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

Daniel B. Peacock, Biologist Insecticide-Rodenticide Branch Registration Division (7504C)

Enclosures:

1. Stamped Label

2. Label Type Point Chart

Peacock:C:\Rotenone\1439-260.NOT3/15/99:703-305-5407

CUBÉ POWDER FISH TOXICANT, 11/19/98 Page 1 3-15-99

CHEM-SECT BRAND

CUBÉ POWDER FISH TOXICANT

RESTRICTED USE PESTICIDE Due to Aquatic, Acute Oral, and Inhalation Toxicity

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.

ACTIVE INGREDIENTS

Rotenone*	7.4%
Other Associated Resins	11.1%
INERT INGREDIENTS 8	31.5%
TOTAL	0.0%
* Nominal content See Certificate of Analysis for actual rotenone content	

Nominal content. See Certificate of Analysis for actual rotenone-content.

KEEP OUT OF REACH OF CHILDRENCCEPTED in EPA Letter Dated

DANGER - POISON

Under the Federal Insecticide, Fungicide, and Rodenticide Act as arnended, for the pesticide registered under EPA Reg. No.

precautionary statements.

39-260



See Side Panel for additional

TIFA (CI) LTD.

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Facsimile Nos. 908-647-2517

908-647-7338

EPA Reg. No. 1439- 260

EPA Est. No. 1439-

Net Contents

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

DANGER:

Fatal if inhaled or swallowed. May be fatal if inhaled. Do not breathe dust. Wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P, or HE filter. Causes moderate eye irritation. Do not get in eyes, on skin or on clothing. Wear protective goggles, faceshield, or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, or smoking. Remove contaminated clothing and wash before reuse.

First Aid Statements

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of

water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not

induce vomiting.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial

respiration, preferably mouth-to-mouth. Get medical attention.

IF IN EYES: Flush eyes with plenty of water. Get medical attention of irritation

persists.

IF ON SKIN: Wash with Plenty of soap and water. Get medical attention.

Environmental Hazards

This pesticide is extremely toxic to fish. Fish kills are expected at recommended rates. Consult your State Fish and Game Agency before applying this product to public waters to determine if a permit is needed for such an application. Do not contaminate untreated water when disposing of equipment washwaters.

STORAGE AND DISPOSAL

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

STORAGE: Store only in original container, in a dry place inaccessible

to children and pets.

PESTICIDE DISPOSAL: Pesticide Wases are acutely hazardous. Improper disposal

of excess pesticide, spray mixture, or rinseate is a violation of Federal Law. If these wastes cannot be disponsed 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: Completely empty bag by shaking and tapping sides and

bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

General Guide to the Application Rates and Concentrations of Rotenone Needed to Control Fish in Lakes, Ponds and Resevoirs

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

USE RESTRICTIONS:

Use against fish in lakes, ponds, reservoirs, and streams (immediately above lakes, ponds, and reservoirs). CHEM SECT CUBÉ POWDER is registered for use by or under permit from and, after consultation with, State and Federal Fish and Wildlife Agencies.

Since such factors as pH, temperature, depth, and turbidity will change effectiveness, use this product only at locations, rates and times authorized and approved by appropriate State and Federal fish and wildlife agencies. Rates must be within the range specified in the labeling.

Do not use water treated with rotenone to irrigate crops or release within ½ mile upstream of or in a standing body of water, such as a lake, pond, or reservoir containing a potable water or irrigation water intake.

Properly dispose of dead fish and unused product. Do not use dead fish as food or feed

Re-Entry Statement

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Do not allow swimming in rotenone-treated water until the application has been completed and all pesticide has been thoroughly mixed into the water according to label instructions.

APPLICATION DIRECTIONS:

To Survey Fish Populations

This product may be used to <u>survey</u> fish populations in fresh or salt water, provided that there is no intent to <u>control</u> such populations. Before using rotenone in such a manner, determine if applications are subject to other Federal, State, and Local laws and regulations or if permits are required.

To Control Fish Populations

Treatment of Lakes, Ponds, and Reservoirs

1. Application Rates and Concentrations of Rotenone.

The actual application rates and concentrations of rotenone needed to control fish will vary widely, depending on the type of use (e.g., selective treatment, normal pond treatment, etc.) and the factors listed above. The table below is a general guide for the proper rates and concentrations.

2. Computation of acre-feet for lake or pond. (An acre-foot is a unit of water volume having a surface area of one acre and depth of one foot).

Make a series of transects across the surface, taking depths with a measured pole or weighted line. Add the measurements and divide by the number of measurements made to determine the average depth. To compute **total acre feet**, multiply this average depth by the number of surface acres, which can be determined from an aerial photograph or plot drawn to scale.

3. Total Amount of Product Needed for Treatment

To determine the total number of pounds needed for treatment, find your "Type of Use" in the table below and divide the number of acre-feet covered by one pound into the number of acre-feet in the body of water to be treated. This will give the amount of CHEM SECT BRAND CUBÉ POWDER (based upon 5.0% rotenone content) needed for treatment. Then correct for the actual rotenone content using the following formula.

Pounds of CHEM SECT BRAND = N x rotenone content from Certificate of Analysis

CUBÉ POWDER 0.05

where N = the pounds of 5.0% CUBÉ POWDER required as determined from the table below.

General Guide to the Application Rates and Concentrations of Rotenone Needed to Control Fish in Lakes and Ponds* (5% Cubé Powder Product)

Type of Use	Active Rotenone (ppm)	5.0% Cubé Powder (ppm)	Acre Feet Covered by One Pound of 5.0% Cubé Powder	Pounds of 5.0% Cubé Powder to Cover One Acre Foot
Selective Treatment	0.005 -0.007	0.10 - 0.13	2.8 - 3.7	0.25 - 0.36
Normal Pond Use	0.025 - 0.05	0.5 - 1.0	0.37 - 0.74	1.35 - 2.70
Remove Bullheads and Carp	0.05 - 0.10	1.0 - 2.0	0.185 - 0.37	2.70 - 5.41
Remove Bullheads and Carp in Rich Organic Ponds	0.1 - 0.2	2.0 - 4.0	0.093 - 0.185	5.41 - 10.75
Pre-Impoundment Treatment Above Dams	0.15 - 0.25	3.0 - 5.0	0.074 - 0.123	8.13 - 13.51

^{*} Adapted from Kinney, Edward. 1965. Rotenone in Fish Pond Management. USDI. Washington, D.C. Leaflet FL-576.

4. Method of Application and Exposure Time

Pre-Mixing and Method of Application:

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Pre-mix one pound of CHEM SECT CUBÉ POWDER with 3 to 10 gallons of water. Uniformly apply over water surface or bubble through underwater lines.

Detoxification: CHEM SECT CUBÉ POWDER treated waters detoxify under natural conditions within one week to one month, depending upon temperatures, alkalinity, etc. Rapid detoxification can be accomplished by adding chlorine or potassium permanganate to the water at the same rates as CHEM SECT CUBÉ POWDER in parts per million plus enough additional to meet the chlorine demand of the untreated water.

5. Removal of Taste and Odor

CHEM SECT CUBÉ POWDER treated waters do not retain a detectable taste or odor for more than a few days to a maximum of one month. Taste and odor can be removed immediately by treatment with activated charcoal at a rate of 30 ppm to each 1 ppm CHEM SECT CUBÉ POWDER remaining. (Note: As CHEM SECT CUBÉ POWDER detoxifies, less charcoal is required.)

6. Restocking

Wait 2 to 4 weeks after treatment. Pace a sample of fish to be stocked in wire cages in the coolest part of the treated waters. If the fish are not killed in 24 hours, the water may be restocked.

Treatment of Streams Immediately Above Lakes, Ponds, and Reservoirs

Use in Streams, Immediately Above Ponds, Lakes, or Reservoirs: The purpose of treating streams immediately above lakes, ponds, and reservoirs is to improve the effectiveness of lake, pond, and reservoir treatments by preventing fish from migrating into the stream corridor, and not to control fish in streams per se. The term "immediately" means the first available site above the lake or pond where treatment is practical while still creating a sufficient barrier to prevent migration of target fish into the stream corridor. To prevent movement of fish from the pond, lake or reservoir, stream treatment should begin before and continue through treatment of pond, lake, or reservoir or until mixing has occurred.

In order to treat immediately above a lake or pond, you must select a concentration of active rotenone, compute the flow rate of the stream, calculate the application rate, select an exposure time, estimate the amount of product needed, and follow the method of application.

1. Concentration of Active Rotenone:

Select the "Concentration of Active Rotenone" based on the type of use from those on the table. For example, if you select "Normal Pond Use" you could select a concentration of "0.025 parts per million".

2. Computation of Flow Rate for Stream:

Select a cross section of the stream where the banks and bottom are relatively smooth and free of obstacles. Divide the surface width into three equal sections and determine the water depth and surface velocity at the center of each section. In slowly moving streams, determine the velocity by dropping a float attached to 5 feet of loose, monofilament fishing line. Measure the time required for the float to move 5 feet. For fast moving streams, use a longer distance. Take at least three readings at each point.

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To calculate the flow rate from the information obtained above, use the following formula:

where F = flow rate (cu. ft./sec.), WS = surface width (ft.), D = mean depth (ft.), L = mean distance traveled by float (ft.), C = constant (0.8 for rough bottoms and 0.9 for smooth bottoms), and T = mean time for float (sec.).

3. Calculation of Application Rate

In order to calculate the application rate (expressed as "pounds/sec"), you convert the rate in the table (expressed as "pounds/acre-feet"), to "pounds per cu feet" and multiply by the flow rate (expressed as cu ft/sec"). Depending on the size of the stream and the type of equipment, the rate could be expressed in other units, such as "ounces/hr".

The application rate for streams is calculated as follows:

$$R_s = R_p \times C \times F$$

where R_s = Application Rate for Stream (lbs/sec), R_p = Application Rate for Pond (lb/acre feet), C = 1 acre foot/43560 cu ft, and F = Flow Rate (cu ft/sec).

Exposure Time

The "Exposure Time" would be the period of time (expressed in hours and minutes) during which rotenone is applied to the stream in order to prevent target fish from escaping from the pond in the stream corridor.

Amount of Product

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Calculate the "Amount of Product" for a stream by multiplying the "Application Rate for Stream" by the "Exposure Time".

$$A = Rs \times H$$

where A = the amount of product for the stream application, Rs = application rate for the stream (pounds/second), and H = the exposure time expressed in seconds.

To facilitate application of CHEM SECT CUBÉ POWDER prepare a pre-mix by adding the "Amount of Product" calculated above into a drum or garbage can and then add 3 - 10 gallons of water. Adjust the rate of application to accommodate the dilution. Allow CHEM SECT CUBÉ POWDER pre-mix to drain from drum directly into center of stream at the rate calculated.