when fruit is present.</p> <p><i>For tree fruits:</i> Make broadcast application and work into top 3-6 inches of soil.</p> <p><i>On berry crops:</i> Make application at base of plants and incorporate into soil.</p> <p><i>On pineapple:</i> Do not apply after fruit begins to form. Use sufficient water to cover treated area thoroughly.</p>
		Cutworms White grubs Wireworms	2.5-4.0	
		Asiatic garden beetle larvae White-fringed beetle larvae	2.5-5.0	
		Green June beetle larvae	3.0-5.0	
		Japanese beetle larvae	10.0	
Grapefruit Kumquats Limes Oranges Tangelos Tangerines	0.3	Termites	1.5-2.0 per 100 gallons of water	<p>Make application to tree trunk and area to be banked.</p> <p>Also apply to mound when bank is half completed.</p> <p>Do not apply to foliage.</p> <p>Do not apply when fruit is present.</p>
Blackberries Blueberries Raspberries Strawberries	0.3	Root weevil larvae	10.0	<p>Make broadcast application and work into top 3-6 inches of soil.</p> <p>Do not make foliar application.</p> <p>Do not apply when fruit is present.</p>
		Rootworms	5.0-10.0	

**VEGETABLE CROPS**

Crop	Tolerance (ppm)	Insect	Rate (lb. a.i./acre)		Directions and Limitations
			Broadcast	Row	
Asparagus	0.1	Asparagus beetle	1.0 lb. in 100 gal. water	--	Make post cutting application only.
Beans	0.3	Cutworms	2.5-4.0	2.0	Make preplant soil or row application (where applicable) only. Do not make foliar application.
Beets	0.3	Wireworms			
Broccoli	0.3	White grubs			Apply to soil after plowing and disc or incorporate into soil immediately.
Brussels sprouts	0.3	Asiatic garden beetle larvae	2.5-5.0	--	
Cabbage	0.3	White-fringed beetle larvae			Use sufficient water for thorough coverage of soil.
Cantaloupe	0.3				
Cauliflower	0.3				On garden beans do not graze or feed treated forage or vines to livestock.
Celery	0.3	Flea beetle larvae (potatoes and sweet potatoes only)	2.5-5.0	--	
Collards	0.3				
Cucumbers	0.3				
Eggplant	0.3				
Kale	0.3				
Kohlrabi	0.3	Japanese beetle larvae	5.0-10.0	--	
Lettuce	0.3				
Melons	0.3				
Okra	0.3	Wireworms (potatoes—Pacific Northwest only)	10.0	5.0	
Onions	0.3				
Peas	0.3				
Peppers	0.3				
Pimentos	0.3				
Potatoes	0.3				
Pumpkins	0.1				
Radishes	0.3				
Rutabagas	0.3				
Squash	0.3				
Sweet potatoes	0.3				
Tomatoes	0.3				
Turnips	0.3				
Watermelon	0.3				

**VEGETABLE CROPS**

Crop	Tolerance (ppm)	Insect	Dosage (Active Ingredient)	Directions	
Cole Crops		Cabbage Maggot	1 lb./100 gal. water or 5-10% Dust	Newly Set Plants: Spray or dust around base of plants as soon as set in the field. Stir or wash the treatment into the soil. One or two repeat applications are frequently necessary.	
Broccoli	0.3				
Brussels Sprouts	0.3				
Cabbage	0.3			4 lb./50 gal. water	Transplanting Dip: Swish roots and crowns through mixture just before setting. Protection is limited to newly set plants.
Cauliflower	0.3				
Collards	0.3				
Kale	0.3				
Kohlrabi	0.3		4 oz./50 gal. water	Transplant Drench: Apply around plant at planting time. Use about 400 gallons of solution per acre. Protection is limited to newly set plants.	



**FIRE ANTS**

Area	Rate, Directions for Use and Limitations
Noncropland (lawns, ornamental turf, cemeteries, golf courses, parks, industrial sites, roadsides and similar areas)	<b>BROADCAST SOIL TREATMENT</b> Apply 1.5 lbs. a.i. per acre. Make broadcast application. Cover surface uniformly. Do not treat when soil is wet. Do not apply to pasture and rangeland. Do not contaminate food and feed crops.
Noncropland and non-food areas	<b>MOUND APPLICATION</b> Do not graze livestock on treated areas within one year of treatment. Do not contaminate feed and food crops. Treated areas should be examined three weeks after application and surviving colonies retreated. <b>GRANULAR:</b> Apply the equivalent of 0.07-0.14 lbs. a.i. to entrance of nest as well as to an area 3 feet around mound. <b>EC:</b> Prepare an 0.5% emulsion in water. Thoroughly saturate mounds using as much as 5 gallons of emulsion for large colonies.

**AGRICULTURAL USES (Non-Crop)**

Area	Insect	Concentration or Rate	Directions
Outdoor treatment: Ditch banks Field borders Roadsides Vacant land	Asparagus Beetle	1.5 lb. (active ingredient per acre)	Dust or spray. Do not contaminate food or feed crops.
	Chiggers Colorado Potato Beetle Crickets Cutworms Earwigs Flea Beetle Thrips	3 lb.	When applied to soil, do not feed forage to dairy animals or animals being finished for slaughter.
		1 lb.	Apply by fogging machine. Do not contaminate food or feed crops.



**LAWNS AND TURF**

Use sufficient water for full coverage. Repeat applications when necessary. Apply just before a rain or use irrigation or sprinklers to wash material into established turf.

Keep children or pets off treated turf until material has been worked into the soil by watering or rain and grass is dry.

**APPLICATION RATES FOR GOLF COURSES, PARKS, ORNAMENTAL TURF AND CEMETERIES.**

Insect	Lbs. Chlordane Per Acre
Ants Armyworms Chiggers Crickets Cutworms European Earwigs Fire Ants Grasshoppers Lawn Moth (Sod Webworm) Mole Crickets Spiders Ticks	5.0-7.0
Asiatic Garden Beetle Larvae European Chafer Larvae Green June Beetle Larvae Japanese Beetle Larvae White-Fringed Beetle Larvae White Grubs Wireworms	5.0-10.0
European Crane fly Larvae	2.0*

\*EC and WP formulations only.

## SHADE TREES, ORNAMENTALS, PERENNIALS AND ANNUALS

Plants	Insect Pest	Dosage (Active Ingredient)	Directions
Arborvitae	Bagworms	1 lb./100 gal. water	Apply in late spring when insects are first observed.
Camellia	Leaf Beetles Leafminers	1 lb./100 gal. water	Apply spray to entire plant when injury is first noticed.
Elm	Leaf Beetles Leafminers	1 lb./100 gal. water	Apply spray to entire plant.
Hawthorn	Leafminers	1 lb./100 gal. water	Apply spray to entire plant when mines are first noticed in the leaf.
Holly	Leaf Beetles Leafminers	1 lb./100 gal. water	Apply spray to entire plant.
Juniper	Bagworms	1 lb./100 gal. water	Apply in late spring when insects are first observed.
Magnolia	Leaf Beetles Leafminers	1 lb./100 gal. water	Apply when growth starts or mines are first observed in the leaf.
Maple	Lace Bugs	1 lb./100 gal. water	Make application in latter part of May. Repeat in 2 or 3 weeks if necessary.
Oak	Tent Caterpillar Tree Crickets	1 lb./100 gal. water	Apply when larvae are young or when insects are present.
Privet	Thrips	1 lb./100 gal. water	Apply spray to entire plant.
Rhododendron	Lace Bugs	1 lb./100 gal. water	Make application in latter part of May. Repeat in 2 or 3 weeks.
	Borers	1 lb./100 gal. water	Apply to stems and leaves. Apply weekly to prevent reinfestation.
Roses	Thrips Japanese Beetles (Adult)	1 lb./100 gal. water	Apply spray to entire plant.
Sweet Bay	Leafminers	1 lb./100 gal. water	Apply when new growth starts or mines are first noticed in the leaf.
Taxus	Black Vine Weevil	1 lb./100 gal. water	Spray entire plant. Thoroughly treat branches closest to the ground as well as drench the ground under the plant. Make application in latter part of June. Use up to 500 gallons per acre.
Willow	Willow Leaf Beetle Tent Caterpillar Leafminers Leaf Beetles	1 lb./100 gal. water	Apply when insects are young or when mines first appear. Apply spray to entire plant.

Recommended rates for use against the above insects may also be used on other shade trees, ornamentals, perennials or annuals. The spray should be prepared by adding 1 lb. chlordane (active ingredient) to 100 gallons of water. Apply spray until runoff appears.

Also, spray containing 1 pound of chlordane (active ingredient) per 100 gallons of water may be applied to shade trees, ornamentals, perennials, and annuals for the control of: Armyworms, Cutworms, Fall Armyworms, Japanese Beetle Adults, Green June Beetle Adults, and May Beetles.

## INDOOR USES

## APPLICATIONS WITHIN FOOD AREAS OF FOOD HANDLING ESTABLISHMENTS\*

Limited to Crack and Crevice Treatment Only—Use a 2-3% spray. Apply a small amount of material directly into cracks and crevices such as expansion joints between different elements of construction or between equipment bases and the floor, wall voids, motor housing, junction boxes or switch boxes, conduits or hollow equipment legs where ants, centipedes, crickets, roaches, silverfish, spiders and waterbugs hide. Care should be taken to avoid depositing the product onto exposed surfaces or introducing the material into the air. Avoid contamination of food or food processing surfaces.

Use equipment that can deliver a pin stream of insecticide. A coarse wet spray is not appropriate for this type of treatment.

Applications of this product in the food areas of food handling establishments, other than as a crack and crevice treatment, are not permitted.

\*EC and oil soluble only.

## APPLICATIONS IN NON-FOOD HANDLING AREAS (SPOT TREATMENT ONLY)

Insect	Application Rate	Application Directions
Ants Boxelder Bugs Carpet Beetles Centipedes Roaches Scorpions Silverfish Spiders Crickets Waterbugs	2-3% Spray 5-6% Dust	Thoroughly dust or spray around doorsills, baseboards, closets, storage cabinets, openings around water pipes, heat and air conditioning ducts, window frames, wall cracks, electrical outlets or wherever these insects may enter, congregate, feed or hide in the home. For carpet beetles, spray cracks and areas under carpeting.
Clothes Moths	2% Spray (EC only)	Thoroughly dampen all surfaces of clothing, blankets and other woolen cloth. Treated articles should be dried and then placed immediately in storage. Dry clean before using them as clothing or bedding.
Wasps	2-3% Spray	Spray the wasp nest after dark when all the insects have returned to the nest.
Brown Dog Tick	2-3% Spray 5-6% Dust	Thoroughly dust or spray or paint with a coarse wet spray infested areas, baseboards, window and door frames, wall cracks, sleeping quarters of household pets and localized areas of floors and floor coverings. Use fresh bedding after treatment. Do not spray pets or other animals.
Powder-Post Beetles	2% Spray (Oil soluble only)	Apply at the rate of 1½ pints per square foot of wood to be treated. Small areas can be treated by brushing on. Use a spray type applicator to treat extensive areas or overhead wood. When treating overhead wood surfaces move nozzle rapidly to prevent runoff. Do not apply as a mist. For best results make application when wood is dry and temperature is at least 80°F.
Springtails Symphilitids (African Violets)	5% Dust	Potting soil—Add 1½ pounds of 5% dust per gallon of soil. Repotting— Mix into new soil as directed above. Dust old soil ball slightly.  Potted plants—Sprinkle ¼ teaspoonful of 5% dust (per inch diameter of pot) over the soil. Water from top for next several waterings. Repeat application at 4 to 6-month intervals or whenever insects appear.

Oil solutions are made with deodorized kerosene and are intended for indoor use only as they are toxic to plants.

Dusts and wettable powders are not commonly used indoors due to unsightly residues.

## ANIMALS

Animal	Insect Pest	Dosage (Active Ingredient)	Directions
Dogs	Fleas Lice Sarcoptic Mange Ticks	1 lb. 25-50 gal. water	Dip or spray animals. Shampoos may also be used. Do not treat dog with 0.25% level more often than once a week and 0.5% level more often than once in every 2 weeks.
		2.5% Dust	Apply thoroughly to the animal.
	Demodectic Mange	1 lb. 750 gal. water	For use only by or under the direction of a veterinarian.

## TERMITE CONTROL

Prepare a 1% emulsion (solution) and apply the 1% emulsion as follows.

**CONCRETE SLAB-ON-GROUND CONSTRUCTION**

- 1 Apply an over-all treatment under entire surface of floor slab. Apply at the rate of 1 gallon per 10 square feet, except that if fill under slab is gravel or other coarse absorbent material, apply at the rate of 1½ gallons per 10 square feet.
- 2 Under slab-on-ground porch floors and entrance platforms apply an over-all treatment at the rate of 1 gallon per 10 square feet.
- 3 Along both sides of foundation walls, along interior foundation walls, and around plumbing, rod or dig a narrow trench to a depth of 1 foot, but not below the top of the footing. Along outside foundation walls, trench should be no wider than six inches. Apply at the rate of 2 gallons per 5 linear feet of trench. The chemical should be mixed with the soil as it is being replaced in the trench.
- 4 Treat all voids in hollow masonry units of the foundation at the rate of at least 1 gallon per 5 linear feet of wall. Apply the emulsion so as to reach the footing.

**BUILDINGS WITH CRAWL SPACES**

- 1 Rod or dig a narrow trench to the top of the footing along the inside of the foundation walls, around piers, sewers, pipes and conduits. Apply 2 gallons of solution per 5 linear feet. When trenching, chemical should be mixed with the soil as it is being replaced in the trench.
- 2 Rod or dig a narrow trench to the top of the footing along the outside of the foundation wall. If a trench is dug, it should be no wider than six inches. Apply 2 gallons of solution per 5 linear feet of trench per each foot of depth. Rodding or trenching 3 feet deep would require 6 gallons per 5 linear feet. When trenching, chemical should be mixed with the soil as it is being replaced in the trench.
- 3 Under attached porches, entrance platforms, utility entrances and similar situations where slab or fill is at the same grade level apply 1 gallon per 10 square feet of soil surface.
- 4 Treat all voids in hollow masonry units of the foundation at the rate of at least 1 gallon per 5 linear feet of wall. Apply the emulsion so as to reach the footing.

**BUILDINGS WITH BASEMENTS**

- 1 Apply an over-all treatment under the basement floorings, as well as under attached porches, entrance platforms, utility entrances and similar situations where slab fill is at the grade level. Apply at the rate of 1 gallon per 10 square feet, except that if fill under slab is of washed gravel, cinders or similar coarse material, increase the dosage by at least one-half. Where crawl spaces exist, treat as described in part 2 below.
- 2 Rod or dig a narrow trench to the top of the footing along the inside of foundation walls, around piers, sewer pipes and conduits. Apply 2 gallons of solution per 5 linear feet. When trenching, chemical should be mixed with the soil as it is being replaced in the trench.
- 3 Along the outside of foundation walls, rod or dig a narrow trench, such trench to be dug no deeper than the top of the footings and to be no wider than six inches. If the trench is less than 15 inches in depth to the top of the footings, apply 1 gallon per 5 linear feet. Replace the soil and apply another 1 gallon per 5 linear feet to the back fill. Cover the back fill with a thin layer of soil. If the trench is more than 15 inches in depth, to the top of the footings, apply 2 gallons per linear foot. Replace the soil and apply another 2 gallons per 5 linear feet to the back fill. Cover the back fill with a thin layer of soil. A trench 30 inches deep is a minimum depth required alongside foundations where the top of the footings is greater than 30 inches deep. In lieu of trenching to a 30 inch depth, make a narrow trench and rod to footing, spacing the holes about 1 foot apart.
- 4 Treat all voids in hollow masonry units of the foundation at the rate of 1 gallon per 5 linear feet of wall. Apply the emulsion so as to reach the footing.

**PRECONSTRUCTION TREATMENT**

If soil is treated and the concrete slab is not poured shortly thereafter on the same day, a polyethylene sheeting or other waterproof material should be placed over the treated soil. However, this procedure is not required where foundation cinder blocks or bricks surrounding the treated area have already been installed.