



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

NOV 10 2004

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Edward M. Lignowski
Agent for Gharda USA, Inc
IPM Resources LLC
660 Newtown-Yardley RD, Suite 105.
Newtown, PA 18940

Subject: Label Amendment: Confirmation to the "me too" label
Navigator 4TC (Chlorpyrifos)
EPA Reg. No. 33658-11 (previously 70907-7)
Submissions dated January 22, 2004.

Dear Dr. Lignowski::

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

- 1) References to porches and patios must be removed from the Industrial Use Sites Only section since they may imply residential use.
- 2) The registration number on your label must be changed to 33658-11 per October 15, 2004 transfer letter.

A stamped copy of the label "accepted with comments" is enclosed for your records.

Please submit two (2) copies of the final printed label for our files prior to releasing the product for shipment. If you have any questions please call me at (703) 308-8328.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Akiva Abramovitch".

Akiva Abramovitch, Ph.D.

Chemist

Insecticide-Rodenticide Branch
Registration Division (7505C)

RESTRICTED USE PESTICIDE
For retail sale to and use only by certified Applicators or persons under their direct supervision and only for those uses covered by the certified Applicator's certification.

**ACCEPTED
with COMMENTS
In EPA Letter Dated:
NOV 10 2004**



Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 33658-TI

NAVIGATOR™ 4TC

**Chlorpyrifos Termiticide Concentrate
LOW ODOR FORMULA**

Active ingredient:

chlorpyrifos: 0,0-diethyl 0-(3,5,6-trichloro-2-pyridinyl) phosphorothioate..... 45.00%

Inert ingredients:..... 55.00%

Total 100.00%

Contains 4 pounds of chlorpyrifos per gallon.
Contains petroleum distillate

KEEP OUT OF REACH OF CHILDREN WARNING AVISO

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

FIRST AID (Organophosphate Insecticide)	
If inhaled:	<ul style="list-style-type: none"> ▪ Remove 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 advise.
If on skin or clothing:	<ul style="list-style-type: none"> ▪ Take off contaminated clothing. ▪ Rinse skin immediately with plenty of water for 15-20 minutes. ▪ Call a poison control center or doctor for treatment advise.
If in eyes:	<ul style="list-style-type: none"> ▪ 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 advise.
If swallowed:	<ul style="list-style-type: none"> ▪ Call poison control center or doctor immediately for treatment advise. ▪ Do not give ANY liquid to a person. ▪ 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.
HOT LINE NUMBER (Organophosphate Insecticide)	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information call: 1-(866)-359-5660	
NOTE TO PHYSICIAN	
Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). 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. Note: Contains Petroleum Distillate - vomiting may cause aspiration pneumonia.	

Gharda USA, Inc.
Newtown, PA 18940

EPA Registration No. 70907-7
EPA Est. No.: 44616-MO-1
53883-TX-001
Net Contents: 2.5 gal

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING. May Be Fatal If Swallowed • Excessive Absorption Through Skin May Be Fatal
• Causes Substantial But Temporary Eye Injury • May Cause Skin Irritation.

Do not get in eyes, on skin or clothing. Wear eye protection. Avoid breathing vapors and spray mist. Handle concentrate in a ventilated area. Wear protective clothing and chemically resistant gloves when handling. 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.

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

Personal Protective Equipment

Applicators and other handlers must wear:

- long sleeved coveralls over short sleeved shirt and short pants
- chemical resistant footwear plus socks
- chemical resistant gloves such as nitrile or butyl
- Protective eyewear

When handling the concentrate or working in a non-ventilated space all handlers must wear a:

Dust/mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C, or
Respirator with an organic-vapor removing cartridge and a prefilter approved for pesticides with MSHA/NIOSH approval number prefix TC-14G, or
Supplied-air respirator with MSHA/NIOSH approval number prefix TC-19C, or
self-contained breathing apparatus (SCBA) with MSHA/NIOSH approval number prefix TC-13F

Mixers and Loaders must wear:

- long sleeved shirt and long pants
- chemical resistant footwear plus socks
- chemical resistant gloves such as nitrile or butyl
- Protective eyewear (goggles, face shield, or safety glasses with front, brow, and temple protection).

Mixers and loaders who do not use a mechanical system (such as an inline injector) to transfer the contents of this container must wear coveralls or chemical resistant apron in addition to the other required PPE.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds and wildlife, and extremely toxic to fish and aquatic organisms. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Cover or incorporate spills. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

This product is not registered in California. California state law prohibits sale, distribution, and use within the State of any product not registered by the State.

DIRECTIONS FOR USE

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

This product may be used at a maximum end-use dilution of 0.5% active ingredient. Treated areas must be inspected annually for signs of reinfestation. For use on outside structures only.

Read all Directions for Use carefully before applying.

Do not formulate this product into other end-use 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 and shake occasionally to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

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

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

or

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

Container Disposal for Refillable Containers: Replace the dry disconnect cap, if applicable, and seal all openings which have been opened during use.

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call
CHEMTREC 1-800-424-9300**

General Information

Subterranean Termites

Navigator 4TC termiticide concentrate 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 trenching, rodding, subslab injection and low pressure spray applications. These techniques must be correctly employed to prevent or control infestations by subterranean termite species of *Reticulitermes*, *Zootermopsis*, *Heterotermes* and *Coptotermes*. Choice of appropriate procedures includes consideration of such variable factors as the design of the structure, water table, soil type, soil compaction, grade conditions and the location and type of domestic water supplies. The biology and behavior of the involved termite species are important factors to be known as well as suspected location of the colony and severity of the infestation within the structure to be protected. For advice concerning current control practices for specific local conditions, consult resources in structural pest control.

General Use Precautions

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.

All leaks resulting in the deposition of termiticide in locations other than those prescribed on this label must be cleaned up prior to leaving the application site. Do not allow people or pets to contact contaminated areas or to reoccupy the contaminated areas of the structure until the cleanup is completed.

Retreatment for subterranean termites can only be performed if there is clear evidence of reinfestation or disruption of the barrier due to construction, excavation, or landscaping and/or evidence of the breakdown of the termiticide barrier in the soil. These vulnerable or reinfested areas may be retreated in accordance with application techniques described in this product's labeling. The timing and type of these retreatments will vary, depending on factors such as termite pressure, soil types, soil conditions and other factors which may reduce the effectiveness of the barrier.

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. Do not treat while precipitation is occurring.
4. Consult Federal, state and local specifications for information regarding approved treatment practices in your area.
5. Do not contaminate wells or cisterns. See specific "Treatment of Structures with Wells, Cisterns or Other Bodies of Water Adjacent to Treated Sites".

Rate Determination Guidelines

- A dilution rate of 0.5% is required for all termiticide applications.
- A 0.5% to 1.0% dilution may be used for treatment of wood products.
- A 1.0% to 2.0% dilution may be used to protect underground utility cable and conduit and utility poles and fence posts in non-residential areas.

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Table 1 - Dilution Directions

Gallons of Finished Dilution Desired	Navigator 4TC Needed		
	Residential	Non-Residential	
		0.5%	1.0%
1	1 1/3 fl oz	2 2/3 fl oz	5 1/3 fl oz
5	6 2/3 fl oz	13 1/3 fl oz	26 2/3 fl oz
10	13 1/3 fl oz	26 2/3 fl oz	53 1/3 fl oz
24	1 qt	1/2 gal	1 gal
48	1/2 gal	1 gal	2 gal
97	1 gal	2 gal	4 gal

Mixing Directions

It is important that the termiticide dilution be uniformly mixed in the spray tank before beginning the treatment. Once mixed, Navigator 4TC will not settle out in the tank although the initial mixing will be enhanced by agitation, circulation through the treating hose, and the filling process.

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

Application Volume

To provide maximum control and protection against termite infestation apply the specified volume of the finished water emulsion and active ingredient as set forth in the Directions for Use section of this label. If soil will not accept the labeled application volume, such as heavy, clay-type soils, the volume may be reduced provided there is a corresponding increase in concentration so that the amount of active ingredient applied to the soil remains the same. 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. NOTE: Large reductions of application volume reduce the ability to obtain a continuous barrier. Variance is allowed when volume and concentration are consistent with label directed rates and a continuous barrier can still be achieved.

Treatment of Structures with Wells, Cisterns or Other Bodies of Water Within or Adjacent to Treated Sites

Do not contaminate wells or cisterns.

1. **Structures with Wells/Cisterns Inside Foundations:** Structures that contain wells or cisterns within the foundation of a structure can only be treated using the following technique:

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

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- a. Trench and remove soil to be treated onto heavy plastic sheeting or similar material or into a wheelbarrow.
 - b. Treat the soil at the rate of 4 gallons of dilute emulsion per 10 linear feet per foot of depth of the trench or 1 gallon per 1.0 cubic feet of soil (see "Mixing Directions" section of this label). Mix thoroughly into the soil taking care to contain the liquid and prevent runoff or spillage.
 - c. After the treated soil has absorbed the diluted emulsion, replace the soil into the trench.

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

- a. Prior to treatment, if feasible, expose the water pipe(s) coming from the well to the structure, if the pipe(s) enter the structure within 3 feet of grade.
- b. Prior to treatment applicators are advised to take precautions to limit the risk of applying the termiticide into subsurface drains that could empty into any bodies of water. These precautions include evaluating whether application of the termiticide to the top of the footer may result in contamination of the subsurface drain. Factors such as depth to the drain system and soil type and degree of compaction should be taken into account in determining the depth of treatment.
- c. When appropriate (i.e. on the water side of the structure), the treated backfill technique (described above) can also be used to minimize off-site movement of termiticide.

Preconstruction Subterranean Termite Treatment

Areas treated with 0.5% end-use dilution must be reinspected annually for signs of reinfestation. Annual reinspection is required during the term of the original contract and any contract renewal period.

Preconstruction applications are defined as those applications made prior to the finished grade being installed. 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. Follow state and local regulations to meet minimum treatment standards for preventative preconstruction treatments.

IN FLORIDA and OHIO: The vertical barrier application is required to complete the preconstruction application. After completion, a consumer notice must be posted in an accessible location on or in the structure that informs the consumer that the soil under and around the structure has been treated for the prevention of termites and contains the following information: date of application, identity of treatment provider, and the need for annual inspection and renewal of treatment contract.

IN KENTUCKY: Vertical and horizontal barrier applications are required to complete the preconstruction application. After completion, a consumer notice must be posted in an accessible location on or in the structure that informs the consumer that the soil under and around the structure has been treated for the prevention of termites and contains the following information: date of application, identity of treatment provider, and the need for annual inspection and renewal of treatment contract

Do not apply at a lower dosage and/or concentration than specified on this label for applications prior to installation of the finished grade.

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

See Rate Determination Guidelines and Table 1 for dilution directions.

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

a. Apply 1 gallon of dilution per 10 square feet or use 1 1/3 fluid ounces of Navigator 4TC 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 beneath the coarse fill.

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

2. For **vertical barriers**, apply the 0.5% dilution at a rate of 4 gallons per 10 linear feet per foot of depth. Establish vertical barriers in areas such as around foundations, plumbing lines, backfilled soil against foundation walls and other areas which may warrant more than just a horizontal barrier.

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

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

Apply 4 gallons of dilution per 10 linear feet per foot of depth or 5 1/3 fluid ounces of Navigator 4TC per 10 linear feet per foot of depth from grade to top of footing in sufficient water (not less than 2 gallons or more than 8 gallons) to ensure complete coverage.

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

d. For crawl spaces, establish a vertical barrier on both sides of the foundation and around all piers and areas where underground utilities 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 underfloor space to circulate heated and/or cooled air throughout the structure, apply the dilution at the rate of 4 gallons per 10 linear feet per foot of depth. Soil adjacent to both sides of foundation walls, supporting piers, plumbing and conduits should be treated by trenching or rodding (where soil conditions permit) to a depth of 6 inches or, if less shallow, to the top of the footing. When conditions will not permit trenching or rodding, surface application adjacent to interior foundation walls may be made but the treated strip shall not exceed a width of 18 inches, horizontally, from the foundation walls, piers or pipes. The surface application should be made at a rate of 1 gallon 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 mil polyethylene film or other suitable vapor barrier must be installed on the ground surface over the entire subfloor area and on the inside of the plenum walls, in accordance with the recommended practices for plenum type structures.

Utility Poles and Fence Posts (Non-residential)

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Preventative Treatment: Use a 1.0 to 2.0% dilution (See Rate Determination Guidelines and Table 1 for dilution directions). After pole or post hole has been dug, mix the dilution with the soil as it is being replaced to a depth of approximately 10 inches. Place pole or post on top of this layer. The remaining soil fill and termiticide dilution should be mixed while backfilling the hole. The treated soil zone around the post or pole should be 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 1.0% to 2.0% dilution. The termiticide dilution should be injected into termite galleries or channels in the wood. For maximum protection, injection sites should be at or below grade.

Posts or poles may also be treated by rodding down 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 fluid ounces of dilution per foot of depth into each rod hole.

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

Treatment of Wood Products

To prevent insect attack of wood products, Navigator TC may be used for treatment of fence posts, utility poles, railroad ties, landscape timbers, logs, pallets, wooden containers, poles, posts, and processed wood products. Applications must be made in manufacturing, industrial, or right-of way settings only.

Dosage and Mixing Directions

Navigator 4TC is recommended for use as an aqueous emulsion containing 0.5%-1.0% chlorpyrifos. See Table 1 for dilution directions.

Advisements

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*) 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 square feet as a coarse spray.

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

Pest Control On Outside Surfaces and Around Buildings (Industrial Plant Sites Only)

To control ants, bees, carpenter ants, clover mites, cockroaches, crickets, earwigs, hornets, millipedes, scorpions, spiders, ticks, wasps, and yellow jackets.

Outside surfaces: Apply Navigator 4TC as a residual spray to outside surfaces of buildings including porches, window frames, eaves, patios, garages, refuse dumps and other areas where pests congregate or have been observed. Treatment may be repeated as needed to maintain effectiveness.

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Perimeter sprays: To help prevent infestation of buildings, treat a band of soil and vegetation 6 to 10 feet wide around and adjacent to the building. Also, treat the building foundation to a height of 2 to 3 feet where pests are active and may find entrance. For **scorpions**, treat or remove accumulations of lumber, firewood, and other materials, which serve as insect harborage sites.

Dosage and Mixing Instructions: Use Navigator 4TC mixed as a 0.25% to 0.5% dilution as indicated in the following table:

Gallons of Finished Dilution Desired	Navigator 4TC Required	
	0.25% Dilution	0.5% Dilution
1	2/3 fl oz	1 1/3 fl oz
5	3 1/3 fl oz	6 2/3 fl oz
10	6 2/3 fl oz	13 1/3 fl oz
24	16 fl oz	1 qt
48	1 qt	2 qt
97	2 qt	1 gal

Notice of Warranty and Disclaimer

Seller warrants that at the time of delivery the product in this container conforms to its chemical description contained hereon and is reasonably fit for its intended purpose under normal conditions of use. This is the only warranty made on this product. Seller expressly disclaims any implied warranties of merchantability or fitness for any particular purpose and, except as set forth above, any other express or implied warranties. Any damages arising from breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid for this product by Buyer, and shall not include incidental or consequential damages such as, but not limited to, loss of profits or values. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of the Seller. In no such case shall Seller be liable for the consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. Buyer acknowledges the use of its own independent skill and expertise in the selection and use of the product and does not rely on any oral or written statements or representations.

Final Print Label based on EPA-accepted copy Dated: **[put in date]**