PM 14 432-829

AgrEvo™ A company of Hoechst and Schering Berlin

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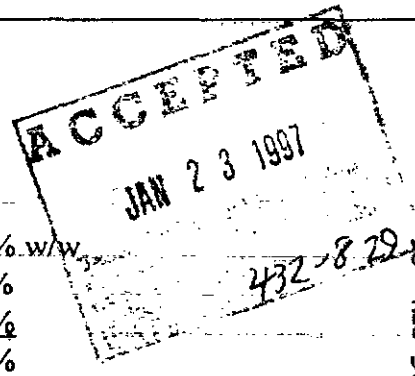
RESTRICTED USE PESTICIDE
Due to Aquatic Toxicity
For retail sale to, and use only by, Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

CUBE POWDER
Fish Toxicant



RECD EPA/OPP/DPD1 AUG 30 A8:20

ACTIVE INGREDIENTS:

Rotenone*	7.4% w/w
Other Associated Resins	11.1%
INERT INGREDIENTS:*	81.5%
Total	100.0%

*Nominal concentration. See certificate of analysis for actual rotenone content.

EPA Reg. No. 432- I E O **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

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. Do not induce vomiting or give anything by mouth to an unconscious person.

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

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals
CAUTION
May be harmful if swallowed, absorbed through skin, or inhaled. Avoid contact with skin, eyes or clothing. Avoid inhalation of dust. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash thoroughly before reuse.

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.

See below for additional precautionary statements.

BEST AVAILABLE COPY

Net Contents

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.
Storage: Store only in original containers, in a dry place inaccessible to children and pets.
Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
Container Disposal: Completely empty bag 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.

DIRECTIONS FOR USE

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).

Cube Powder Fish Toxicant 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 on the label.

Properly dispose of dead fish and unused product. Do not use dead fish for food or feed. Do not use water treated with rotenone to irrigate crops or release within 1\2 mile upstream of a potable water or irrigation water intake in a standing body of water such as a lake, pond or reservoir.

Re-Entry Statement

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 labeling instructions.

Application Directions

Treatment of Ponds, Lakes and Reservoirs
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 use, etc.) and the factors listed above. The table below is a general guide for the proper rates and concentrations.

Computation of Acre-Feet: An acre-foot is a unit of volume of a body of water having the area of one acre and the depth of one foot. To determine acre feet in a given body of water, make a series of transects across the body of water taking depths with a measured pole or weighted line. Add the soundings and divide by the number made to determine the average depth. Multiply this average depth by the total surface area in order to determine the acre feet to be treated. If number of surface acres is unknown, contact your local Soil Conservation Service, which can determine this from aerial photographs.

Amount of Product Needed for Treatment: To determine the approximate number of pounds needed for treatment, find your "Type of Use" in the first column of the table below and then divide the corresponding numbers in the third column, "Number of Acre-Feet Covered by One Pound" into the number of acre-feet in your body of water. This will give you the number of pounds of cube powder containing 5% rotenone needed for treatment. To correct for the actual rotenone content of the Cube Powder use the following formula;

$$P = N \times \frac{\text{Actual Rotenone Content}}{0.05}$$

Where N= the number of pounds of cube powder containing 5% rotenone needed for treatment, P= number of pounds of Cube Powder (actual concentration) needed for treatment.

General Guide to the Application Rates and Concentrations of Rotenone Needed to Control Fish in Lakes, Ponds and Reservoirs[1]

Type of Use	Parts Per Million		Number of Acre-Feet Covered by One Pound (based on 5% rotenone)	Pounds of Cube Powder to Cover one Acre-foot (based on 5% rotenone)
	5% Rotenone	Active Rotenone		
Selective Treatment	0.10 to 0.13	0.005 to 0.007	3.7 to 2.8	0.25 to 0.36
Normal pond use	0.5 to 1.0	0.025 to 0.050	0.74 to 0.37	1.35 to 2.70
Remove bullheads or carp	1.0 to 2.0	0.050 to 0.100	0.37 to 0.185	2.70 to 5.41
Remove bullheads or carp in rich organic ponds	2.0 to 4.0	0.100 to 0.200	0.185 to 0.093	5.41 to 10.75
Preimpoundment treatment above dam	3.0 to 5.0	0.150 to 0.250	0.123 to 0.074	8.13 to 13.51

[1]Adapted from Kinney, Edward. 1965. Rotenone in Fish Pond Management. USDI Washington, D.C. Leaflet FL-576.

Pre-Mix and Method of Application: Pre-mix one pound Roteone with 3 to 10 gallons of water. Uniformly apply over water surface or bubble through underwater lines.

Detoxification: Rotenone 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 rate as Rotenone in parts per million, plus enough additional to meet the chlorine demand of the untreated water.

Removal of Taste and Odor: Rotenone 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 for each 1 ppm Rotenone. (Note: As Rotenone detoxifies, less charcoal is required.)

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

Use in Streams Immediately Above Lakes, Ponds and 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 target fish from moving into the stream corridors, and not to control fish in streams per se. The term "immediately" means the first available site above the lake, pond or reservoir where treatment is practical, while still creating a sufficient barrier to prevent migration of target fish into the stream corridor.

In order to completely clear a fresh water aquatic habitat of target fish, the entire system above or between fish barriers must be treated. See the use directions for streams and rivers on this label for proper application instructions.

In order to treat a stream immediately above a lake, pond or reservoir, you must: (a) select the concentration of active rotenone, (b) compute the flow rate of the stream, (c) calculate the application rate, (d) select an exposure time, (e) estimate the amount of product needed, (f) follow the method of application. To prevent movement of fish from the pond, lake or reservoir, stream treatment should begin before and continue throughout treatment of pond, lake or reservoir until mixing has occurred.

1. Concentration of Active Rotenone:

Select the concentration of active rotenone based on the type of use from those listed on the table. Example: If you select "normal pond use" you could select a concentration of 0.025 part 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 3 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. To calculate the flow rate from the information obtained above, use the following formula:

$$F = \frac{Ws \times D \times L \times C}{T}$$

where F = flow rate (cubic feet/second), Ws = surface width (feet), D = mean depth (feet), L = mean distance traveled by float (feet), 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/second), you convert the rate in the table (expressed as pounds/acre-feet), to gallons per cubic feet and multiply by the flow rate (expressed as cubic feet/second). Depending on the size of the stream and the type of equipment, the rate could be expressed in other units, such as ounces/hour.

The application rate for the stream is calculated as follows:

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

where R_s = application rate for stream (pounds/second), R_p = application rate for pond (pounds/acre-feet), C = 1 acre foot/43560 cubic feet, and F = flow rate of the stream (cubic feet/second).

4. Exposure Time:
The exposure time would be the period of time (expressed in hours or minutes) during which Rotenone is applied to the stream in order to prevent target fish from escaping from the pond into the stream corridor.

5. Amount of Product:
Calculate the amount of product for a stream by multiplying the application rate for streams by the exposure time.

$$A = R_s \times H$$

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

Warranty Statement
Our recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The buyer must assume all responsibility. including injury or damage, resulting from its misuse as such, or in combination with other materials.