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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

SEP 12 2000

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Ms. Rebecca Horton
Registrations By Design (Consultant for Bonide Products, Inc.)
118 ½ E. Main Street, Suite 1
Salem, VA 24153

Dear Ms. Horton:

SUBJECT: Amendment - Add Uses on Termites & Wood-Infesting Insects
Bonide Total Pest Control Concentrate
EPA File Symbol 4-349
Your Submission Dated June 20, 2000

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

1. The above referenced product is classified as a Tox. Category II for Primary Eye Irritation. Therefore, revise the first two sentences under PRECAUTIONARY STATEMENTS to read: "Causes substantial but temporary eye injury. Do not get in eyes or on clothing". Also add: "Remove contaminated clothing and wash clothing before reuse".
2. Also under PRECAUTIONARY STATEMENTS, add "Harmful if absorbed through skin". Add: "with soap and water" to last sentence.
3. Under FIRST AID: as the concern is greatest for exposure to eyes, the section entitled "IF IN EYES" should be list first. Please move the number given for information on pesticide products (i.e., the National Pesticide Telecommunications Network) in proximity to the FIRST AID section and the PRECAUTIONARY STATEMENT section.
4. Where appropriate, where mixing directions are given, include the following statement: "Do not use kitchen utensils for measurements".
5. Under SUBTERRANEAN TERMITES, amend the last statement in the first paragraph to read: "One treatment should last up to 5 years if treated soil is left undisturbed".

- 6. Delete the fourth sentence under Environmental Hazards. The statement "Do not apply directly to water" is sufficient.
- 7. Under DIRECTIONS FOR USE following the use statement add: "Not for use on plants being grown for safe or for other commercial use or for commercial seed production or for research purposes".
- 8. Under NOTE SUBTERRANEAN TERMITES, expand the statement to read: "Do not treat structures that contain cisterns, wells, french drains, or sump systems".
- 9. Under WOOD INFESTING BEETLES revise the last part of the sentence to read: "... thoroughly apply mixture to wood using a coarse spray or using a paintbrush. Do not allow runoff to occur".
- 10. Under SUBTERRANEAN TERMITES, please clarify the 3rd to the last sentence in the first full paragraph (i.e., Apply half of this to the back-fill). Do you mean half the rate of application or half of a particular volume?
- 11. On front panel add the following precaution: "DO NOT USE INSIDE DWELLINGS. For use around existing structure, not for pre-construction use".
- 12. Add the paragraph indicated below, following the first paragraph under SUBTERRANEAN TERMITES. Also delete reference to use in crawl spaces. Crawl spaces are considered *within* the structure.

"Kills and controls subterranean termites. Chemicals for soil treatment are used to establish a barrier against termites. The chemical emulsion must be adequately dispersed in the soil to provide a barrier between the wood in the structure and the termite colonies in the soil. Barriers may be established in the soil on the outside perimeter of the house by trenching using a rate of 4 gallons of emulsion per 10 linear feet per foot of depth. A complete termite barrier may require treatment with another EPA registered product to the inside perimeter of the foundation and to other interior critical areas. For these situations, contact a licensed pest control operator for treatment. Do not use under slabs, in crawl spaces, or indoors. If termites are found within the house or structure, contact a licensed pest control operator for treatment".

- 13. Add the following Re-Application to the end of the DIRECTIONS FOR SUBTERRANEAN TERMITES:

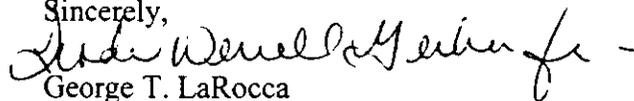
WHEN TO RE-APPLY

"Reapplication for subterranean termites should only be made when there has been a disruption of the chemical barrier in the soil due to construction, excavation, landscaping, etc. Reapplication should be made as a spot treatment to those areas. Annual reapplication of the entire premises must be avoided".

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Submit 2 copies of the final labeling prior to releasing the product for shipment. If you have any questions regarding this letter, please contact Linda Werrell Gerber of my team at (703) 308-8033.

Sincerely,



George T. LaRocca
Product Manager 13
Insecticide Branch
Registration Division

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Total Pest Control Concentrate

[Alternate Brand Names: BONIDE® Total Pest Control Concentrate Outdoor Formula, BONIDE® Termite & Carpenter Ant Control, BONIDE® Carpenter Ant Control]

FOR TERMITES: OUTDOOR, POST-CONSTRUCTION, RESIDENTIAL USE ONLY.

Optional Marketing Statements:

Provides long lasting control of problem insects. such as, Colorado potato beetle, Cutworms, Leafminers, Borers, Mites, Crickets. For use outdoors, around buildings, homes, in small flower and vegetable gardens, and on fruit, nut and ornamental trees.

Kills Potato beetles.

One teaspoon makes up to 1 1/4 gallons.

Kills and repels: Potato beetles, Borers, Codling moths, Thrips, Whiteflies, Cutworms, Grubs, Grasshoppers, Ants, Mole crickets, Japanese beetles, and over 40 other insects!

Makes up to 40 gallons (5.4 oz. container).

Use on Listed:

- Lawns
- Vegetables
- Fruits & Nuts
- Flowers & Trees

To Control Listed:

- Ants, Japanese beetles, Grubs, Mole crickets
- Potato flea beetles, Cutworms, Armyworms, Japanese beetle
- Plum Curculio, Pear Psylla
- Aphids, Elm leaf beetle, Scales, Spider mites, Mealybugs, Thrips, Whiteflies.

Also controls other wood-infesting insects.

Kills Termites, Carpenter Ants and Other Wood-Infesting Insects.

Controls subterranean termites, fire ants, carpenter ants, and wood-infesting beetles.

ACTIVE INGREDIENT:

Permethrin (CAS #52645-53-1).....	13.30% w/w
OTHER INGREDIENTS:.....	86.70%
Total.....	100.00%

ACCEPTED

with COMMENTS
EPA Letter Dated:
SEP 12 2000

KEEP OUT OF REACH OF CHILDREN
WARNING

Federal Insecticide, Fungicide, and Rodenticide Act. See back side/other panel(s) for additional Precautionary Statements. registered under EPA Reg. No. 4-349

Net Contents: _____

EPA Reg. No. 4-349
6/20/00

EPA Est. No. 4-NY-1
Page 1 of 8 Pages

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FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If swallowed: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS—WARNING

Causes eye irritation. Do not get in eyes. Wear goggles, face shield or safety glasses when handling the undiluted material. Avoid contact with skin or clothing. Harmful if swallowed. Avoid breathing vapor. Wash thoroughly after handling.

*2000-23
poison number
Dilute !!!
Eye
Don't Irr !!!*

ENVIRONMENTAL HAZARDS

This product is extremely toxic to fish. Do not contaminate water by disposal of equipment washwaters. Do not apply directly to water. Keep out of lakes, streams or ponds, tidal marshes or estuaries. Apply this product only as specified on this label.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame. Flashpoint minimum of 105°F (49°C).

DIRECTIONS FOR USE

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

For use on home lawns, flower and vegetable gardens, fruit, nut and ornamental trees.

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DIRECTIONS FOR USE ON VEGETABLES: For backyard vegetable gardens only. Prepare spray mix as directed in following chart. Use 1 qt. of finished spray per 110 square feet (or 1 gal./440 sq. ft.) of surface area.

HOW TO MIX AND APPLY

Step #1: Determine size of spraying job. For lawns and vegetables, measure the area to be sprayed. For all other applications, apply as a thorough cover spray. Make applications when insects first appear. Repeat applications as needed or as noted in the rate chart.

Step #2: Use clean sprayer. Carefully measure and mix the amount of product and water as suggested in the rate chart.

Step #3: Spray as directed in rate chart. Thorough coverage is important. Flush sprayer with clean water after each use.

1 fl. oz. = 6 tsp. or 2 Tbs.

8 fl. oz. = 1/2 pt. or 1 cup

1 fl. oz. in 3 gallons of water = 2 tsp. in 1 gallon of water or 8 fl. oz. in 24 gallons.

do not use in tomatoes

Vegetables	Target Pest(s)	Remarks	Recommended Dilution Rate tsp./qt. of water
Asparagus (Pre-harvest)	Cutworm Asparagus Beetle	Apply for uniform coverage as needed. Do not apply more than 4 applications per crop. Can be applied up to 3 days prior to harvest.	1 tsp./5 qts.
(Post-harvest)	Larval stages of Asparagus Beetle, Tarnished Plant Bug, Lygus Bugs, and Adult Japanese Beetle	Treat ferns or bush growth after spear harvest when insects are present.	1 tsp./5 qts.
Celery	Vegetable Leafminer, Cabbage Looper, Black and Granulate Cutworm, Fall, Beet and Southern Armyworm	Apply every 3-5 days or as needed. Can be applied up to 3 days prior to harvest. Do not make more than 10 applications per season.	1 1/2 tsp./4 qts.
Cole Crops: Broccoli, Brussels Sprouts, Cabbage, Cauliflower	Beet Armyworm, Diamond Back Moth, Imported Cabbageworm, Cabbage Aphid, Cabbage Looper	Apply every 5 days or as needed. Can be applied up to 1 day prior to harvest. Do not make more than 8 applications on Cauliflower, Brussels Sprouts, and Broccoli, and 10 applications to Cabbage.	1 tsp./5 qts.
Eggplant	Colorado Potato Beetle, Vegetable Leafminer	Apply for uniform coverage as needed. Do not exceed 16 applications. Can be applied up to 3 days prior to harvest.	1 1/2 tsp./4 qts.
Horseradish (Foliar application)	Imported Crucifer Weevil	Apply as needed. Do not exceed 3 foliar applications. Can be applied up to 22 days prior to harvest.	1 1/2 tsp./4 qts.
Head Lettuce only (Do not use on Leaf Lettuce)	Cabbage Looper, Alfalfa Looper, Beet Armyworm, Corn Earworm and Tobacco Budworm	Apply every 5-10 days as needed. Do not make more than 10 applications per season. Can be applied up to 1 day prior to harvest.	1 1/2 tsp./4 qts.
Potatoes	Beet Armyworm, Colorado Potato Beetle, Potato Leafhopper, Potato Flea Beetle, Aster Leafhopper, Potato Aphid, Potato Tuberworm, Cabbage Looper, Cutworms, European Corn Borer, Potato Psyllid, Tarnished Plant Bug	Apply as needed. Do not apply more than 12 applications. Can be applied up to 7 days prior to harvest.	1 1/2 tsp./4 qts.
Peppers	Vegetable Leafminer, Cabbage Looper, Flea Beetle, Corn Earworm, Pepper Weevil, European Corn Borer	Apply as needed, but not more than 8 sprays per season. Can be applied up to 3 days prior to harvest.	1 1/2 tsp./4 qts.

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Spinach	Beet Armyworm, Corn Earworm, Cabbage Looper, Cutworms, European Corn Borer, Green Cloverworm and Leafhoppers.	Apply for uniform coverage when needed but not more than 7 applications per season. Can be applied up to 7 days prior to harvest.	1 tsp / 5 qts
Sweet Corn	Corn Earworm, European Corn Borer, Fall Armyworm, Southern Armyworm	Apply every 5 days and when needed but not more than 6 applications per season. Can be applied up to 1 day prior to harvest.	1 1/2 tsp / 4 qts
Trees (Fruit or Nut)	Target Pest(s)	Remarks	Recommended Dilution Rate tsp./qt. of water
Almonds	Navel Orange Worm Peach Tree Borer	Apply when insects appear. Do not make more than 2 applications during hull split and 5 applications per season. Can be applied up to 7 days prior to harvest.	2 3/4 tsp / 5 qts
Apples	Plum Curculio, Redbanded Leafroller, Rosy apple Aphid, Spotted Tentiform Leafminer, Tarnished Plant Bug, White Apple Leafhopper, Oblique-banded Leafroller, Green Fruitworm	Apply when insects appear. Repeat as required to maintain control. Do not make more than 3 applications per season. Do not apply after petal fall.	2 3/4 tsp / 5 qts
Peaches	Lesser Peachtree Borer, Peach Twig Borer, Plum Curculio, Tarnished Plant Bug, Green Fruitworm, Oriental Fruit Moth	Apply when insects appear. Do not apply within 7 days of harvest. Do not make more than 8 applications per season.	2 3/4 tsp / 5 qts
Pears (dormant through delayed dormant)	Pear Psylla	Apply during the dormant through delayed dormant growth period only. Add if desired 8 oz. of Bonide All Season's Oil to each gallon of TOTAL Pest Control and use spray. Do not make more than 2 applications per season.	2 3/4 tsp / 5 qts
(summer)	Pear Psylla, Green Fruitworm and Codling Moth	Apply when needed. Do not apply more than 3 applications per season. Can be applied up to 14 days prior to harvest.	2 3/4 tsp / 5 qts.

FOR ORNAMENTAL TREES GROWN AROUND THE HOME:

Use sufficient spray to obtain full coverage of all foliage. Avoid heavy wetting. Use to control: Pine Moths, Pine Needle Miners, Pine Beetles and Needle Scales on pine, Budworms on conifers, Oakworms on oak, Fall Webworms on cherry, elm and honeysuckle, Aphids on tulip poplar, Citrus Black Flies on non-bearing citrus, Tussock moths on Douglas and grand firs, Leafminers on birch, Elm Leaf Beetle and Elm Spanworms on elms. Mix 2 3/4 tsp. per 5 qts. water.

TO KILL TENT CATERPILLARS: Application should be made when caterpillars are young and tents are first noticed. For results, apply in the late afternoon or evening, when caterpillars have returned to their tents. Mix 2 fl. oz. of this product in one gallon of water. Wet tents with spray on all sides. A few caterpillars may be seen escaping from tent, however, they should die within several hours.

FOR USE ON HOME LAWNS

For control of ants (including fire ants), armyworms, chinch bugs, crickets, cutworms, Japanese beetle grubs, grasshoppers, mole crickets and sod webworms, consult the following chart:

Pests	Dilution
Armyworms, Cutworms, Chinch Bugs, Japanese Beetle Grubs, Mole Crickets, Sod Webworm	5 tsp. 10 gal. water/1000 sq. ft.
Crickets, Grasshoppers, Ants (including Fire Ants)	2 tsp. 3 gal. water/1000 sq. ft.

Lawn should be no taller than 3 inches at time of application. Slightly more water may be used as long as the amount of product per area is as listed above. For heavy infestations, repeat application after two weeks.

Also for control of cutworms on dichondra and Irish moss. Use as directed above for lawns.

Keep children and pets off treated areas until lawn has dried following the application.

FOR USE ON ORNAMENTAL PLANTS OUTDOORS

Contact and Residual Spray – Use sufficient spray to obtain full coverage of all foliage. Adjust spray volume used to plant size.

To use, mix 1 teaspoon of Total Pest Control Concentrate with one gallon of water.

Spray in the late afternoon or evening, when the temperature ranges from 50° to 75° F and when there is little or no wind. Spray at the first indication of insect pests. On those plants that will flower during the season, the spray schedule should be completed before blossom formation. Repeat as necessary, use intervals of 4 to 8 days. Application can be made up to the day of collection.

Spray as directed above to control aphids, cicadas, corn earworms, fall cankerworms, inchworms, leafminers, leafrollers, mealybugs, bagworms, spider mites, exposed thrips and whiteflies on the following plants: Ageratum, Arizona Cypress, Aster, Azalea, Begonia, Coleus, Common Ninebark, Common Snowberry, Elm, Exacum, Euonymous, English Ivy, Gladiolus, Gold Bells, Hypoestes, Ivy, Lilac, Marigold, Mock Orange, Nannyberry, Orchid, Palm, Pansy, Pea Shrub, Petunia, Philodendron, Poinsettia, Rhododendron, Rose, Snapdragon, Taxus, Wax Plants, Weeping Fig, Zinnia.

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OUTDOOR PEST CONTROL

For contact and residual spray, mix with water in the following manner:

Finished spray	Total Pest Control (Fl. Oz.)	Water
0.25%	2 2/3 (5 1/3 Tbs.)	1 gallon
0.25%	3/4 (4 tsps.)	1 quart
0.50%	5 1/2 (10 1/2 Tbs.)	1 gallon
0.50%	1 1/2 (8 tsps.)	1 quart

For heavy infestations, use the 0.50% dilution. For lighter infestations and for maintenance purposes, use the 0.25% dilution. One gallon of finished spray is sufficient to treat 1580 linear feet with a 6 inch spray band.

PEST ON OUTSIDE SURFACES OF BUILDINGS: Use this product to control ants, clover mites, crickets, earwigs, millipedes and sowbugs (pillbugs) on the outside surfaces of buildings. To help prevent infestation of buildings, treat the building foundation to a height of 2 to 3 feet where pests are and may find entrance. Also, apply as a residual spray to outside surfaces of buildings, including porches, screens, window frames, eaves, patios, garages, refuse dumps, and other areas where these pests congregate or have been seen. Repeat treatment as needed to maintain effectiveness.

HOUSE FLIES, MOSQUITOES, CLUSTER FLIES, GNATS, FLYING MOTHS OUTDOORS: For outdoor use only as an aid in reducing annoyance from these insects. Spray outside surfaces of screens, doors, window frames or wherever these insects may enter the room. Also treat surfaces around light fixtures on porches, in garages, and other places where these insects alight or congregate. Repeat as necessary.

ANTS, DEER AND LONE STAR TICKS, CRICKETS, FLEAS, AND EARWIGS, OUTDOORS: For treatment of localized infestations of these insects in outdoor areas where there are weeds or bushy non-crop areas, spray infested areas thoroughly. For ants, thoroughly wet hills and runways. Repeat application as infestations warrant and as reinfestations occur.

WASPS, HORNETS, YELLOW JACKETS, BEES OUTDOORS: Application should be made in late evening when insects are at rest. Aim spray at nest openings in ground, bushes, and in cracks and crevices which may harbor nests, saturating nest openings and contacting as many insects as possible.

TO CONTROL FIRE ANTS: Dilute 2 tablespoons of this product in 1 gallon of water. Apply 1 gallon of solution as a gentle rain to each fire ant mound using a sprinkler can. Thoroughly wet the mound and surrounding area to a 4 foot diameter. For best results, apply in cool weather, 65-80°F, or in early morning or late evening hours. Treat new mounds as they appear. Do not disturb the mound prior to treatment. If possible, treat all mounds in the vicinity and treat all colonies which may not as yet have constructed a mound. Larger quantities of solution can be prepared for multiple mound treatments. Equipment to deliver the diluted product as a gentle rain at the rate of 1 gallon per mound

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is still required. Do not use equipment that produces a pressurized spray as pressurized sprays may disturb fire ants and cause migration, reducing product effectiveness.

SUBTERRANEAN TERMITES: For post-construction treatment around residential buildings. Mix **5 fl. oz. of Bonide Total Pest Control Concentrate per 1 gallon of water** (makes a 0.5% water emulsion). Apply as specified below. One treatment should last several years if treated soil is left undisturbed.

up to 5 years

Remove all wood debris and wood forms. Around piers, pipes, chimney bases and along foundations of poured concrete, dig a trench 6 inches wide and 4 inches deep. For brick and block foundations, dig the trench about 12 inches deep. If footing is more than 12 inches deep, make holes with a crowbar, pipe or a rod about 1 foot apart that extend from the trench bottom to the top of the footing. Make holes closer in hard-packed clay soils. **NEVER DIG BELOW THE TOP OF THE FOOTING.** Apply the emulsion (or solution) in the trench at a rate of 4 gallons per 10 linear feet per foot of depth. Apply half of this to the back-fill. Likewise, treat along the inside of foundations of crawl-space buildings. Cover treated soil with a thin layer of untreated soil.

half this
act

For raised porches, terraces and entrance slabs outdoors, drill holes at one foot intervals, 6 inches from the foundation, and pour one-half gallon of emulsion (or solution) into each hole. Refill holes.

Be sure to treat the interiors of accessible hollow block foundations at same rate as above. Do not use in structural voids insulated with rigid foam. Be careful to have adequate ventilation when treating areas under structure. For severe infestations or treatment under slabs with heat ducts or radiating heat pipes, in basements and buildings with insufficient crawl space, etc., contact a licensed pest control operator or termite control service.

NOTE: Avoid contamination of public and private water supplies by following these precautions. Do not allow a hose or any type of faucet extension to reach into the termite chemical solution while filling or mixing this material with water. Use anti-backflow or anti-siphonage equipment on all filling equipment. These devices can be purchased at hardware or plumbing supply stores. Use of anti-backflow equipment will help ensure that the user of this chemical will not contaminate domestic water supplies. Refer to FHA (Federal Housing Administration), state and local specifications for safe distances of treatment areas from wells. Do not treat structures that contain cisterns or wells. Soil in the vicinity of wells, cisterns or ponds should not be treated. For those situations, contact the local Cooperative Extension Service or consult a commercial pest control service. Do not treat soil that is water saturated or frozen or in any conditions where runoff or movement from the treatment area (site) is likely to occur.

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CARPENTER ANTS & WOOD-INFESTING BEETLES: For localized treatment in and around residential buildings. Mix **5 fl. oz. of Bonide Total Pest Control Concentrate in 1 gallon of water** and apply as directed. Allow spray to dry before allowing people or pets to occupy treated areas.

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Carpenter Ants: Adjust sprayer to deliver a coarse spray. Apply mixture around doors, windows and other points of entry. Spray into cracks and crevices where ants or their nests are suspected.

Wood-Infesting Beetles (Old House Borer and Powder Post): To protect wood and control damage by these wood-infesting insects, apply mixture to wood using a coarse spray to the point of run-off, or with a paintbrush.

STORAGE: Do not store at temperatures below 40°F (4.5°C). Store product in original container in a locked storage area, inaccessible to children and pets. Store and transport in upright position.

DISPOSAL: *If empty* – Do not reuse this container. Do not rinse unless required for recycling. Place in trash. *If partially filled* – Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Unless otherwise instructed, place in the trash. Never pour unused product down the drain or on the ground.

For information on pesticide products (including health concerns, medical emergencies, or pesticide incidents), call the National Pesticide Telecommunications Network at 1-800-858-7378.

Buyer assumes all risks for use of this product when not used according to label directions or established safe practice.

Manufactured by
BONIDE PRODUCTS, INC.
2 Wurz Avenue
Yorkville, NY 13495