Reg # 1439-159 PM- 14 1 of 5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

S409504 656/17

JAN 14 1992

Tifa, Ltd.
Tifa Square
Millington, NJ 07946

Dear A. M. Livingston:

Subject: Chem Fish Synergized
EPA Reg. No.1439-159
Your Letter Dated January 6, 1992

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the revised labeling:

   a. The active ingredient statement has been incorrectly declared on the label. According to our records "Other Associated Resins" should be listed as 5.0 percent.

2. Submit a copy of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

Sincerely yours,

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

CONCURRENCES								
SYMBOL								
SURNAME								
DATE								

EPA Form 1320-1 (12-70) *U.S.GPO:1989-624-485/10186 OFFICIAL FILE COPY

MADDEN DISK 1 1/13/92

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 to 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

Do not use or store near heat or open flame.

STORAGE AND DISPOSAL

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE 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 BY OTHER PROCEDURES APPROVED BY STATE AND LOCAL AUTHORITIES.

CHEM-SECT BRAND

CHEM FISH SYNERGIZED

(2.5% Emulsifiable Concentrate)

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.

CHEM-SECT BRAND

CHEM FISH SYNERGIZED

(For Control of Fish in Lakes and Ponds)

ACTIVE INGREDIENTS	10.0%
Rotenone	2.5%
Other Associated Resins . . .	15.0%
Technical Piperonyl Butoxide	2.5%*
INERT INGREDIENTS	90.0%**
TOTAL	100.0%

*Consist of 2.0% of (Butylcarbityl propylpiperonyl) ether and 0.5% of related compounds.

**This product contains aromatic solvents.

KEEP OUT OF REACH OF CHILDREN

W A R N I N G

See Left Panel for additional precautionary statements.

Tifa (U.S.) Limited
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Millington, New Jersey 07946
United States of America
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E.P.A. PESTICIDE EST. #44616-MO-1
E.P.A. REG. NO. 1439-159
Net Contents _____

ACCEPTED
with COMMENTS
In EPA Letter Dated:

JAN 14 1992

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 1439-159

DIRECTIONS

It is a violation of Fede product in a manner incon labeling.

USE RESTRICTIONS:

Use against fish in lakes, (immediately above lakes

Since such factors as pH, and turbidity will change this product only at loca times authorized and appr State and Federal fish an Rates must be within the labeling.

Properly dispose of dead product. Do not use dead

Do not use water treated irrigate crops or release upstream of a potable wat intake in a standing body lake, pond, or reservoir.

APPLICATION DIRECTIONS:

Treatment of La

1. Application Rates and Rotenone

The actual application ra of rotenone needed to con widely, depending on the selective treatment, norm etc.) and the factors lis below is a general guide and concentrations.

2. Total Amount of Produc

To determine the total nu for treatment, divide the covered by one gallon for use (e.g., selective trea indicated in the table be of acre-feet in the body

CHEM FISH SYNERGIZED shou before application, rathe full strength. A wash tu a convenient container fo FISH SYNERGIZED mixes rea some types of water, CHEM not penetrate to the deep (20 to 25 feet or more) w the surface. The deeper treated by pumping the mi weighted garden hose with the end.

FOR USE IN STREAMS, IMMED LAKES, OR RESERVOIRS. Al SYNERGIZED to drain from center of stream at a rat minute for each cubic foo second in the stream (0.5 CHEM FISH SYNERGIZED or 0 rotenone).

General Guide to the Application Rates and Concentrations of Rotenone Needed to Control Fish in Lakes and Ponds*
(2.5% Emulsifiable Concentrate Product)

Type of Use	No. of Acre-Feet Covered by One Gallon	Parts Per Million Active Rotenone	2.5% Product
Selective Treatment	15 to 12	0.005-0.007	0.20-.25
Normal Pond Use	3.0 to 1.5	0.025-0.050	1.0-2.0
Remove Bullheads or Carp	1.5 to .75	0.50-0.100	2.0-4.0
Remove Bullheads or Carp in Rich Organic Ponds	.75 to .38	0.100-0.200	4.0-8.0
Pre-Impoundment Treatment above Dam	.50 to .30	0.150-0.250	6.0-10.0

* Adapted 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 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 and Exposure Time

Pre-Mixing and Method of Application: Pre-mix with water at a rate of one gallon CHEM FISH SYNERGIZED to 10 gallons of water. Uniformly apply over water surface or bubble through underwater lines.
Detoxification: CHEM FISH SYNERGIZED treated waters detoxify under natural conditions within 1 week to 1 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 FISH SYNERGIZED in parts per million plus enough additional to meet the chlorine demand of the untreated water.

4. Removal of Taste and Odor

CHEM FISH SYNERGIZED 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 FISH SYNERGIZED remaining. (Note: As CHEM FISH SYNERGIZED detoxifies, less charcoal is required.)

5. Restocking

Waters treated with this product detoxify within 3-5 days, 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 potassium permanganate at the same dosage in parts per million as rotenone was used for the reclamation treatment.

SEE ATTACHMENT A

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.

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-feet"), to "gallon per cu feet" and multiple 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".

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 feet), 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 gal/3 acre-foot x 1 acre-foot/43560 cu ft x 10 cu ft/sec

R_S = .000076 gal/sec or 35 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 140 oz (35 oz/hr x 4 hr) or 1.09 gal.