NOV 1 8 1993

Mr. Robert F. Bischoff DowElanco Quad IV--9002 Purdue Road Indianapolis, Indiana 46268-1189

Subject: General Label Revisions, Including Risk Mitigation

Dursban ME20 Insecticide

EPA Registration Number 62719-88

Your Application Dated October 18, 1993

Dear Mr. Bischoff:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, is acceptable provided that you make the labeling change indicated below before you release the product for shipment bearing the amended labeling:

On page 6 of the draft labeling, in the directions for "Brown dog ticks," revise the first sentence to "Thoroughly apply the spray to cracks and crevices and along baseboards, windows and door frames and other areas of floor and floor coverings where these pests may be present."

Submit five (5) copies of your final printed labeling before you release the product for shipment.

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

Sincerely yours,

DHE

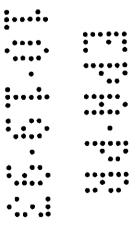
Dennis H. Edwards, Jr. Product Manager (19) Insecticide-Rodenticide Branch Registration Division (7505C)

Enclosure

Dursban ME20 62719-88

Amendments:

- 1) Revised restrictions on tank mixing with other products.
- 2) Revised "General Use Precautions section text, including certain statements previously under "Directions for Use" heading (Specific instructions have been added for safeguarding humans and pets within "General Information" section and in "Specific Instructions").
- 3) Added "such as, but not limited to those listed" statements to pests controlled by Dursban ME20 lists for "Indoor" and "Outdoor" uses.
- 4) Pest Control Indoors: Revised specific directions for brown dog ticks, carpet beetles and fleas.
- 5) Added section for "Localized Treatment of Subterranean Termites" which recommends use of prefoamed dilutions for uniform treatment of "hard-to-treat areas or voids.



[Editor's note: Added text is underlined and deleted text is denoted by strikethrough.]

(base label):

(logo) DowElanco

Dursban* ME20 Microencapsulated Insecticide

Controls numerous pests in and around households and other structures

To be sold only to and applied by commercial applicators responsible for insect control programs or persons under the direct supervision of such commercial applicators

Active Ingredient:

Contains 1.7 pounds of chlorpyrifes per gallon.

Precautionary Statements

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

CAUTION

May Be Harmful If Swallowed . Harmful If Absorbed Through Skin

Do not get in eyes, on skin or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse. Keep away from food, feedstuffs and water supplies.

First Aid

If swallowed: Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not give anything by mouth to an unconscious persor.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.

If In eyes: Flush with plenty of water for 5 minutes. Get medical attention if irritation persists.

If Inhaled: Remove to fresh air if symptoms of cholinesterase inhibition appear and get medical

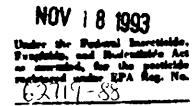
attention immediately.

Note to physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atroping, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote • • • immediately after establishing an open airway and respiration.

Environmental Hazards

This pesticide is toxic to birds and wildlife. Do not apply directly to water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not contaminate water when disposing of equipment washwaters.

ACCEPTED with comments in EPA Letter Dated



Refer to inside of label booklet for Directions for Use including STORAGE AND DISPOSAL.

Notice: Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label bocklet. In case of an emergency endangering life or property involving this product, call collect 517-636-4400. Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

MM

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EPA Reg. No. 62719-88

EPA Est. 464-MI-1; 52379-MI-002

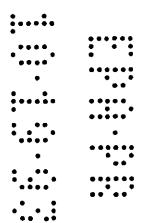
Superscripts used are first letters of lot number.

*Trademark of DowElanco

DowElanco • Indianapolis, IN 46268, U.S.A.

Specialty Insecticide

Net Contents 16 fl oz



(Label Booklet Cover)

(logo) DowElanco

Dursban* ME20 Microencapsulated Insecticide

Controls numerous pests in and around households and other structures

To be sold only to and applied by commercial applicators responsible for insect control programs or persons under the direct supervision of such commercial applicators

Active Ingredient:	
chlorpyrifos: O,O-diethyl-O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate	20.0%
Inert Ingredients	80 0%
Contains 1.7 pounds of chlorpyrifos per gallon.	

Keep Out of Reach of Children CAUTION

Refer to back panel of container for precautionary information and First Aid.

Notice: Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet. In case of an emergency endangering life or property involving this product, call collect 517-636-4400. Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

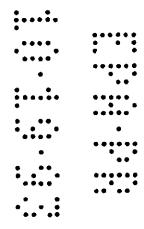
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EPA Reg. No. 62719-88 EPA Est. 464-MI-1; 52379-MI-002
Superscripts used are first letters of lot number.

*Trademark of DowElanco

DowElanco • Indianapolis, iN 46268, U.S.A.

Specialty Insecticide

Net Contents 16 fi oz



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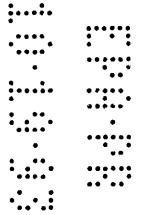
Fire ant mounds

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Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

PRECAUCION:

Precaucion al usuario: Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

May Be Harmful If Swallowed - Harmful If Absorbed Through Skin

Do not get in eyes, on skin or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse. Keep away from food, feedstuffs and water supplies.

First Aid

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

If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.

If in eyes: Flush with plenty of water for 5 minutes. Get medical attention if irritation persists.

If Inhaled: Remove to fresh air if symptoms of cholinesterase inhibition appear and get medical attention immediately.

Note to physician: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.

Environmental Hazards

This pesticide is toxic to birds and wildlife. Do not apply directly to water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not contaminate water when disposing of equipment washwaters.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying

Do not formulate this product into other and use

Do not formulate this product into other end-use products.

Do not tank mix this product with dichlorvos (DDVP) containing products.

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 122°F for extended periods of time. Storage below 40°F may result in formation of crystals. If product crystallizes, store at 55-75°F- 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, språy mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use 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-refiliable 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 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 Refiliable Containers: Replace the dry disconnect cap, if applicable, and seal all openings which have been opened during use. Return the empty container to a collection site designated by DowElanco. If the container has been damaged and cannot be returned according to the recommended procedures, contact DowElanco Customer Service Center at 1-800-258-1470 to obtain proper handling instructions.



General Information

Dursban ME20 insecticide is a flowable microencapsulated concentrate designed for use as a residual spray to control various pests in and around residential and non-residential structures. Dursban ME20 may be sprayed on any surface which will not be damaged or stained by water. A visible deposit may appear on some dark surfaces. This deposit can be easily removed with a cloth or damp sponge.

General Use Precautions

Do not apply this product to conduits, motor housings, junction and switch boxes, or other electrical equipment because of possible shock hazard.—Attention: Do not allow spray to contact food or food-contacting surfaces, feedstuffs, or water supplies. Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product. Remove pets and cover fish bowls (tanks) before spraying. Do not use in togging equipment to apply the product indoors. Do not allow adults, children or pets on treated areas until spray has dried. Keep out of fishpools or other bodies of water. Do not treat vegetable gardens. Do not use in poultry houses.

Do not formulate this product into other end-use products.

Do not tank mix this product with dichloryos (DDVP) containing products.

Do not allow spray to contact food, feedstuffs, or water supplies,

Dursban ME20 may be tank-mixed with Insect Growth Regulators, and other chemically compatible products.

Do not allow spray to contact food or food-contacting surfaces. Thoroughly wash dishes and food handling utensits with soap and water if they become contaminated by application of this product.

Do not use in foaging equipment.

Do not allow adults or children on treated areas until spray has dried.

Do not apply water based sprays of this product to conduits, motor housings, junction and switch boxes, or other electrical equipment because of possible shock hazard.

Pets: Remove pets (cats, dogs, etc.) and cover fish bowls (tanks) before spraying. Do not treat pets with this product. Humans or pets should not contact treated surfaces for a minimum of 4 hoofs and until the spray has dried. Keep out of fishpools or other bodies of water. Do not use in poultry flouses.

Mixing Directions

Thoroughly clean spray equipment before using Dursban ME20. Shake concentrate well before diluting so that material is thoroughly dispersed. When diluting, add water to the spray tank and the appropriate amount of Dursban ME20. Agitate the sprayer before using and occasionally during use to ensure even coverage. Re-agitate sprayer if dilution is left in prayer overnight. If spray screens are used, they should be 50 mesh or larger. Dilute Dursban ME20 only with water.

Amount of Durst	an ME20 to Make	1 Gallon of Fir	ished Spray
% Concentration of Sprayer Mixture	0.2%	0.4%	0.5%
Dursban ME20	1 1/3 fl oz (38 ml)	2 2/3 fl oz (76 ml)	3 1/3 fl oz (95 ml)



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Approved Uses

General Pest Control Indoors

General Directions for Use

Dursban ME20 may be applied within residential and non-residential buildings or structures and within industrial, institutional and commercial buildings and vehicles. Applications can be made in food service establishments such as restaurants, cafeterias, taverns, delicatessens, mess halls, school and institutional dining areas, hospitals, mobile canteens, vending machines, groceries and markets. Applications can also be made in non-food areas of food manufacturing, and food processing establishments including garbage rooms, lavatories, drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets and storage rooms (after canning or bottling). Treat where insects are found or normally occur. Application of a 0.2% solution is suitable for control of light pest infestations (i.e. maintenance applications). Application of a 0.4% solution provides residual control of heavy infestations (i.e. clean-out applications). Where extended residual control is desired, apply Dursban ME20 at a rate of 0.5% solution. A period of 4 to 7 days is normally required to observe maximum effectiveness on insect populations; therefore, limit Limit retreatments to no more often than once per every 7 days. Apply spray solutions in such a manner as to minimize spray drift to non-target surfaces.

General Directions for Use in Food Service Establishments

Dursban ME20 may be applied in food service establishments such as restaurants and cafeterias. Treat where insects are found or normally occur. Application of a 0.2% solution is suitable for control of light pest infestations (i.e. maintenance applications). Application of a 0.4% solution provides residual control of heavy infestations (i.e. clean-out applications). For extended residual control, apply Dursban ME20 at a rate of 0.5% solution. Application within food service establishments is limited to spot and/or crack and crevice treatments. For crack and crevice treatments, apply small amounts of material directly into openings leading to voids and hollow spaces in walls, equipment legs and bases, or which occur at points between elements of construction, or between equipment and floors. Equipment capable of delivering a pinstream of spray should be used for crack and crevice application. For spot treatments, an individual spot should not exceed two square feet. Repeat treatment as needed but not more than once every 14 days, Applications of this product in food service establishments other than as a spot and/or crack and crevice treatment are not permitted. Apply spray solutions in sich a manner as to minimize drift to non-target surfaces.

Indoor Pests Controlled by Dursban ME20†

Use Dursban ME20 to control pests such as, but not limited to, those listed in the following table by application at the recommended dosages.

Ants ¹	Crickets	Mediterranean	·····	
Brown dog ticks ²	Earwigs	flour moths	••••	•••••
Carpet Beetles ³	Firebrats	Millipedes	•••••	: ';
Centipedes	Fleas ⁵	Rice weevils	••••	*****
Clover mites	Flour beetles	Silverfish	•	•••
Cockroaches ⁴	(Confused)	Sowbugs	••••	••••
(American)	(Red)	Spiders	• ••	•••••
(Brownbanded)	(Saw-toothed)		•••••	•
(German)	Indian meal moths		•	•••••
(Oriental)			• ••	••
(Smokey brown)			•	*****
(Asian)			• •	•••••
			• •	

[†]Superscripts refer to Specific Indoor Use Directions

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Specific Indoor Use Directions

1. Ants may be controlled by treating ant trails and wherever else these pests may find entrance; for example, around doors and windows.

- 2. Brown dog ticks may be controlled by applying spray to infested areas, such as pet beds and resting-quarters; nearby cracks and crevices; along baseboards, windows and door frames, where these pests may be present. For best results, old bedding should be removed or replaced with clean, fresh bedding after treatment. Do not treat pets with this product.
- 2. Brown dog ticks: Thoroughly apply the spray to infested areas such as cracks and crevices and along baseboards, windows and door frames and other areas of floor and floor coverings where these pests may be present. Non-carpeted flooring should only be treated with spot applications as necessary. Spots are defined as areas not to exceed two square feet. Old bedding should be replaced or thoroughly washed. Use a 0.5% spray at the rate of 1 gallon of diluted spray per 1600 square feet. DO NOT TREAT PETS WITH THIS PRODUCT. Humans or pets should not contact treated surfaces for a minimum of 4 hours and until the spray has dried.
- 3. Carpet beetles may be controlled by thoroughly applying the spray as a spot treatment along baseboards and edges of carpeting; under carpeting, rugs and furniture; in closets and on shelving. Spots are defined as areas not to exceed two square feet, and two spots cannot be connected.
- 3. Carpet beetles: Thoroughly apply the spray to rugs and carpets, along baseboards and edges of carpeting, under carpeting, rugs, and furniture, in closets and on shelving, and wherever else these insects are seen or suspected. Non-carpeted flooring should only be treated with spot applications as necessary. Spots are defined as areas not to exceed two square feet. Use a 0.5% spray at the rate of 1 gallon of diluted spray per 1600 square feet. DO NOT TREAT PETS WITH THIS PRODUCT. Humans or pets should not contact treated surfaces for a minimum of 4 hours and until the spray has dried.
- 4. Cockroaches are best controlled by making crack and crevice or spot treatments. Treat where insects are found or normally occur including, but not limited to, dark corners of rooms and closets; floor drains, cracks and crevices in walls; along and behind baseboards; beneath and behind sinks, stoves, refrigerators, refrigerator units, and cabinets; and around plumbing and other utility installations. Crack and crevice treatments are applied by delivering a pin stream or small amounts of solution directly into cracks or voids. Spot treatments are defined as areas not to exceed two square feet. Two spots cannot be connected. Limit spot applications to less than 20% of the lower wall and floor surface.

Thoroughly apply Dursban ME20 to infested areas. Indoor flea control is achieved by thorotoght coverage and deep carpet penetration. Use a 0.2% dilution at a rate of 1 gallon of diluted spray per 800 to 1,600 square feet, depending upon carpet density. Provide uniform coverage, but do not to 1,600 square feet may be applied. Entire carpets may be treated. If fleas reappear if about 1 to 2 weeks after treatment, it is probably because they have hatched from their pupal (cocoon) stage. If this occurs, either repeat treatment or allow the product's time-release microcapsules another week to kill newly-emerged fleas. Do not treat pets with this product.

Effective flea control includes controlling the source of flea infestations. This can require treatment of pets with a product registered for flea control and treating outside areas frequented by pets. Dursban ME20 can also be applied out-of-doors for flea control.



Fleas: Thoroughly apply a fine-particle broadcast spray to intested areas, such as rugs and carpets. Prior to treatment, carpets should be vacuumed thoroughly and vacuum cleaner bag discarded in an outdoor trash container. DO NOT TREAT PETS WITH THIS PRODUCT. For light infestations. use a 0.2% dilution at the rate of 1 gallon of diluted spray per 1600 square feet. For heavy infestations or for extended residual control, use a 0.4% to 0.5% dilution at the rate of 1 gallon of diluted spray per 1600 square feet or a 0.2% dilution may be used at the rate of 1 gallon of diluted spray per 800 square feet. Do not use a 0.4% to 0.5% dilution at the rate of 1 gation of spray per 800 square feet. An insect Growth Regulator may be added to achieve extended control of developing flea larvae and pupae. Non-carpeted flooring should only be treated with spot applications as necessary. Spots are defined as areas not to exceed two square feet. Cover aquarium and fish bowls and remove pets (cats, dogs, birds, etc.) from area prior to treating. Other than the applicator, treated areas should be vacated during application. Humans or pets should not contact treated surfaces for a minimum of 4 hours and until the spray has dried. Old pet bedding should be replaced or thoroughly washed. DO NOT TREAT PETS WITH THIS PRODUCT. To control the source of flea infestations, pets inhabiting the treated premises should be treated with a fleacontrol product registered for application to animals.

General Pest Control Outdoors

General Directions for Use

Use Dursban ME20 to control outdoor pests listed in the accompanying table by application as either a perimeter treatment or as a residual spray.

Use Dursban ME20 to control pests such as but not limited to those listed in the accompanying table by application as either a high volume or low volume perimeter treatment.

PerImeter treatments: <u>High volume perimeter treatments</u> help prevent infestation of buildings and may be applied at rates ranging from 10 to 20 fluid ounces per 50 gallons of spray solution. When making perimeter treatments, apply Dursban ME20 where pests are active or may find entrance. For example, treat a band of soil 6 to 10 feet wide around and adjacent to buildings and treat the building foundation to a height of 2 to 3 feet. Apply as a coarse spray at the rate of about 10 gallons spray mixture per 1,000 square feet to thoroughly and uniformly wet the band area.

Residual sprays provide extended control and Low volume perimeter treatments may be applied at a rate of 1 1/3 to 2 2/3 fluid ounces of Dursban ME20 per 1 gallon of water. Apply dilution to localized areas on outside surfaces of buildings and other outdoor areas where pests congregate or have been apply as a coarse, low pressure (less than 20 psi) spray or use other suitable equipment to minimize spray drift.

Sewer manhole shafts can be treated for cockroach control. To control cockroaches in sewers add 3.1 fluid ounces of Dursban ME20 per each gallon of water and apply approximately 0.5 gallons of spray solution per each 8 vertical feet of manhole shaft 3.1/3 fluid ounces of Dursban ME20 per gallon of water and apply approximately 0.5 gallons of spray solution per 8 vertical feet of manhole shaft. Avoid application directly to drainage water. Most efficient coverage is achieved, but not limited to, by spraying the vertical walls of the sewer manhole shaft using a power sprayer fitted with a long extended wands tipped with a 360 degree spray nozzle.

Note: Do not discharge spray or unused material directly into the sewer system. Do not apply product within 36 hours of predicted heavy rainfall.

Note: Persons applying this product in the manhole must wear chemical resistant gloves, a respirator approved by NIOSH for organic chemical vapors, goggles and long-sleeved clothing.



Outdoor Pests Controlled by Dursban ME20†

Use Dursban ME20 to control pests such as, but not limited to, those listed in the following table by application at the recommended dosages.

Ants Earwigs
Bees Fire ants
Beetles Fleas
Carpenter ants Flies
Carpenter bees Hornets

Clover mites Millipedes
Cockroaches Mosquitoes

Crickets

Scorpions² Silverlish Sowbugs

Sowbugs Spiders Ticks Wasps

Yellowjackets

†Superscripts refer to Specific Outdoor Use Directions

Specific Outdoor Use Directions

- 1. For individual fire ant mounds, apply Dursban ME20 as a mound drench at a rate of 1.0 fluid ounce per each 2 gallons of water. Satisfactory results can be expected by from applying 2 gallons of dilution per mound. Adjust volume according to mound size, avoiding unnecessary runoff. Allow 7 to 10 days to achieve maximum effectiveness. Dursban ME20 has shown residual control of fire ants in excess of 30 days. If retreatment is necessary, limit applications to once per every 14 days.
- 2. For **scorpions**, remove accumulations of lumber, firewood, and other materials which serve as harborage sites. Before stacking firewood or lumber, apply Dursban ME20 as a residual spray to sull aces immediately below such materials. Band treatments may also be helpful in reducing pests immigrating from surrounding areas.

Subterranean Termites

Dursban ME20 for soil treatment is used to establish a barrier 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 technician be familiar with current control practices including tranching, rodding, substable injection, and low pressure spray applications. These techniques must be correctly employed to prevent or control infestations by subterranean termite species of Reticultermes, 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 a mestic water supplies. The biology and behavior of the involved termite species are important factors to be known as well as suspected location of the serbny 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.

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

- 1) Use anti-backflow equipment or procedures to prevent siphonage of pesticide back into-water supplies.
- 2) Do not treat soil that is water saturated or frozen.
- 3) Consult Federal, state, and local specifications for information regarding approved treatment practices in your area.

Structures that contain wells or cisterns may be treated using the following guidelines:

 Do not treat soil while it is beneath or within the foundation of a structure that contains a well or cistern. The treated backfill method may be used if the soil is removed and treated outside the foundation.



- 2. Excavation/Treated Backfill Technique: If treatment must be made along exterior foundation walls of structures containing wells or disterns or other difficult situation, such as near wells or disterns, along dieldstone or rubble walls, along faulty joundation walls, around pipes and utility lines which lead downward from the structure to a well, pond, or other body of water, application may be made in the following manner:
 - a. Trerich and remove soil to be treated onto heavy plastic shifeting or similar material or into a wheelbarrow.
 - t. Treat the soil at the rate of 4 gallons of diluted emulsion per 10 linear feet per foot of depth of the trench or 1 gallon of dilution per 10 cubic feet (See Rate Determination Guidelines). Initial treatments of less than 0.75%, but no less than 0.5% may be made. Areas treated with less than 0.75% must be inspected annually for signs of reinfestation. 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.
- 3) Infested and/or damaged wood can be treated using an injection technique such as is described in the Wood Infesting Insects section of this label.

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.

Rate Determination Guidelines

Consult the local Extension Agent or State Entomologist for application note recommendations.

An initial treatment using a 0.75%-1% dilution will provide effective, optimum long term residual control. Initial treatments of less than 0.75% but no less than 0.5% may also be made. Areas treated with less than 0.75% must be inspected annually for signs of reinfestation. The 0.5% rate may be used when making follow-up or spot treatments with no reinspection restrictions.

A 2% dilution may be used to protect utility poles and fence posts.

Table 1. Dilution Directions

		Dursban M	E20 Needed	
Gallons of Finished Dilution Desired	0.5%	0.75%	1.0%	2.0%
1	3.1 oz	4.7 02	6.2 oz	12.5 oz
10	1 qt	1.5 qts	2 qts	1 gal
18	1.75 qts	2.6 qts	3.5 qts	1.75 gals
36	3.5 qts	5.2 qts	1.75 gals	3.5 gais •
48	1.2 gals	1.75 gals	2.3 gais	4.7 gais
72	1.75 gals	2.6 gals	3.5 gals	7 gals
96	2.3 gais	3.5 gals	4.7 gals	9.3 gais***

Mixing Recommendations: It is important that the termiticide dilution be uniformly mixed in the spray tank before beginning the treatment and that it remain mixed during the application process. Soffle settling of this product will occur if allowed to stand without agitation.

- 1. Fill tank 1/4 to 1/3 full.
- 2. Start pump to begin by-pass agitation (or mechanical) and place end of treating tool in tank to allow circulation through hose.
- 3. Shake container well.
- 4. Add appropriate amount of Dursban ME20.
- 5. Add remaining amount of water.
- 6. Let pump run and allow recirculation through the hose for 2-3 minutes.

NOTE: If diluted solution is allowed to stand for more than 3-5 minutes without agitation, it will be necessary to repeat step number 6.



Application Volume

To ensure thorough and complete coverage in different soil types, it may become necessary to adjust the volume being applied. In situations such as heavy, clay-type soils which will not accept large amounts of water, reduced volumes can be used which will deliver the appropriate concentrations of termiticide in the soil. This would also apply to sensitive areas and/or horizontal applications where less volume may be desirable. Minimum volumes will be specified in the appropriate use directions. In light textured soils such as sand or gravel which accept larger amounts of water, increased volumes which deliver the appropriate concentration of termiticide in the soil may be used. Maximum volumes will be specified in the appropriate use directions.

Preconstruction Subterranean Termite Treatment

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 F.H.A. termite proofing requirements, follow the latest edition of the Housing and Urban Development (H.U.D.) Minimum Property Standards. Follow state and local regulations to meet minimum treatment standards for preventive preconstruction treatments.

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

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

- 1. For horizontal barriers, applications shall be made using a low pressure spray after grading is completed and prior to the pouring of the slab or footing.
 - a. For a 0.5% rate, apply 1 gallon of dilution per 10 square feet, or use 3.1 fluid ounces of Dursban ME20 per 10 square feet in sufficient water (no less than 1/2 gallon or more than 2 gallons) to provide thorough and continuous coverage of the area being treated (see Application Volume section).

For a 0.75% rate, apply 1 gallon of dilution per 10 square feet, or use 4.7 fluid ounces of Dursban ME20 per 10 square feet in sufficient water (no less than 1/2 gallon or more than 2 gallons) to provide thorough and continuous coverage of the area being treated (see Application Volume section).

For a 1% rate, apply 1 gallon of dilution per 10 square feet or use 6.2 fluid ounces of Dursban ME20 per 10 square feet in sufficient water (no less than 1/2 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 barfeath 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 0.5-1.0% 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. Rodding and/or trenching applications should be made to reach the top of the footing. Rod holes should be spaced to provide a continuous barrier.
 - b. Trenches need not be wider than 6 inches. Treat soil with the dilution as it is being replaced in the trench.

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For a 0.5% rate, apply 4 gallons of dilution or 12.4 fluid ounces of Dursban ME20 in sufficient water (not less than 2 gallons or more than 8) per 10 leaner feet per foot of depth.

For a 0.75% rate, apply 4 gallons of dilution or 18.8 fluid ounces of Dursban ME20 in sufficient water (not less than 2 gallons or more than 8) per 10 leaner feet per foot depth.

- 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 exit the soil. Do not apply the dilution to the entire surface area intended as the crawl.
- 3. For plenum type structures which use a sealed under-floor space to circulate heated and/or cooled air throughout the structure, apply the dilution at a 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 the foundation walls, piers, or pipes. The surface application should be made at a rate of 1 gal. per 10 square feet as a very coarse spray under low pressure (not to exceed 20 psi when measured at the treating tool). After soil treatment, a continuous vapor barrier of at least 6 mill 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 practice for plenum type structures.

Postconstruction Termite Treatment

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

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 should be securely plugged following application.

- 1. For 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 lestings. For foundations with exposed footings, dig a trench alongside the 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 0.5% rate, apply 4 gallons of dilution per 10 linear feet or use 12.4 fluid ounces of Dursban ME20 per 10 linear feet in sufficient water (no less than 2 gallons or more than 8 gallons) to provide thorough and complete coverage of the area being treated (see Application Volume section).



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For a 0.75% rate, apply 4 gallons of dilution per 10 linear reet or use 24.8 fluid ounces of Dursban ME20 per 10 linear feet in sufficient water (no 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 the soil to absorb the liquid and provide an adequate vertical barrier. The wider drill hole spacings (18-24") can usually be used in this situation. Sand, loam, or gravel back fill 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 (12-18").

For a 0.5%-1.0% rate apply 4 gallons of dilution per 10 linear feet.

- c. It may be necessary to treat along one side of 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 areas, 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, 3-5 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.
- 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 0.5-1.0% dilution or Dursban ME20.

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 drenching the soil. A one square foot bath trap will usually require about 3-5 gallons of dilution for thorough and complete coverage.

- 2. Hollow block foundations or voids in masonry resting on the footing can be treated to make a continuous chemical barrier in the voids. If the void has direct contact with the soil, it should be treated. Apply at a rate of 2 gallons of dilution per 10 linear feet to reach the top of the footing or soil. It is not necessary to treat the entire vertical surface of the void, rather, apply dilution to the lower part of the void so that it reaches the top of the footing or the soil.
- 3. For basements, apply at a rate of 4 gallons of dilution per 10 linear feet. Where footings are greater than 1 foot of depth from the grade to the top of the looting 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 inside of foundation walls, along cracks in basement floors, along interior load bearing walls, around sewer pipes, conduits and piers.
- 4. In crawl spaces, apply 4 gallons or 0.5% 1.0% dilution per 10 linear feet per foot of depth. Treat both sides of foundation and all around all piers and pipes.
 - a. Rodding and/or trenching applications should be made to reach the top of the footing.
 Rod holes should be spaced to provide a continuous chemical barrier.
 - b. Trenches need not be wider than 6 inches nor below the top of the footing. The emulsion should be mixed with the soil as it is replaced in the trench.

For a 0.5% rate, apply 4 gallons of dilution or 12.4 fluid ounces of Dursban ME20 in sufficient water (not less than 2 gallons or more than 8) per 10 linear feet per foot of depth.

For a 1% rate, apply 4 gallons of dilution or 24.8 fluid ounces of Dursban ME20 in sufficient water (not less than 2 gallons or more than 8) per 10 linear feet per foot of depth.

- c. For inaccessible under-floor spaces, treat soil by alternate method such as drilling and rodding through foundation walls from the outside.
- d. When conditions will not permit trenching, i.e. inadequate soil to wood clearance, rocky soil, etc., a surface application may be made adjacent to interior foundation walls, piers, and pipes but the treated strip shall not exceed 18 inches in width. The surface application should be made in a manner that avoids rulioff. Use a very coarse spray at a pressure not exceeding 20 psi when measured at the treating tool. Structures should be ventilated during application and until the treatment is dry.

For 0.5% rate, apply 4 gallons of dilution per 10 linear feet or 12.4 fluid ounces of Dursban ME20 per 10 linear feet in sufficient water *not less than 2 gallon or more than 8) to ensure complete coverage (refer to Application Volume section).

For a 0.75% rate, apply 4 gallons of dilution per 10 linear feet or 18.8 fluid ounges of Dursban ME20 per 10 linear feet in sufficient water (not less than 2 gallon or more than 8) to ensure complete coverage (refer to Application Volume section).

For a 1% rate, apply 4 gallon of dilution per 10 linear feet or 24.8 fluic ounces of Ducstan ME20 per 10 linear feet in sufficient water (not less than 2 gallons or more than 8) to ensure complete coverage (refer to Application Volume section).

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

5. In plenum type structures which use a sealed under-floor space to circulate heated and/or cooled air within the structure, apply the 0.5-1.0% dilution at a rate of 4 gallons per 10 linear feet per foot of depth. Soil adjacent to both sides of the 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 interior foundation walls may be made. but the treated strip shall not exceed a width of 18 inches, horizontally, from the foundation piers or pipes. The surface application should be made at a rate of 1 gal. per 10 square feet as a very coarse spray under low pressure (not to exceed 20 psi 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. Structures would be ventilated during application and until treatment is dry.

Localized Treatment of Subterranean Termites

Foam Treatment Recommendations

In situations where conventional subterranean termite control application methods have not or are not likely to provide adequate coverage, foam generating equipment or similar machines can be used to provide a continuous barrier. Treatment of filled porches, chimney bases, soil under slabs and treatment of wall voids are examples where spot foam applications may be useful.

Refer to label of foaming adjuvant for proper amount of material to add per gallon of Dursban ME20 dilution.

The following provides the amount of Dursban ME20 required for a given area and volume range of the prefoamed insecticide dilution necessary for application of the product.

For a 0.75% rate, apply 19 fluid ounces of Dursban ME20 per 10 linear feet using no less than 2 gallons. or more than 8 gallons, of prefoamed dilution.

For a 1.0% rate, apply 25 fluid ounces of Dursban ME20 per 10 linear feet using no less than 2 gallons, or more than 8 gallons, of prefoamed dilution,

Underground Cable and Conduit

Prevention Treatment For Use Only in Hawaii, Guam, and Other Pacific Islands: Use a 0.75% - 2% dilution (see Rate Determination Guidelines section and refer to Table 1 for dilution. directions). After digging the trench, place approximately 6" of backfill or sand at the bottom and apply 2 gallons of the dilution per 10 linear feet. Allow to dry then place the cable backful. Cover with an additional 6" of backfill or sand and apply another 2 gallons of emulsic n per 10 linear feet. Finish filling treก็ผลินหนึ่ง 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" chemical barrier.

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

Utility Poles and Fence Posts

Preventative Treatment: Use a 0.75% - 2% dilution (see Rate Determination Guidelines section and refer to 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 approximately 6 inches wide. Soil for the base layer and backfill of each pole or post 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 0.75% - 2% 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 to 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 fl oz. 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.

Retreatment Statement

Retreatment of subterranean termites may be made any time there is evidence of reinfestation, disruption or loss of the barrier due to construction, excavation, landscaping, etc. Retreatments may be made to vulnerable or reinfested areas in accordance with application techniques described on this label.

Treatments may be made as wither a spot or complete treatment. The timing of these retreatments will vary, depending on factors such as termite pressure, soil conditions, etc., which may reduce the effectiveness of the barrier.

Annual retreatments are prohibited unless reinfestation on barrier disruption has occurred.

Control of Wood Infesting Insects

Dosage and Mixing Instruction: Dursban ME20 is recommended for use as an aqueous emulsion containing 0.5% - 1.0% chlorpyrifos. See Table 1 for dilution directions.

Advisement: 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 expessed feeds before treatment. Dow 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 coarse sprays or by brushing the product onto targeted surfaces. Use a sufficient amount of spray to cover the area to the point of wetness but avoiding 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 ft² as a coarse spray.

Old Wood, (typically greater than 10 years of age) apply approximately 1 gallon of dilution per 100 ft² as a coarse spray.

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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 void where these ants or their nests are present. Use a sufficient amount of spray to cover the area to the point of wetness but avoiding runoff.

For control of **termites** (localized areas of infest 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 in accessible 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 infestations 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.

Warranty Disclaimer

DowElanco 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. DOWELANCO 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, tack 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, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of DowElanco or the seller. All such risks shall be assumed by Buyer.

Limitation of Remedies

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

(1) Refund of purchase price paid by buyer or user for product bought, or

(2) Replacement of amount of product used.

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

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