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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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SureCo, Inc.
P. O. Box 938
Fort Valley, GA 31030

Gentlemen:

Subject: Fish-Tox-5 (5% Rotenone)
EPA Registration No. 769-309
Powdered Cube
EPA Registration No. 769-414
Your Labeling Dated March 9, 1992

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable, and a stamped copy is enclosed for your records.

Sincerely yours,

Robert A. Forrest
Product Manager (14)
Insecticide-Rodenticide Branch
Registration Division (H7504C)

enclosure

cc: Ms. Linda Watson

CONCURRENCES

SYMBOL	SURNAME	DATE						

MADDEN Disk 1 4/16/92

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.

SUREGARD

FISH-TOX-5

ACTIVE INGREDIENTS:

Rotenone.....	5.0%
Other Associated Resins.....	10.0%
INERT INGREDIENTS*.....	<u>85.0%</u>
TOTAL.....	100.0%

*This product contains aromatic solvents.

KEEP OUT OF REACH OF CHILDREN

WARNING

See Side Panel for Additional Precautionary Statements.

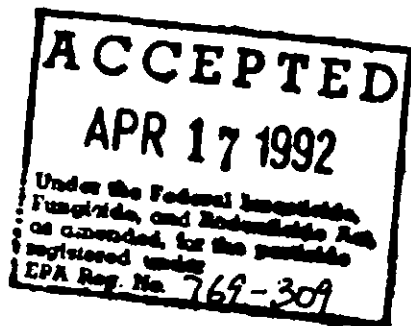
Manufactured For
SURECO, INC.

Fort Valley, Georgia 31030

EPA REG. NO. 769-309

EPA Est. No. 769-GA-1

NET CONTENTS: ONE GALLON



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

May be fatal if swallowed. May cause eye injury. Causes skin 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. Remove contaminated clothing and wash thoroughly before reuse.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center. Do not induce vomiting. This product contains aromatic petroleum solvent. Aspiration may be a hazard.

Promptly drink a large quantity of a milk, egg white, and gelatin solution, or if these are not available, water. Avoid alcohol.

IF IN EYES: Flush with plenty of water and get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

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 in public waters to determine if a permit is needed for such an application. Do not contaminate untreated water when disposing of equipment washwaters.

PHYSICAL AND CHEMICAL HAZARDS

Flammable: Keep away from heat and open flames.

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: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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41

DIRECTIONS FOR USE

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

GENERAL INFORMATION:

Fish-Tox-5 is a specially formulated product to be used in fisheries management for the eradication of fish from lakes, streams immediately above lakes and ponds, and reservoirs.

Fish-Tox-5 disperses readily in water both laterally and vertically, and will penetrate below the thermocline in thermally stratified bodies of water (U.S. Patent No. 3,098,004).

Fish-Tox-5 will not solidify nor show any separation at temperatures down to 40°F., and is stable for a minimum of one year when stored in sealed drums at 70°F.

USE RESTRICTIONS:

Use against fish in lakes, ponds, and streams (immediately above lakes and ponds).

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.

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

Do not use water treated with rotenone to irrigate crops or release within $\frac{1}{2}$ mile upstream of a potable water or irrigation water intake in a standing body of water such as a lake, pond, or reservoir.

APPLICATION DIRECTIONS:

Treatment of Lakes and Ponds

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. Total Amount of Fish-Tox-5 Needed for Treatment

To determine the total number of gallons needed for treatment, divide the number of acre-feet covered by one gallon for a specific type of use (e.g., selective treatment, etc.), as indicated in the table below, into the number of acre-feet in the body of water.

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159

General Guide to the Application Rates and
Concentrations of Rotenone
Needed to Control Fish in Lakes and Ponds¹

<u>Type of Use</u>	<u>Number of Acre-Feet Covered by One Gallon</u>	<u>Parts Per Million</u>	
		<u>Active Rotenone</u>	<u>Fish-Tox-5</u>
Selective Treatment	30 to 24	0.005 - 0.007	0.10 - 0.13
Normal Pond Use	6.0 to 3.0	0.025 - 0.050	0.5 - 1.0
Remove Bullheads or Carp	3.0 to 1.5	0.050 - 0.100	1.0 - 2.0
Remove Bullheads or Carp in Rich Organic Ponds	1.5 to 0.75	0.100 - 0.200	2.0 - 4.0
Pre-impoundment Treatment above Dam	1.0 to 0.60	0.150 - 0.250	3.0 - 5.0

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

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 a 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 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 plat drawn to scale

3. Method of Application

Pre-mix with water at the rate of 1 gallon Fish-Tox-5 to 10 gallons water. Spray uniformly over surface of lake or reservoir at a rate of 1-2 gallons Fish-Tox 5 or 0.025-0.05 ppm rotenone.

Fish-Tox-5 disperses readily in water both laterally and vertically but more rapid dispersal may be obtained with agitation by motor prop action.

4. Removal of Taste and Odor

Fish-Tox-5 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. Fish-Tox-5 remaining. (Note: As Fish-Tox-5 detoxifies, less charcoal is required).

5. Restocking

Waters treated with this product under normal conditions detoxify within 1 week to 1 month, depending on pH, temperature, water hardness, and depth. To determine if detoxification has occurred, place live boxes containing samples of fish to be stocked in the treated waters. More rapid detoxification can be accomplished by adding chlorine or potassium permanganate to the water at the same rate as Fish-Tox-5 in parts per million plus enough additional to meet the chlorine demand of the untreated water.

Treatment of Streams Immediately Above Lakes and Ponds

The purpose of treating streams immediately above lakes and ponds is to improve the effectiveness of lake and pond treatments 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.

In order to treat a stream 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 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 (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.).

For example, after using the above formula, you might have computed the stream's flow rate to be "10 cu ft per sec".

3. Calculation of Application Rate

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

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The application rate for the stream above is calculated as follows:

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

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

In the example, the Application Rate for Stream would be:

$$R_s = 1 \text{ gal}/6 \text{ acre-foot} \times 1 \text{ acre-foot}/43560 \text{ cu ft} \times 10 \text{ cu ft/sec}$$

$$R_s = .000038 \text{ gal/sec or } 17.5 \text{ oz/hr.}$$

4. Exposure Time

The "Exposure Time" would be the period of time (expressed in hours or seconds) during which target fish should not enter the lake or pond under treatment. In the example, this period of time could be 4 hours.

5. Amount of Product

Calculate the "Amount of Product" for a stream by multiplying the "Application Rate for Stream" by the "Exposure Time". In the example, the "Amount of Product" would be 70 oz (17.5 oz/hr x 4 hr) or 0.547 gal.

6. Method of Application

Allow Fish-Tox-5 to drain from container directly into center of stream with the amount of product and at the application rate as calculated in the above instructions.

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.

NOTICE

Disclaimer of Warranty, Merchantability & Liability

If for any reason this product is not used, applied, stored, transported or disposed of in accordance with the instructions set forth on this label, then and thereafter SURECO terminates, ends and excludes all warranties, expressed or implied, including the warranty of merchantability and fitness.

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