

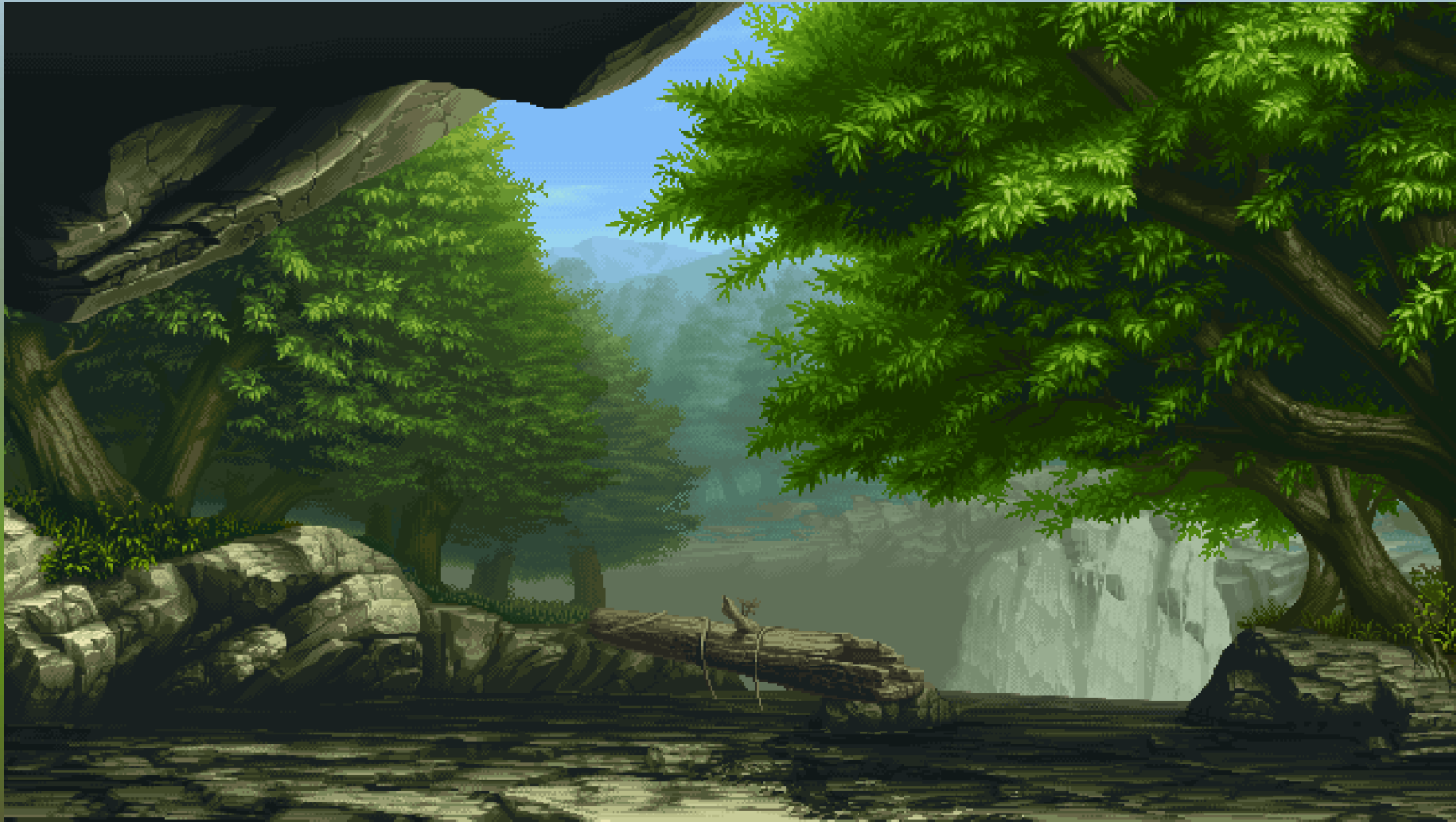


LOS ANGELES COUNTY
**AGRICULTURAL COMMISSIONER/
WEIGHTS & MEASURES**

PROTECTING CONSUMERS AND THE ENVIRONMENTS SINCE 1881

Aniko Pomjanek

Deputy Agricultural Commissioner/Sealer
Structural Pesticide Regulation Division





A 1907 advertisement for pyrethrum spray, which was originally developed by Austrian inventor Johann Zacherl. (Wikimedia Commons)

Pyrethrum:

Genus of several Old World plants now classified as Chrysanthemum





Common name for plants formerly included in the genus Pyrethrum

Natural insecticide, active ingredients are pyrethrins

Johann Zacherl (1814 – 30 June 1888) was an Austrian inventor and manufacturer who made a fortune in the late 19th century selling dried flower heads of *Chrysanthemum cinerariifolium* as an insecticide.

Pyrethrins







-  Made from the dried flower heads of Chrysanthemum, separated from the flowers
-  Oldest known insecticide
-  Rapid degradation in the environment
-  Pyrethrum powder=whole crushed flower



Pyrethroids

Man-made in the 60s

-  Highly toxic to fish and aquatic organism in small levels, 4 parts per trillion
-  Usually broken down by sunlight in 1-2 days
-  In sediment, can persist for some time
Unaffected by conventional secondary treatment facilities
-  Vertebrates have sufficient enzymes for rapid breakdown of pyrethroids, except for cats



River Rhône flowing into Lake Geneva. Sediments make the water appear brownish-grey; they are an indicator of increased water runoff, land degradation, erosion due to intensive industrialized land use, land sealing, and poor soil management.

CCR 6970

The provisions of this section apply to any person performing pest control for hire, including landscape maintenance gardeners, when any of the following pesticides is applied outdoors to structural, residential, industrial, and institutional sites:

17

listed pyrethroids

bifenthrin
bioallethrin
S-bioallethrin
cyfluthrin
beta-cyfluthrin
gamma-cyhalothrin
lambda-cyhalothrin
cypermethrin
deltamethrin
esfenvalerate
fenpropathrin
tau-fluvalinate
permethrin
phenothrin
prallethrin
resmethrin
tetramethrin

THRIN

Often ends in **-thrin**.

Active ingredient	Product examples
bifenthrin	Talstar, Wisdom TC, Masterline 7.9
Bioallethrin	Ace Wasp/Hornet Killer
S-bioallethrin	Zep Ant and Roach Spray
cyfluthrin	Cy-Kick SC, Tempo dust
beta-cyfluthrin	Tempo SC Ultra, Temprid SC
gamma-cyhalothrin	Standguard
lambda-cyhalothrin	OneGuard, Tandem, Cyzmic SC, Demand SC
cypermethrin	Cynoff EC, Demon Max, Cyper WSP
deltamethrin	Suspend SC, D-Fense SC, Delta Dust
esfenvalerate	Onslaught, Conquer
fenpropathrin	Tame
tau-fluvalinate	Mavrik
permethrin	Tengard, Dragnet
Phenothrin	Wasp and Hornet Killer
Prallethrin	Flying Insect Spray
Resmethrin	Black Flag Fogging Insecticide
tetramethrin	Ortho Hornet/Wasp Killer

Soft surfaces

Applications to the **soil** surface, **mulch**, **gravel**, **lawn**, **turf**, or **groundcover** must be made using only the methods described below:

(1) Spot treatment

(2) Pin stream treatment of

1

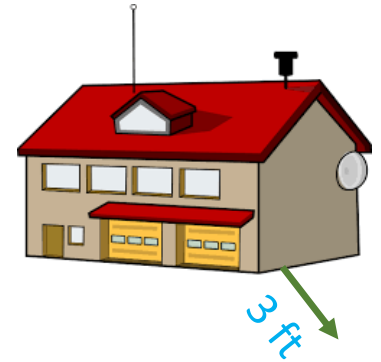
inch wide or less




(3) Perimeter band treatment of
of a building outward



feet wide or less from the base



Soft surfaces

(4) Broadcast treatment but not within  feet from any horizontal impervious surface. Pin stream treatment of one-inch wide or less may be made within the two-foot area.



2 feet

(5) For broadcast treatment of termiticides to preconstruction sites, prior to precipitation, the treatment site must be covered with a waterproof covering, such as a polyethylene sheet, or a concrete slab must be poured over the treated soil.

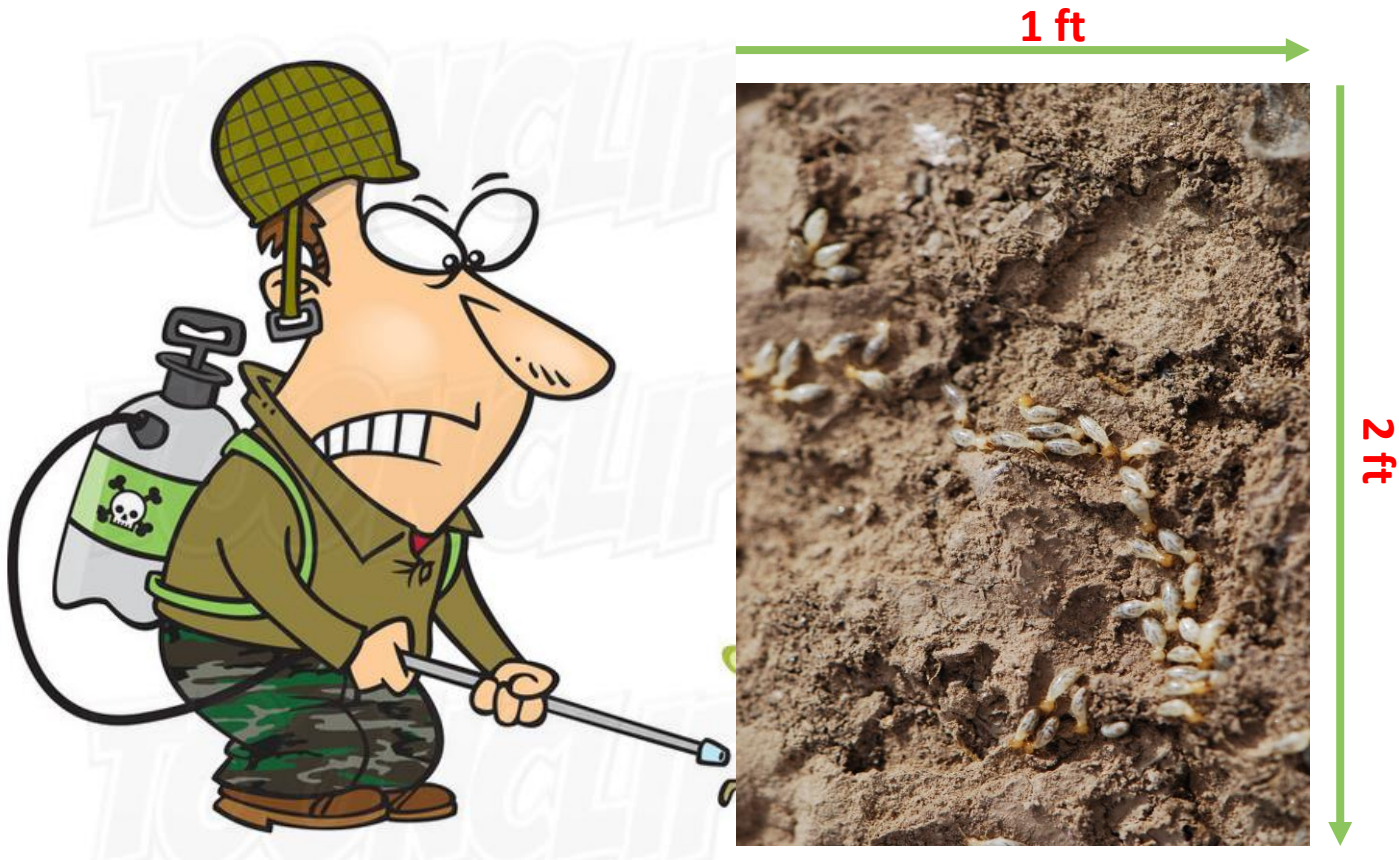


Copyright Classroom Clipart

Applications to the **soil** surface, **mulch**, **gravel**, **lawn**, **turf**, or **groundcover** must be made using only the methods described above.

CCR 6000 - Definitions

"Spot treatment" means an application to limited areas that will not exceed **2 square feet** on which pests are likely to occur or have been located during the process of monitoring or inspection.



CCR 6000 - Definitions

"Impervious surfaces" means

hard surfaces, such as concrete or asphalt streets, sidewalks, and driveways.



what's the opposite of impervious?



permeable, pervious, penetrable, vulnerable, affected, susceptible, responsive, moved, exposed, open



CCR 6000 - Definitions

"Precipitation" means the condensation of atmospheric water vapor that falls under gravity. Precipitation does not include mist or fog.

Not a precipitation!



Del-Digitopia

Horizontal impervious surfaces

Doors and windows

Applications to windows and doors, and horizontal impervious surfaces must be made using only the methods described below:

- (1) Spot treatment
- (2) Crack and crevice treatment
- (3) Pin stream treatment of one-inch wide or less



CCR 6000 - Definitions

"Crack and crevice treatment" means the application of small amounts of insecticide directly into cracks and crevices in which insects hide or through which they may enter the building. Examples are openings occurring at expansion joints, between different elements of construction, and between equipment and floors. Only minimal amounts of pesticide should remain on the surface.

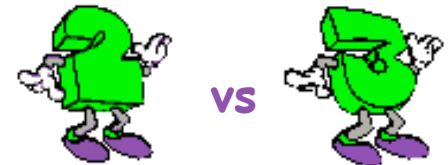


Applications to **VERTICAL STRUCTURAL SURFACES**, such as walls, foundations, and fencing, must be made using only the methods described below:

- (1) Spot treatment
- (2) Crack and crevice treatment
- (3) Pin stream treatment of one-inch wide or less
- (4) Perimeter band treatment up to a maximum height of **2 feet** above the grade level.



3. Applications to the side of a building, up to a maximum height of **3 feet** above grade;



2 feet

For applications using granules to the soil surface, mulch, gravel, lawn, turf, or groundcover, the applicator shall sweep any granules that land on horizontal impervious surfaces onto the treatment site.



Prohibited applications:



(1) To any site during precipitation, except for applications made to the underside of eaves;



Except underside of eaves.

Prohibited applications:

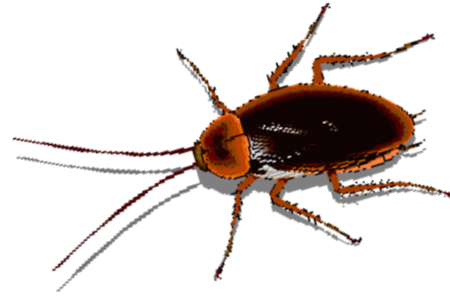
(2) To the soil surface, mulch, gravel, lawn, turf, groundcover, or horizontal impervious surfaces with standing water, including puddles;





Prohibited applications:

(3) To a sewer or storm drain, or curbside gutter;



Prohibited applications:

(4) To the following components of a constructed drainage system that drains to a sewer or storm drain, curbside gutter, or aquatic habitat:

(A) Visible drainage grate connected to a drain pipe; or

(B) Visible french drain, or a landscaped dry river bed, swale or trench filled with gravel or rock;

French drain



CCR 6000 - Definitions

"**Aquatic habitat**" means bodies of water, such as lakes, reservoirs, rivers, perennial and intermittent streams, wetlands, or ponds, sloughs, and estuaries.



Prohibited applications:

(5) To the soil surface, including preconstruction termiticide sites, mulch, gravel, lawn, turf, groundcover, or horizontal impervious surfaces within 25 feet of aquatic habitat located downgradient from the application. The applicator shall measure the distance from the high water mark or intermittent streams that are dry from the top of the near bank;

NO

25 feet



Prohibited applications:

(6) To the preconstruction termiticide site within 10 feet of a storm drain located downgradient from the application.

NO

Within 10 feet!



6972. Exemptions from Surface Water Protection in Outdoor Nonagricultural Settings.

The following applications are exempt from the provisions of section 6970:

- (a) Injection into soil or structural materials, such as bricks, concrete, or wood.
- (b) Post-construction rod or trench termiticide application methods.
- (c) Applications to below-ground insect nests or nests made of mud or paper combs.
- (d) Applications of baits in weather-proof stations or gel baits.
- (e) Pesticide applications to receiving waters for which a permit has been issued under the Statewide General National Pollutant Discharge Elimination System (NPDES) for Pesticide Discharges to Waters of the U.S. from Spray Applications, and Vector Control Applications.
- (f) Applications to the underside of eaves.
- (g) Foggers or aerosol applications.



EXEMPT



Everything ties together!

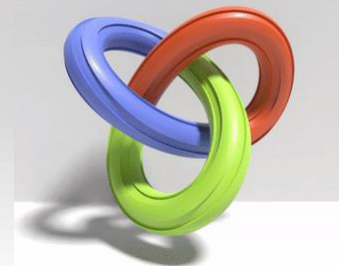
CCR 6602:

A copy of the registered labeling that allows the manner in which the pesticide is being used shall be available at each use site.

FAC 12973:

The use of any pesticide shall not conflict with labeling registered pursuant to this chapter which is delivered with the pesticide or with any additional limitations applicable to the conditions of any permit issued by the director or commissioner.

Pesticides can be useful but wrong or careless use can cause environmental damage. The label lists several ways to protect the environment. Follow these instructions to avoid harming beneficial insects (for example, bees), damaging nearby desirable plants, or polluting ground or surface water (with irrigation runoff or drift from treated areas).



CCR 6000 - Definitions

"Conflict with labeling" means any deviation from instructions, requirements or prohibitions of pesticide product labeling concerning storage, handling or use except:

- (a) A decrease in dosage rate per unit treated;
- (b) A decrease in the concentration of the mixture applied;
- (c) Application at a frequency less than specified;
- (d) Use to control a target pest not listed, provided the application is to a commodity/site that is listed and the use of the product against the unnamed target pest is not expressly prohibited;
- (e) Employing a method of application not expressly prohibited, provided other directions are followed;
- (f) Mixing with another pesticide or with a fertilizer, unless such mixing is expressly prohibited;
- (g) An increase in the concentration of the mixture applied, provided it corresponds with the current published UC Pest Management Guidelines of the University of California, which are available from their Statewide Integrated Pest Management Program, 2801 Second Street, Davis, California 95681-7774, or on-line at <http://www.ipm.ucdavis.edu>; or
- (h) The use of personal protective equipment consistent with the exceptions and substitutions in section 6738.4.

Before using a pesticide,
read the entire label!



The most valuable time you spend in pest control is the time you take to read the pesticide label.

Don't rely on your memory!

Talstar Professional Insecticide



EPA Reg. No. 279-3206

Active Ingredient: By Wt.

Bifenthrin* 7.9%

Other Ingredients: 92.1%

Environmental Hazards



This pesticide is extremely toxic to fish and aquatic invertebrates. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Care should be used when spraying to avoid fish and reptile pets in/around ornamental ponds.



To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help to avoid run off to water bodies or drainage systems.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops if bees are foraging the treatment area.

Talstar Professional Insecticide

DIRECTIONS FOR USE

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

Do not apply a broadcast application to interior surfaces of homes.

Do not apply by air.

Do not apply in plant nurseries.

- ! Do not apply this product through any kind of irrigation system.
- ! Not for use on sod farm turf, golf course turf, or grass grown for seed.
- ! Do not water treated area to the point of run-off.
- ! Do not make applications during rain.
- ! Application is prohibited directly into sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur. Do not allow the product to enter any drain during or after application.



The logo for Demon Max Insecticide features a stylized circular icon on the left, composed of a blue circle with a red and orange swoosh passing through it. To the right of the icon, the word "Demon" is written in a bold, black, sans-serif font, followed by a registered trademark symbol (®). The word "Max" is written in a larger, blue, sans-serif font. Below "Max", the word "Insecticide" is written in a bold, black, sans-serif font.

Demon[®] Max

Insecticide

Active Ingredient:

Cypermethrin: 1 (±) α -cyano-(3-phenoxyphenyl) methyl(±)-*cis,trans*-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate* 25.3%

Other Ingredients: 74.7%

Total: 100.0%

1 Pyrethroid Insecticide

Contains petroleum distillates.

**Cis/trans* ratio: Min. 45% (±) *cis* and max. 55% (±) *trans*

Demon Max Insecticide contains

2 lb. active ingredient per gal.,

formulated as an emulsifiable concentrate.

Environmental Hazards



This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to or near water. Drift and run-off may be hazardous to fish in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash water or rinsate. See **Directions for Use** for additional requirements.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.



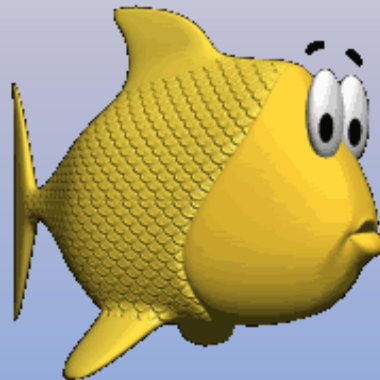
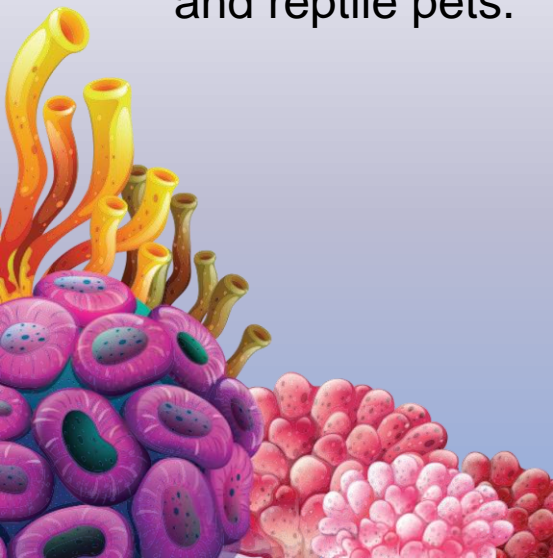
For Treatment of Preconstruction Lumber and Logs: Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.





Environmental Hazards

This product is extremely toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. Apply this product only as specified on this label. Care should be used when spraying to avoid fish and reptile pets.



I am in trouble! I hope someone is reading the pyrethroid label!

APPLICATION RESTRICTIONS

Do not water the treated area to the point of run-off.

Do not make applications during rain.

Do not apply directly to sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur, except as directed by this label.

Do not apply into closed air handling systems, voids or ducts including Heating, Ventilation, Air Conditioning (HVAC) appliances and systems that circulate, filter, or condition air that is directed into rooms that are, or may be, occupied.

DeltaDust Insecticide can be used for residual pest control in and on buildings and structures and their immediate surroundings.

Do not use in aircraft cabins. Permitted areas of use include:



DeltaDust[®]

INSECTICIDE

- PROVIDES QUICK CONTROL OF ANTS, BEES, COCKROACHES, FLEAS, SILVERFISH, TICKS, AND NUMEROUS STORED PRODUCT PESTS AS LISTED.
- KILLS LISTED CRAWLING INSECTS UP TO 8 MONTHS WHEN LEFT UNDISTURBED.
- FOR USE INDOORS AND OUTDOORS.
- DOES NOT CLUMP OR ABSORB MOISTURE.
- NON-STAINING AND ODORLESS.

ACTIVE INGREDIENT:

Deltamethrin 0.05%

OTHER INGREDIENTS 99.95%

TOTAL: 100.00%

EPA Reg. No. 432-772

See Booklet for Complete Precautionary Statements and Directions for Use.

KEEP OUT OF REACH OF CHILDREN

Ants • Bed Bugs • Wasps

6600: Standards of Care

Each person performing pest control shall:

- (a) Use only pest control equipment which is in good repair and safe to operate.
- (b) Perform all pest control in a careful and effective manner.
- (c) Use only methods and equipment suitable to insure proper application of pesticides.
- (d) Perform all pest control under climatic conditions suitable to insure proper application of pesticides.
- (e) Exercise reasonable precautions to avoid contamination of the environment.

I better be
careful....



INSPECTIONS

Involving a pyrethroid insecticide in 2018 and 2019

Bifen I/T (bifethrin)	15 inspections	
Talstar (bifethrin)	7 inspections	
Masterline 7.9 (bifenthrin)	8 inspections	
Masterline B Maxx Pro (bifenthrin)	9 inspections	
Maxxthor SC (bifenthrin)	1 inspection	Termidor SC
Wisdom SC (bifenthrin)	2 inspections	21 inspections
Cy Kick SC (cyfluthrin)	7 inspections	
Tempo Ultra WP (beta-cyfluthrin)	5 inspections	
Temprid (beta-cyfluthrin)	7 inspections	
Tandem (lambda-cyhalothrin)	1 inspection	
Cyzmic SC (lambda-cyhalothrin)	3 inspections	
Demand SC (lambda-cyhalothrin)	5 inspections	
Demon Max (cypermethrin)	1 inspection	
Cyper WSP (cypermethrin)	1 inspection	
Suspend (deltamethrin)	11 inspections	
D-Foam (deltamethrin)	1 inspection	
D-Force (deltamethrin)	1 inspection	
Onslaught Fastcap (esfenvalerate)	2 inspections	
TOTAL	87 inspections	



Violations we found out there

Period: last two fiscal years

Notices of violations: 212 (branch 2 and 3)



Examples of violations:

The sections most violated:

8505.17 (c)	Failure to submit use reports in a timely manner.	59 violations
15204 (a)	Failure to register with the County Commissioner.	34 violations
6739 (e) (p)	Respirator fit testing.	15 violations
6739 (d) (s)	No current medical evaluation record.	13 violations
1970.4 (a)	Incomplete Fumigation Notice.	10 violations

Other violations:



Work vehicle not properly identified. (6630) (3 violations)

Failure to label service containers. (6678) (3 violations)

No handler training.

Failure to mark rodent bait stations. (1983) (1 violation)

Failure to ensure employees wear proper PPE. (6738) (2 violations)

Failure to ensure that equipment was safe and in good repair. (6742) (1 violation)

Incomplete inspection reports.

OOPS

Violations we found out there: 1

Label violations. FAC 12973

Applied pesticides in the rain.

Applied pesticides where surface water was present.

Termidor SC (fipronil)

From the label:

Do not make treatments while precipitation is occurring

All drill holes, in commonly occupied areas into which product has been applied, must be plugged.

Do not treat soil ... in conditions where runoff or movement from the treatment area/site will occur.

Do not apply directly to water, or to areas where surface water is present.



Sections violated:

FAC 12973. Conflict with label

CCR 6600(d). General standards of care.

(d) Perform all pest control under climatic conditions suitable to insure proper application of pesticides.

CCR 6614.(a)

Note: **NOT** CCR 6970. Fipronil is not a pyrethroid.

6614:

(a) An applicator prior to and while applying a pesticide shall evaluate the equipment to be used, meteorological conditions, the property to be treated, and surrounding properties to determine the likelihood of harm or damage.

(b) Notwithstanding that substantial drift would be prevented, no pesticide application shall be made or continued when:

(1) There is a reasonable possibility of contamination of the bodies or clothing of persons not involved in the application process;

(2) There is a reasonable possibility of damage to nontarget crops, animals, or other public or private property; or

(3) There is a reasonable possibility of contamination of nontarget public or private property, including the creation of a health hazard, preventing normal use of such property. In determining a health hazard, the amount and toxicity of the pesticide, the type and uses of the property and related factors shall be considered.



Violations we find out there: 2

Label violations. FAC 12973

Failed to calculate the area treated.

Failed to properly ventilate after the treatment.

CB-80 insecticide. (pyrethrins 0.50%, piperonyl butoxide 4.00%)

From the label:

Calculate cubic feet of space to be treated.

For space spray use: Except when applying to horses and livestock, do not enter or allow others to enter until vapors, mists, and aerosols have dispersed, and the treated area has been thoroughly ventilated.

Sections violated:

FAC 12973. Conflict with label.

What a boring and long label !!



Violations we find out there: 3

Label violations. FAC 12973

Fogging at a creamery.

Area was not properly sealed and workers got exposed next door because of drift.

Pyrocide 100[®] (pyrethrins 1.00%, piperonyl butoxide 2.00%)

DIRECTIONS FOR USE

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

READ ALL DIRECTIONS COMPLETELY BEFORE USE

RESTRICTIONS:

- FOR INDOOR USE ONLY.
- Do not enter or allow others to enter until sprays have dried.
- Do not allow adults, children, or pets to enter the treated area for at least 15 minutes, until vapors, mists, and aerosols have dispersed, and the treated area has been thoroughly ventilated.
- Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.
- Do not use in aircraft cabins.
- Do not remain in treated area. Exit area immediately and remain outside the treated area until aerosols, vapors, and/or mists have dispersed.
- Remove or cover exposed food and drinking water before application.
- Remove or cover dishes, utensils, food processing equipment, and food preparation surfaces, or wash them before use.
- Do not make space spray applications when food processing facility is in operation.
- Do not apply more than 1 time per day.

- Not for use in outdoor residential misting systems.
- Remove pets, birds, and cover fish aquariums before use.
- Do not apply directly into sewers or drains, or to any area like a gutter where drainage to storm sewers, water bodies, or aquatic habitat can occur. Do not allow the product to enter any drain during or after application.
- When used in dairy barns or facilities: Close milk bulk tank lids to prevent contamination from spray and from dead or falling insects. Remove or cover milking utensils before application. Wash teats of animals before milking.

GENERAL:

This concentrate is designed for use undiluted in mechanical sprayers that give particles of aerosol size. It can be diluted with refined kerosenes, which meet Food Additive Regulation as defined by CFR Title 21, 172.884, and applied in fogging equipment that give larger than aerosol particle size. It can also be diluted with the oil specified above and applied as a contact spray to kill crawling insects shown later on this label.

Violations we find out there: 4



**How did this end up here?
Unanchored, but locked.**

Violations we find out there: 4

Label violations. FAC 12973



IMPORTANT: Do not expose children, pets, or nontarget animals to rodenticides. To help to prevent exposure:

1. Store unused product out of reach of children and pets.
2. Apply bait in locations out of reach of children, pets, domestic animals and nontarget wildlife, or in tamperresistant bait stations. These stations must be resistant to destruction by dogs and by children under six years of age, and must be used in a manner that prevents such children from reaching into bait compartments and obtaining bait. If bait can be shaken from bait stations when they are lifted, units must be secured or otherwise immobilized. Stronger bait stations are needed in areas open to hooved livestock, raccoons, bears, or other potentially destructive animals, or in areas prone to vandalism.
3. Dispose of product container and unused, spoiled, or unconsumed bait as specified on this label.

Bait stations are mandatory for outdoor, above-ground use. Tamper-resistant bait stations must be used wherever children, pets, non-target mammals, or birds may have access to the bait placement location.

Violation of FAC 12973.

CCR 1983

(i) When a covered or uncovered bait station is used for any rodenticide or avicide the bait station shall be adequately marked with the signal word or symbols required on the original rodenticide or avicide label, the generic name of the pesticide, and the name, address and telephone number of the structural pest control company.

OOPS

Smells
yummy!





Violations we find out there: 5



Active Ingredient: Lambda-cyhalothrin1 (CAS No. 91465-08-6): . . .9.7%
Other Ingredients:90.3%
Total:100.0%

LET TREATED SURFACES DRY BEFORE ALLOWING HUMANS AND PETS TO CONTACT SURFACES.



Do not use this product with oil.

Do not apply this product in any room being used as living, eating, sleeping, or recovery area by patients, the elderly, or infirm when they are in the room.

Do not apply to classrooms when in use.

Do not apply to institutions (including libraries, sports facilities, etc.) in the immediate area when occupants are present.

Do not apply this product to edible growing crops or stored raw agricultural commodities used for food or feed.

Do not allow applications to contact water inhabited by fish, such as in aquariums and ornamental fish ponds that are located in/around structures being treated.

Section violated:

FAC 12973. Conflict with label.



Always do the right thing!

