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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

April 3, 2002

Mathew Brooks, PH.D.
Ag-Chem consulting
12208 Quinque Lane
Clifton, VA 20124

Subject: Siren Termite Bait
EPA Reg. No. 68850-02
Label Amendment to Change Product Name to Labyrinth Termite Bait;
Additional Efficacy Data, Updated Confidential Statement of Formulas (CSFs)
Your submissions dated November 26, 2001, and February 19, 2002

Dear Dr. Brooks:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable. From now on, Labyrinth Termite Bait is the name of record for this product, replacing Siren Termite Bait as the basic name, and Labyrinth Termite Bait AC is an alternate brand name. A stamped copy of the label is enclosed for your records.

The revised CSFs dated January 22, 2002 for the basic and alternate formulations are acceptable and these information have been added to our files for this product. All previous versions are obsolete.

We have completed review of the additional efficacy data from the field study that was submitted earlier (MRID# 4434750-04), where we had requested continued observations to be submitted to the Agency and to the Association of Structural Pest Control Regulatory Officials. Please note that we have now concluded that these limited data do not adequately support current label claims for use of diflubenzuron as either an in-ground or above-ground bait. The guidelines for testing of termite baits (separate tests for above ground and in the soil) are under development, and when these are finalized the registrants of all bait termite products will be required to submit efficacy data. A copy of the efficacy review is enclosed for your perusal.

If you have any questions about this letter, please contact me at 703-308-8291.

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Sincerely yours,

Rita Kumar

**Rita Kumar, Senior Regulatory Specialist
Insecticide Rodenticide Branch
Registration Division (7505C)**

Encl.

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LABYRINTH™ TERMITE BAIT

Active Ingredient diflubenzuron (1-(4-chlorophenyl)-4-amino)carbonyl]-2,6-difluorobenzamide 0.25%

Inert Ingredients 99.75%

Total 100.00%

Contains .25 grams of diflubenzuron per 100 grams of formulation

Important: Before buying or using this product, read the entire label including the "Warranty Disclaimer", "Inherent Risks of Use" and "Limitation of Remedies" sections of this label. If terms are not acceptable, return the unopened product container at once. Use this product only according to label directions.

EPA Reg. No. 68850-2 EPA Est. No. 68850-NC-001

Precautionary Statements

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

CAUTION

In case of an emergency endangering life, property or the environment involving this product, call 1-888-398-3772.

Environmental Hazards

This product is highly toxic to aquatic invertebrates. Do not place Labyrinth in any area where, because of the movement of water, it could be washed into a body of water containing aquatic life, such as ponds or streams.

Storage and Disposal

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

Storage - Store in original container in a dry storage area out of reach of children and animals.

Container Disposal - Place container in a trash can.

Pesticide Disposal - Wrap product not disposed of by use according to label directions in paper and place in a trash can.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read the General Information and General Use Directions carefully before using. Labyrinth is a part of the EXTERRA™ Termite Interception and Baiting System and is intended for use only in EXTERRA System receptacles. Use of Labyrinth in any other type of receptacle or system is prohibited. Contact Ensystem at 1-888-EXTERRA (1-888-398-3772) for assistance in using Labyrinth or any other components of the Exterra Termite Interception and Baiting System.

General Information

Labyrinth is intended for use in an ongoing program of management and control of subterranean termite colonies around and under any type of building or other object (structure). Labyrinth does not exclude termites from a structure. Instead, it suppresses or eliminates termite colonies. Labyrinth affects termite colonies only if they consume it. Sufficient consumption of Labyrinth by all subterranean termite colonies that present an existing or potential hazard to the structure may, subject to the limitations stated herein, protect the structure against subterranean termite attack.

The active ingredient in Labyrinth, diflubenzuron, is an insect development inhibitor. When consumed by a termite, diflubenzuron impairs the ability of a termite to molt. Molting is the process by which termites, at certain points in their development, shed their existing exoskeleton and form a replacement exoskeleton. Termites that attempt to molt after ingesting an amount of Labyrinth sufficient to impair their molting process either die or are incapacitated by their inability to complete the molting process. Insect development inhibitors such as diflubenzuron are characterized as slow acting toxicants, however their action is slow only to the extent that they affect a termite only at the points in its life cycle when it molts. Because all the termites in a colony do not molt at the same time, the effect of diflubenzuron on the colony as a whole is progressive. This progressive effect is one of the key attributes of diflubenzuron as a termite colony toxicant.

Sufficient consumption of Labyrinth by a termite colony can cause a decline in the number of members of the colony. Such a decline, if sustained by continued consumption of Labyrinth by the colony, can significantly impair the vitality of the colony. Further continued consumption of Labyrinth by remaining colony members may ultimately result in the total elimination of the colony. The extent of the decline of the colony, the speed of its decline and the possibility of its elimination depends upon the extent to which Labyrinth is made continuously available to a colony for consumption and the extent to which members of the colony consume it. Close adherence to the General Use Directions can increase the likelihood of colony elimination, however conditions or circumstances beyond the control of the user may prevent or substantially delay colony elimination. Such conditions may include, but are not limited to, alternate non-bait food sources that reduce the extent to which the colony depends on Labyrinth as a food source, excess moisture, low or high temperatures or abandonment of feeding on the bait by the colony.

Because termites cannot be attracted, they must instead be intercepted as they randomly forage for food. Interception is the process by which termite activity is established at a location prior to the application of Labyrinth at that location. Once they are intercepted, termites can normally be induced to consume Labyrinth. These intercepted termites then guide other colony members back to the interception location where they also consume Labyrinth. The addition of moisture to Labyrinth can, under certain conditions, enhance the acceptance of Labyrinth by termites.

Termite colonies are intercepted and baited inside bait receptacles that are placed in the ground and, depending on the circumstances, above ground. In ground bait receptacles are buried in or placed in contact with the ground around or under structures to be protected. Above ground bait receptacles are attached to above ground parts of a structure infested with termite activity.

Bait receptacles include bait stations, bait bags and bait casings. Bait stations consist of a rigid hollow body with perforations in one or more of its sides allowing for termite entry, an inspection/baiting opening and a removable, tamper resistant cover that is affixed over the opening. Bait bags are made of a flexible fabric containing perforations large enough to permit termite entry. Bait bags are used in lieu of bait stations only within certain prescribed above ground voids or in ground cavities where station installation would be difficult or is not feasible. Access to above ground voids or in ground cavities containing bait bags must be securely restricted. Casings are used only within stations and bags. Casings restrict the movement of moisture into and out of Labyrinth, thereby permitting Labyrinth to remain in a receptacle for extended periods of time without decomposing. If Labyrinth has been moistened prior to use, it is advisable to use a casing, however casings can also be used with unmoistened Labyrinth.

Termites are intercepted within in ground bait stations with interceptors that are placed inside the station but are accessible to termite attack through the perforations in the station sides. Interceptors are a nontoxic, cellulose containing substance readily consumed by subterranean termites, such as wood. The interceptors provide a pre-baiting food source for termites that, upon being fed on by termites, establishes termite activity within the station. After interception of a termite colony within an in ground station, Labyrinth is made continuously available for colony consumption by placing Labyrinth in the station and replenishing consumed amounts of Labyrinth for as long as termite activity is present in the station. Termites are intercepted within in ground bait bag cavities with interceptors that are placed in contact with the earth in the cavity. A bait bag is placed adjacent to the interceptors when termites are found to be infesting the interceptors. When using above ground receptacles, the step of intercepting termites prior to Labyrinth application is eliminated. Termites are instead intercepted with Labyrinth.

After termite activity has been absent from a baited in ground receptacle for at least sixty days, the interception process is resumed by cleaning out the station or cavity and replacing the interceptors. After termite activity has been absent from an above ground receptacle for at least thirty days, the receptacle is removed.

In order to affect as many of the termites as possible that currently or could potentially infest a structure, every termite colony that inhabits the ground under and around the structure must be intercepted and baited with Labyrinth. If the cycle of interception and baiting around a structure is interrupted or discontinued, new colonies occupying the territory of eliminated colonies, existing colonies that were suppressed but not eliminated or existing colonies never intercepted may forage at points of possible entry into and infest the structure. For this reason, the cycle of interception and baiting should continue for as long as it is desirable to exclude subterranean termites from the structure.

If a conventional termite liquid barrier treatment is performed in conjunction with an installation of Labyrinth, care must be taken not to treat in the area of installed receptacles (preferably not within two feet of receptacles). Do not treat in areas of installed receptacles during routine pesticide applications.

ACCEPTED
APR 3 2002
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
renewed for the pesticide
Registered under
EPA Reg. No. 68850-02

Preventative critical area soil or wood treatments may be performed in conjunction with receptacle installation. Because the use of Labyrinth is a multistep process, localized supplemental treatment(s) of areas of the structure infested with active termites at the time of station installation, using barrier or contact type termiticides, may provide more immediate control of termites in those parts of the structure than Labyrinth. Because they can disrupt termite feeding in the structure, supplemental treatments should not be made to areas of the structure containing above ground receptacles for so long as above ground receptacles are installed in that area.

General Use Directions

Preconstruction Use

Labyrinth can be used for preventative treatment (before signs of infestation) of structures under construction or newly completed (as a substitute for and in lieu of preconstruction soil treatment). Place receptacles around the outside of the structure only after the final exterior grade is installed (and preferably after landscaping is completed).

Postconstruction Use

Labyrinth can be used for remedial treatment of infested existing structures or for preventative treatment (before signs of infestation) of existing structures.

Bait Receptacle and Restriction to Access Approval

Use Labyrinth only in receptacles approved by Ensystem for use with Labyrinth. Approved receptacles available from Ensystem include stations, bags and casings. Use only restrictions to bait bag access approved by Ensystem. Approved restrictions to access available from Ensystem include wall void access cover panels and slab plugs.

Above Ground Use of Labyrinth

Labyrinth is used above ground only when termites are known or suspected to be actively infesting the structure and areas of above ground termite infestation in the structure can be identified and are accessible.

Above Ground Bait Receptacle Selection

Bags are used in lieu of stations only within voids behind, between or within walls (wall voids) where station installation would be difficult or not feasible and access to the wall void can be securely restricted.

Above Ground Bait Receptacle Location Selection

Locate receptacles close to or in contact with areas of the structure that contain evidence of known or suspected termite activity. Examples of such evidence include inhabited termite tubing running across structural elements and evidence of active termite infestations within wooden elements.

A station can be located in or on any surface of the structure to which it can be securely attached. To reduce the potential for tampering with and disturbance of stations, points of station installation should be chosen that, where possible, minimize installed station visibility. Bags should be used only within wall voids to which access can be securely restricted.

If termites have not been present in a receptacle for at least thirty days, remove the receptacle. At that time, check surrounding areas for evidence of continued above ground termite activity. If continued above ground termite activity is located, reinstate above ground baiting by installing one or more new receptacles in the area of continuing termite activity.

Above Ground Bait Receptacle Installation and Initial Baiting

Moisten Labyrinth before installing it in the receptacle.

Install a station by attaching it to the structure securely. The termite access openings in the station should be positioned flush with a surface close to or on which evidence of an active termite infestation is located. Bait the station by filling it with Labyrinth. Replace the station cover securely.

Install a bag by filling a casing with Labyrinth, placing the casing within a bag and placing the bag within a wall void, creating an access to the wall void if necessary. Restrict access to the wall void securely.

Above Ground Receptacle Inspection and Rebaiting

To inspect a station, remove the station cover and visually examine the interior of the station for active termites, carefully probing the Labyrinth if necessary. If live termites are present in the station and consumption of Labyrinth sufficient to warrant rebaiting has occurred, refill the station with Labyrinth. Replace the station cover securely.

To inspect a bag, remove the restriction to wall void access and visually examine the interior of the bag for active termites, carefully probing the Labyrinth if necessary. If live termites are present in the bag and consumption of Labyrinth sufficient to warrant rebaiting has occurred, place another bag containing Labyrinth adjacent to the infested bag. Resecure the restriction to wall void access.

Scheduling Above Ground Receptacle Inspections

Inspect a receptacle approximately 15 days after the date of installation and thereafter within approximately 15 days after the date of the last inspection of the receptacle.

Adjustments to Above Ground Receptacle Inspection Scheduling

Decreases in elapsed time between inspections may be warranted if consumption of all the bait in a receptacle occurs during the interval between any two inspections.

In Ground Use of Labyrinth

In Ground Bait Receptacle Selection

Bags are used in lieu of stations only within cavities beneath hardened construction surfaces such as concrete slabs where station installation would be difficult or not feasible and access to the cavity can be securely restricted.

In Ground Bait Receptacle Location Selection

To reduce the potential for tampering with and disturbance of receptacles, points of receptacle installation should be chosen that, where possible, minimize installed receptacle visibility. Areas where barrier type termiticides may have been previously applied, such as within two feet of the foundation wall, should be avoided if possible.

Install receptacles at or near points of known or suspected termite entry into the structure. If a point of accessible ground is not located within ten feet of a point of known termite entry (due to an intervening hardened construction surface such as a concrete slab), it may be advisable to create an access to the ground through that surface close to the point of known entry and install a receptacle at that access.

Install receptacles at or preferably within five feet of points of known, probable or suspected termite foraging and at other critical areas. Such areas may include areas with concentrations of cellulose-containing debris, such as mulch or wood scraps, in contact with the ground, areas of moderate soil moisture, shaded areas, areas containing plant root systems, bath traps, visible termite foraging tubes, etc.

Install receptacles around a structure such that, except where sufficient access to the ground is not available, the maximum interval between any two adjacent receptacles does not exceed twenty feet. If the distance between two points of accessible ground around the structure exceeds thirty feet, it may be advisable to form one or more openings in the surface creating the inaccessibility to facilitate baiting between those points.

If the structure has an accessible crawl space, receptacles can be installed in the crawl space in lieu of or in addition to installing receptacles around the structure. Receptacles can be installed within a slab structure at existing or created openings in the slab surface through which ground is accessible and into which a receptacle can be installed in a secure manner.

Once termite interception has occurred at a receptacle and bait consumption has begun, it may be advisable, depending on the rate of bait consumption in that receptacle and nearby receptacles, to locate one or more supplemental receptacles in the immediate vicinity of the infested receptacle(s) in order that bait consumption by the colony be maximized.

If termites have not been present in a receptacle for at least approximately sixty days, remove any remaining bait (clean out station or remove bag) and replace the interceptors. If termites have abandoned the receptacle possibly due to reductions in termite activity related to low temperatures during the period of predicted limited termite activity (see below), it may be advisable to leave the bait in place and recheck the receptacle after the period of predicted limited termite activity has elapsed before removing the bait. If termites have abandoned the receptacle possibly due to excessive moisture, it may be advisable to remove the saturated bait (clean out station or remove bag) and rebait at that time or after the excess moisture condition has abated.

If a receptacle, upon repeated inspection, is found to contain excess moisture (water standing at the bottom of the station or cavity, etc.), it may be advisable to relocate the receptacle, if possible, to a nearby area where the soil is better drained or alternately, modify the receptacle location to prevent water from collecting in the receptacle by, for example, creating a sump area under an installed station or at the bottom of the cavity.

In Ground Bait Receptacle Installation

To install a station, excavate or form a hole in the ground approximately the same size and dimensions as those of the station. Insert the station into the hole. Maximizing contact between the exterior of the station and the earth during installation will increase the probability of termite interception within the station. Replace the station cover securely.

To create a bait bag cavity, locate or form an opening through a hardened construction surface (such as a concrete slab, asphalt, etc.) exposing the ground beneath the surface. Form a cavity in the exposed ground. Install

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one or more interceptors in the cavity in contact with the ground. Restrict access to the cavity securely.

Inspecting a Receptacle Before First Use of Labyrinth in that Receptacle

Remove the station cover or restriction to bag access and visually examine the interceptors for the presence of termites, being careful to minimize disturbance of the interceptors. If termites are present, bait the receptacle according to *First Use of Labyrinth in a Receptacle*. If termites are not present, further inspect interceptors for excessive decay or moisture saturation. Replace excessively decayed interceptors and also replace saturated interceptors if experience in your area shows that moisture in interceptors does not readily dissipate naturally. Replace the station cover or restriction to cavity access securely.

First Use of Labyrinth in a Receptacle

Optionally, moisten Labyrinth before installing it in a receptacle. Optionally, place Labyrinth (whether or not it has been moistened) in a casing before placing it in a receptacle.

To bait a station, substantially fill the station with Labyrinth. To bait a bait bag cavity, place a bag containing Labyrinth in contact with the infested interceptors in the cavity. Replace the station receptacle cover or restriction to cavity access securely.

Inspecting and Rebaiting a Previously Baited Receptacle

To inspect a station, remove the station cover and visually examine the interior of the station for active termites, carefully probing the Labyrinth if necessary. If live termites are present in the station and sufficient consumption of Labyrinth has occurred to warrant rebaiting, rebait the station by refilling the station with Labyrinth. If a casing is in use in the station, either refill the in use casing or fill a new casing with the appropriate amount of bait and place it in the station adjacent to the in use casing. Replace the station cover securely.

To inspect a bag, remove the restriction to cavity access and visually examine the interior of the bag for active termites, carefully probing the Labyrinth if necessary. If live termites are present in the bag and consumption of Labyrinth sufficient to warrant rebaiting has occurred, place another bag containing Labyrinth adjacent to the infested bag. Resecure the restriction to cavity access.

Scheduling in Ground Receptacle Inspections

The length of time between receptacle inspections is dependent upon the type of receptacle.

Square (40 cubic inch) station

If termite activity is known to be present in the structure at the time receptacles are initially installed, inspect all receptacles three times at approximately 30, 60 and 90 days after the date of completion of initial receptacle installation. If no termite activity is present in the structure at the time receptacles are initially installed, inspect all receptacles for the first time within approximately 90 days after the date of completion of initial receptacle installation.

Thereafter, inspect any receptacle that does not contain Labyrinth within approximately 90 days after the date of the last inspection of that receptacle.

Inspect a newly baited receptacle two times at approximately 30 and 60 days after the date of initial bait installation. Thereafter, as long as the receptacle continues to contain Labyrinth, inspect the receptacle within approximately 45 days of the date of the last inspection of the receptacle.

Round (80 cubic inch) station and bag

If termite activity is known to be present in the structure at the time receptacles are initially installed, inspect all receptacles two times at approximately 45 and 90 days after the date of completion of initial receptacle installation. If no termite activity is present in the structure at the time receptacles are initially installed, inspect all receptacles for the first time within approximately 90 days after the date of completion of initial receptacle installation.

Thereafter, inspect receptacles within approximately 90 days after the date of the last inspection of the receptacles.

Adjustments to In Ground Receptacle Inspection Scheduling

Decreases in elapsed time between inspections of a baited receptacle may be warranted if consumption of all the bait in the receptacle occurs during the interval between any two inspections.

Because subterranean termites are cold blooded (poikilothermic) animals, low temperatures can substantially reduce or stop their activity close to the earth's surface during a certain period of the year. For this reason, if the temperature falls low enough, termites may cease to feed in receptacles or the onset of feeding in receptacles may be delayed until temperatures

have recovered above a certain level for a long enough period of time. Reductions in termite activity that are the result of low temperatures may make inspections of receptacles unnecessary for as long as low temperatures prevail in the area.

The temperature at which termite activity is substantially curtailed may vary significantly between different geographic areas and with different species of termites. However, generally speaking, termite activity will be reduced in the receptacles during those times of the year during which the average daily mean exterior air temperature is below 50 ° F. For this reason, the following rule may be applied when counting the number of elapsed days between inspections unless, in the opinion of the operator, increases in the elapsed time between inspections are unwarranted based on local circumstances.

In counting the number of days between inspections, exclude from the total number of days elapsed since the last inspection any days whose date falls between the first date in the fall/winter that long term climate data predicts that the mean exterior air temperature for that date at that application site will be below 50 ° F (begin period of predicted limited activity) and the first date in the winter/spring that the climate data predicts that the average mean exterior air temperature for that date at that application site will be above 50 ° F (end period of predicted limited activity).

However, if the number of days excluded according to this rule exceed 90, then schedule the date of the first inspection after the end of the period of predicted limited activity according to the rule or within 30 days of the date of the end of the period of predicted limited activity, whichever of these two dates occurs first. However, under no circumstances should more than six months elapse between inspections of receptacles. Climate data used should be for the National Weather Service reporting station closest to the application site. Information on determining the period of limited activity for any application site based on the zip code of the site can be found at www.ensystex.com.

Allowing extra time between inspections as provided for by this rule may not be advisable if receptacles are located within an area in or under a structure in which the average daily mean air temperature is expected to remain above 50 ° F and termites are actively consuming bait in the receptacles.

Warranty Disclaimer

Ensysstex 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 for use, subject to the inherent risks set forth below. ENSYSTEX 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. Lack of performance or other unintended consequences may result because of factors such as use of the product contrary to the label directions, adverse conditions (such as unfavorable temperatures, soil conditions, excessive rainfall, etc.), abnormal conditions (such as drought, tornadoes, hurricanes, earthquakes, etc.), presence of other materials, the manner of application or other factors, all of which are beyond the control of ENSYSTEX or the seller. All such risks shall be assumed by the Buyer and User.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from the use of this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at ENSYSTEX'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.

ENSYSTEX shall not be liable for losses or damages resulting from handling or use of this product unless ENSYSTEX is promptly notified of such loss or damage in writing. In no case shall ENSYSTEX be liable for consequential or incidental damages or losses even if ENSYSTEX knew of, was advised of or should have been aware of the possibility of such damages.

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

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