

PM 04

432-172

11/7/97

P3185

NOV 7 1997

Agrevo Environmental Health  
95 Chestnut Ridge Road  
Montvale, NJ 07645

S-521528

345/117

Attention: Ms. Sharon Johnston

Subject: Noxfish Fish Toxicant  
EPA Registration No. 432-172  
Nusyn-Noxfish Fish Toxicant  
EPA Registration No. 432-550  
Your amended applications of March 24, 1997

For each of the above products, you have submitted A) a revised label and B) four revised Confidential Statements of Formula (CSF): one basic formulation and three alternate formulas. We have reviewed these submissions and have the following comments.

A) Revised Label

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable for each product, provided that you submit one (1) copy of the final printed labeling to us before you ship the product.

If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of this condition.

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

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B) Revised CSF

All of the revised CSFs dated March 24, 1997, are acceptable. Previous versions are obsolete.

Sincerely,



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

Peacock:WP14:A:\Rotenone\432-550.NOV:703-305-5407:11/5/97



**AgrEvo**™

A company of Hoechst and Schering Berlin

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ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

NOV 7 1997

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans & Domestic Animals**

DANGER 432-172

Fatal if inhaled. May be fatal if swallowed. Harmful if absorbed through skin. Causes substantial but temporary eye injury. Causes skin irritation. Do not breath spray mist. Do not get in eyes, on skin or on clothing. Wear goggles or safety glasses. When working with undiluted product wear either a respirator with an organic-vapor removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix 14G).

Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash 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.

**Chemical and Physical Hazards**

FLAMMABLE: KEEP AWAY FROM HEAT AND OPEN FLAME.  
FLASH POINT MINIMUM 45°F (7°C).

**DIRECTIONS FOR USE**

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

Noxfish is registered for use by or under permit from, and after consultation with State and Federal Fish and Wildlife Agencies.

**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. Noxfish 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.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed 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:** 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.

**General Information**

Noxfish is a specially formulated product containing rotenone to be used in fisheries management for the eradication of fish from lakes, ponds, reservoirs and streams.

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. Noxfish is registered for use by or under permit from, and after consultation with State and

**RESTRICTED USE PESTICIDE**

Due to Aquatic Toxicity and Acute Inhalation

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.

**NOXFISH®**

**Fish Toxicant  
Liquid-Emulsifiable**

\* FOR CONTROL OF FISH IN LAKES, PONDS, RESERVOIRS AND STREAMS

**ACTIVE INGREDIENTS:**

Rotenone ..... 5.0% w/w  
Other Associated Resins ..... 5.0%

**INERT INGREDIENTS:\* .....** 85.0%  
100.0% w/w

\*This product contains aromatic hydrocarbons.  
©Noxfish is a registered trademark of AgrEvo Environmental Health, Inc.

EPA REG. NO. 432-172      EPA EST. NO.

**KEEP OUT OF REACH OF CHILDREN  
DANGER**



**POISONOUS**



**STATEMENT OF PRACTICAL TREATMENT**

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

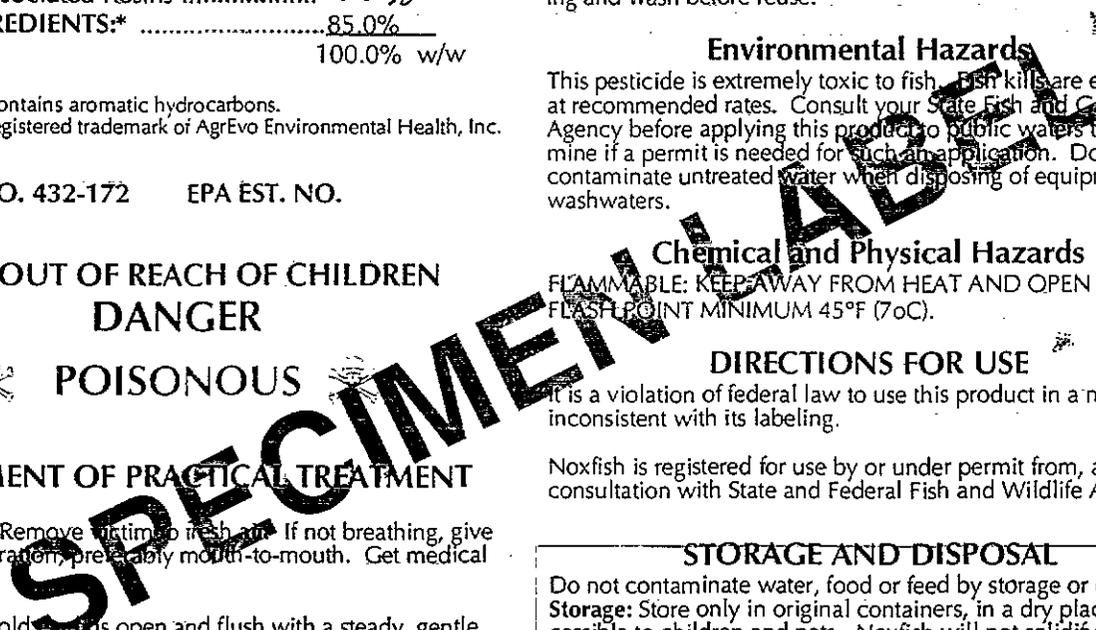
**IF IN EYES:** Hold lids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**IF SWALLOWED:** Promptly drink a large quantity of milk, egg white, gelatin solution or if these are not available, large quantities of water. Avoid alcohol. Do not induce vomiting. Call a physician or Poison Control Center.

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

**See Below For Additional  
Precautionary Statements.**

**NET CONTENTS**



Federal Fish and Wildlife Agencies. Rates must be within the range specified on the label.

Properly dispose of 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.

### For Use in 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.

- Noxfish disperses readily in water both laterally and vertically, and will penetrate below the thermocline in thermally stratified bodies of water.

**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 the number of surface acres is unknown, contact your local Soil Conservation Service, which can determine this from aerial photographs.

**Amount of Noxfish Needed for Specific Uses:** To determine the approximate number of gallons of Noxfish (5.0% Rotenone) needed, find your "Type of Use" in the first column of the table below and then divide the corresponding numbers in the fourth column, "Number of Acre-Feet Covered by One Gallon" into the number of acre-feet in your body of water.

**Pre-Mixing and Method of Application:** Pre-mix with water at a rate of one gallon Noxfish to 10 gallons of water. Uniformly apply over water surface or bubble through underwater lines.

**Detoxification:** Noxfish 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 Noxfish in parts per million, plus enough additional to meet the chlorine demand of the untreated water.

**Removal of Taste and Odor:** Noxfish 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 Noxfish remaining. (Note: As Noxfish 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 the 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:

$$F = \frac{W \times D \times V \times C}{1}$$

General Guide to the Application Rates and Concentrations of Rotenone Needed to Control Fish in Lakes, Ponds and Reservoirs<sup>1</sup>

Type of Use	Parts Per Million		Number of Acre-Feet Covered by One Gallon
	Noxfish	Active Rotenone	
Selective treatment	0.10 to 0.13	0.005 to 0.007	30 to 24
Normal pond use	0.5 to 1.0	0.025 to 0.050	6.0 to 3.0
Remove bullheads or carp	1.0 to 2.0	0.050 to 0.100	3.0 to 1.5
Remove bullheads or carp in rich organic ponds	2.0 to 4.0	0.100 to 0.200	1.5 to 0.75
Preimpoundment treatment above dam	3.0 to 5.0	0.150 to 0.250	1.0 to 0.60

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

