Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD 2013-2015 LIC. NO. 9519.29

RESTRICTED USE PESTICIDE

Due to acute inhalation, acute oral, primary eye and primary dermal toxicity and due to toxicity to fish and other aquatic organisms. 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.

PRENFISH TOXICANT

Liquid Emulsifiable Fish Toxicant

For Control of Fish in Lakes, Ponds, Reservoirs, and Streams

THE APPLICATOR IS RESPONSIBLE FOR CONFORMING TO THE LABEL. IMPORTANT GUIDANCE ON THE SAFE AND EFFECTIVE USE OF THIS PRODUCT IS PROVIDED IN THE *ROTENONE SOP MANUAL*, AVAILABLE FROM THE REGISTRANT OR THE AMERICAN FISHERIES SOCIETY AT www.fisheries.org/units/rotenone.

ACTIVE INGREDIENTS:

Rotenone	5.0% w/w
Cube Resins other than rotenone	5.0%
OTHER INGREDIENTS[1]	90.0%
[1] Contains Petroleum Distillates — Total	100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER - POISON

See additional Precautionary Statements below.

FIRST AID

Have product container or label with you when obtaining treatment advice.

If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Do not give any liquid to the person. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor at for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may contact 1-800-222-1222 for emergency medical treatment information. You may also contact the National Pesticide Telecommunication Network at 1-800-858-7378 for information including health concerns, medical emergencies or pesticide incidents.

NOTE TO PHYSICIAN: Contains petroleum distillate. Vomiting may cause aspiration pneumonia. Symptoms of exposure include numbness, lethargy & incoordination. Decontamination, symptomatic and supportive treatment is recommended.

envincio

EPA Reg. No. 655-422
EPA Est. No. 655-GA-1

Manufactured By
PRENTISS LLC
Plant: Kaolin Road, Sandersville, GA 31082
Office: 2155 West Croft Circle, Spartanburg, SC 29302 864-596-1553

file: 11696-2_book_art
folder: 11696-2_Prentiss_655-422
colors: black, pms 7427
☐ dp proofed

created: CCL St. Louis
alt: 07-31-13 ek
size: 5.5(w) x 6(h)

Concentration of Active Rotenone
Select the concentration of active rotenone based on the type of use from those listed on the tables below. Example: If you select "normal use" you could select a concentration of 0.025 - 0.05 parts per million.

Table - Recommended rotenone treatment concentrations and number of cubic feet per second (ft^3/s) flowing water treated for 4- and 8-hour (hr) periods with one gallon of (5% A.I.) product. Adjust amount of product according to the actual rotenone content on Ingredient Statement on label.

Type of Use	Parts per Million (ppm)		ft^3/s per Gallon (4-hr)	ft^3/s per Gallon (8-hr)
	Product (5% A.I.)	Active Rotenone		
Normal	0.5 - 1.0	0.025 - 0.05	18.4 to 9.2	9.2 to 4.6
Tolerant Species	1.0 - 3.0	0.05 - 0.15	9.2 to 3.1	4.6 to 1.6
Tolerant Species in Organic Waters	2.0 - 4.0	0.1 - 0.2	4.6 to 2.3	2.3 to 1.2

Table - Recommended rotenone treatment concentrations and number of cubic meters per second (m^3/s) flowing water treated for 4- and 8-hour (hr) periods with one liter of (5% A.I.) product. Adjust amount of product according to the actual rotenone content on Ingredient Statement on label.

Type of Use	Parts per Million (ppm)		m^3/s per Liter (4-hr)	m^3/s per Liter (8-hr)
	Product (5% A.I.)	Active Rotenone		
Normal	0.5 - 1.0	0.025 - 0.05	0.138 to 0.069	0.069 to 0.034
Tolerant Species	1.0 - 3.0	0.05 - 0.15	0.069 to 0.024	0.034 to 0.013
Tolerant Species in Organic Waters	2.0 - 4.0	0.1 - 0.2	0.034 to 0.018	0.0180 to 0.008

Measurement of Flow Rate for Stream
Select a cross section of the stream where the banks and bottom are relatively smooth and free of obstacles and the flow appears laminar. Best discharge measurements are achieved with an electronic flow meter and use of the United States Geological Survey *Weighted Area Method*. Alternatively, divide the stream surface width into 3 equal sections and determine the water depth and surface velocity at the center of each section. Determine the velocity by dropping a float and measure the time required to move 10 feet or more. 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 (ft^3/s or m^3/s), Ws = surface width (ft or m), D = mean depth (ft or m), L = mean distance traveled by float (ft or m), C = constant (0.8 for rough bottoms and 0.9 for smooth bottoms), T = mean time (s) for float to travel distance.

Exposure Time and Spacing
Apply rotenone as a drip for 4 to 8 hours to the flowing portion of the stream. Multiple application sites are used along the length of the treated stream, spaced approximately 1/2 to 2 miles apart depending on the water flow travel time between sites. Multiple sites are used because rotenone is diluted and detoxified with distance. Application sites are spaced at no more than 2 hours or at no less than 1-hour travel time intervals. This assures that the treated stream remains lethal to fish for a minimum of 2 hours. A non-toxic dye such as Rhodamine-WT® or fluorescein can be used to determine travel times. Cages containing live fish placed immediately upstream of the downstream application sites can be used as sentinels to assure that lethal conditions exist between sites.

Amount of Product and Calculation of Application Rate of Undiluted Product:

$$X = F1\ (1.699\ B) \text{ or } X = F2\ (59.99\ B)$$

X = ml per minute of undiluted Prenfish Toxicant applied to the stream, F1 = the flow rate (ft^3/s) and F2 the flow rate (m^3/s) (see Measurement of Flow Rate for Stream in this labeling), B = parts per million desired concentration of Prenfish Toxicant. Total amount of product needed:

$$Y = X(60)H$$

Y = total ml of undiluted Prenfish Toxicant required for treatment, X = ml per minute of undiluted product, and H = duration (hours) of treatment.

Amount of Product in Drip Can and Flow Rate of Diluted Product:

$$Y = B(102\ F1)H \text{ or } Y = B(3{,}602\ F2)H$$

Y = ml of undiluted product in the reservoir, B = parts per million desired concentration of Prenfish Toxicant, F1 = the flow rate (ft^3/s) and F2 = flow rate (m^3/s) (see Measurement of Flow Rate for Stream in this labeling), and H = duration (hours) of treatment. Discharge of the diluted product:

$$X = Z/60/H$$

X = ml per minute of diluted Prenfish Toxicant applied to the stream from drip can, Z = volume (ml) of drip can, and H = duration (hours) of treatment.

Method of Application
The unique nature of every application site could require minor adjustments to the method and rate of application. Should these unique conditions require major deviation from the use directions, a Special Local Need 24(c) registration should be obtained from the state. Before application, authorization must be obtained from state or federal Fish and Wildlife agencies. Since local environmental conditions will vary, consult with the state Fish and Wildlife agency to ensure the method and rate of application are appropriate for that site.

Contact the local water department to determine if any water intakes are within one mile downstream of the section of stream, river, or canal to be treated. If so, coordinate the application with the water department to make sure the intakes are closed during treatment and detoxification.

Prenfish Toxicant can drain directly into the center of the stream. Flow of should be checked at least hourly. Backwater, stagnant, and spring areas of streams should be sprayed by hand with a 1 to 2% v/v solution of 5% rotenone product to assure a complete coverage. Streams should be treated for 4 to 8 hours in order to clear the treated section of stream of fish. See Rotenone SOP Manual for detailed guidance on application equipment, methods and strategies.

DEACTIVATION
Flow in a stream and outflow from a treated lake beyond the treatment area must be deactivated with potassium permanganate to minimize exposure beyond the treatment area unless unnecessary. (See Rotenone SOP Manual [SOP 6] for the definition of treatment area, examples when deactivation with potassium permanganate is unnecessary, and detailed guidance for deactivating with potassium permanganate [SOP 7].)

Within 1 to 2 hours travel time from the furthest downstream rotenone application site, the rotenone can be deactivated with a potassium permanganate solution or granules at a resultant stream concentration of 2 to 4 parts per million, depending on rotenone concentration and organic demand of the water. A 2.5% (10 pounds potassium permanganate to 50 gallons of water) permanganate solution is dripped in at a continuous rate using the equation:

$$X = Y(70\ F1) \text{ or } X = Y(2{,}472\ F2)$$

X = ml of 2.5% permanganate solution per minute, Y = ppm of desired permanganate concentration, F1 = stream flow (ft^3/s) or F2 = stream flow (m^3/s) or, granular potassium permanganate is applied at a continuous rate using the equations:

$$Z = Y(1.7\ F1) \text{ or } Z = Y(60.02\ F2)$$

Z = grams of granular potassium permanganate per minute, Y = ppm of desired permanganate concentration, F1 = stream flow (ft^3/s) or F2 = stream flow (m^3/s).

Flow of permanganate should be checked at least hourly. Live fish in cages placed immediately above the permanganate application site will show signs of stress signaling the need for beginning deactivation. Deactivation can be terminated when replenished fish survive and show no signs of stress for at least four hours.

Deactivation of rotenone by permanganate requires between 15 to 30 minutes contact time (travel time). Cages containing live fish can be placed at these downstream intervals to judge the effectiveness of deactivation. At water temperatures less than 50°F, deactivation may be retarded, requiring a longer contact time.

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. To the extent consistent with applicable law, the buyer must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER - POISON

Fatal if inhaled. Do not breath the vapors or spray mists. May be fatal if swallowed. Causes substantial but temporary eye irritation. Harmful if absorbed through skin. Causes skin irritation. Do not get in eyes or on skin or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemical resistant to this product are Barrier Laminate, Nitrile Rubber, Neoprene Rubber or Viton. If you want more options, follow the instructions for Category E on EPA chemical-resistance category selection chart.

All mixers, loaders, applicators, and other handlers (except pilots) must wear at a minimum, the following PPE: (1) coveralls, over long-sleeved shirt and long pants; (2) chemical-resistant gloves; (3) chemical-resistant footwear plus socks; (4) protective eyewear; and (5) a dust/mist respirator.

In addition, mixers, loaders, and others exposed to the concentrate, through cleaning equipment or spills must wear a chemical-resistant apron.

Exception: waterproof waders may be worn in place of coveralls, chemical-resistant apron and chemical-resistant footwear.

See Engineering Controls for additional requirements and exceptions.

User Safety Requirements

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate; do not reuse them. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Engineering Controls for Mixing/Loading/Applying Liquid Formulations Packaged in Containers > 5 Gallons

Mixers/loaders/applicators must either:

(1) Use a closed system that meets the requirements listed in Worker Protection Standard (WPS) for dermal protection of agricultural pesticides [40 CFR 170.240(d)(4)], or

(2) Use the Semi-Closed Probe Mixing/Loading/Applicator System described below.

Remove plug from bung of drum containing this product only when drum is sitting on the ground or on a secure level platform, with the drum pointed up. Do not pour this product from its drum. Transfer product from the drum of the mixing tank by use of a suction hose connected to one end of the suction pump on the mixing tank and connected at the other end to a probe/dip tube. Remove the plug from the bung of the drum and insert the probe/drip tube into the bung of the drum until the foam ring/gasket fits snugly around the bung opening to minimize leakage of liquid rotenone. The probe/dip tube should be specifically sized to insure a snug fit into the bung which incorporates an anti-drip flange to remove excess liquid rotenone when the probe/dip tube is removed. In addition, the foam ring/gasket on the probe/dip tube insures a snug fit to minimize leakage of liquid rotenone. Do not handle the probe/dip tube in a manner that allows dripping or splattering of the product onto yourself or any other person. Do not touch the portion of the probe/dip tube that has been in contact with this product until the probe has been triple rinsed with water. See Rotenone SOP Manual (SOP 8) for further information on the operation of the Semi-Closed Probe system.

If the entire product is removed from the drum, then triple rinse the probe while it remains inside of the drum if possible. If not, remove the aspirator probe and triple rinse it and all parts of the aspirator in site water. If an un-rinsed probe must be removed from the drum, triple rinse it and all parts of the aspirator in treated site water. The anti-drip flange must be designed to remove excess rotenone product from the probe as it is extracted from the drum. Take the following steps if the probe must be disconnected from the suction hose before the both the probe and the hose have been triple rinsed: (1) equip the probe end of the hose with a shutoff valve; (2) install a dry-brake coupling between the valve and the probe, and the close the shut off valve before disconnecting the probe. See Rotenone SOP Manual (SOP 8) for further information on un-rinsed probes.

Mixers/loaders/applicators using all systems must wear PPE as required in the PPE section of this labeling for mixers/loaders. All systems must be capable of removing the pesticide from the shipping container and transferring it into mixing tanks and/or application equipment. At any disconnect point, the system must be equipped with a dry disconnect or dry-couple shutoff device to minimize drips.

Transferring (Mixing/Loading) Liquid Formulations

Mixers and loaders must transfer product from original to mixing tank or secondary container using a measuring device, inside a plastic-lined bermed area or other secondary confinement area capable of recovering spilled product. Wash plastic liner or other secondary confinement area and dispose of into treated site water. Do not handle this product in a manner that drips or splatters the product onto yourself or any other person. See Rotenone SOP Manual (SOP 10) for further guidance.

Product Containers ≤ 5 Gallons - Transfer product from original container into measuring device, within secondary confinement area, by pouring or using pump or pipette-type device. See Rotenone SOP Manual (SOP 10) for further guidance.

Product Containers > 5 Gallons - Do not pour rotenone concentrate from containers > 5 gallons. Transfer product from original container into measuring device, within secondary confinement area, using hand or electric drum pump. See Rotenone SOP Manual (SOP 10) for further guidance.

Engineering Controls for Applying Liquid Formulations

Applications using a boom or other mechanized equipment must release this product below the water surface. Applications made with aircraft, backpack sprayer, drip can, or handheld or hand-directed nozzle may release this product above the water surface.

Engineering Controls for Aerial Applications

Open cockpits are prohibited. Pilots must use a cockpit that has a non-porous barrier that totally surrounds the cockpit occupants and prevents contact with pesticides outside the enclosed area. Pilots in enclosed cockpits may wear a long-sleeved shirt, long pants, shoes, and socks instead of the PPE required for applicators in the PPE section of this labeling.

Engineering Controls for Boat Applications

When boat pilots or others on the application boat are located within an enclosed area that has a nonporous barrier that totally surrounds the occupants and prevents contact with pesticides outside the enclosed area, they: (1) may wear long-sleeved shirt, long pants, shoes, and socks, instead of the PPE required for applicators in the PPE section of this labeling; (2) must be provided and have immediately available in the use of an emergency when they must exit the enclosed area while the application is taking place, the PPE required for applicators of the PPE section of this labeling; (3) must take off any PPE that worn while outside the enclosed area before reentering the enclosed area; and (4) store all such used PPE in a chemical resistant container, such as a plastic bag, to prevent contamination of the enclosed area.

User Safety Recommendations

Certified Applicators applying or supervising any aspect of the application of this product should attend a training program for the Rotenone SOP Manual. The American Fisheries Society offers this training: go to www.fisheries.org/units/rotenone for current schedule of training.

Users should remove clothing/PPE if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to fish and other aquatic organisms. Fish kills are expected at recommended rates. Consult your State Fish and Game Agency and other agencies before applying this product to public waters to determine if a permit is needed for such an application. Do not contaminate water outside of the treatment area by cleaning of equipment or disposal of equipment wash waters. Do not contaminate water outside of the treatment area, food or feed by storage or disposal. Do not discharge effluent containing this pesticide into sewage systems without notifying the sewage treatment plant authority (PTOW).

PHYSICAL AND CHEMICAL HAZARDS

Flammable. Keep away from heat and open flame. Do not allow product to come into contact with oxidizing agents and/or strong acids.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store only in original containers, in a dry place inaccessible to children and pets. This product 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 HANDLING: Non-refillable container. Do not reuse or refill this container. Triple rinse or equivalent. Then, offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved State and local procedures.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING, INCLUDING BOTH THE CONTAINER LABEL AND THE ROTENONE STANDARD OPERATION PROCEDURES MANUAL (SOP) available from the registrant or the American Fisheris Society at www.fisheries.org/units/rotenone. THIS PRODUCT MUST BE ACCOMPANIED BY AN EPA-APPROVED ROTENONE SOP MANUAL. READ THE CONTAINER LABEL AND ROTENONE SOP MANUAL PRIOR TO USE. THE APPLICATOR IS RESPONSIBLE FOR FOLLOWING THE DIRECTIONS FOR USE CONTAINED WITHIN BOTH THE CONTAINER LABEL AND THE SOP MANUAL.

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

GENERAL INFORMATION

This product is a specially formulated product containing rotenone to be used in fisheries management for the eradication of fish from lakes, ponds, reservoirs, rivers and streams. 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 an irrigation water intake in a standing body of water such as a lake, pond or reservoir.

General Application Precautions and Restrictions: The Certified Applicator supervising the treatment must remain on site for the duration of the application. Do not allow recreational access (e.g., wading, swimming, boating and fishing) within the treatment area while rotenone is being applied (see Placarding of Treatment Areas). In streams/rivers/lakes/reservoirs/ponds, do not apply this product in a way that will result in active rotenone concentrations > 200 parts per billion/0.2 ppm (>4.0 ppm 5% rotenone formulation). Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application (see Placarding of Treatment Areas and Re-entering of Treatment Area). This product must not be applied to estuarine or marine environments. Where practical, users should collect and bury dead fish.

Applications using a boom or other mechanized equipment must release this product below the water surface. Applications made with aircraft, backpack spryer, drip can, or hand-held or hand-directed nozzle may release this product above the water surface.

Mixers/loaders of liquid rotenone product containers of 5 gallons of less should not handle more than 25 gallons of undiluted product per day.

Re-entering the Treatment Area: For applications that result in concentrations greater than 0.09 ppm active rotenone (when applying at a rate of > 1.8 ppm of 5% rotenone formulation), handlers reentering treated water, must wear, at a minimum, the following PPE: (1) coveralls over long-sleeved shirt and long pants; (2) chemical-resistant gloves; (3) chemical-resistant footwear plus socks; and (4) Chemical-resistant apron. Duration of PPE requirements for handlers re-entering treated water exactly correspond to duration of placarding requirements (e.g., PPE requirements end when placards are removed; see Placarding of Treatment Areas section of this labeling). Exception: waterproof waders may be worn in place of coveralls, chemical resistant apron and chemical-resistant footwear.

Placarding of Treatment Areas: The Certified Applicator in charge of the application (or someone his/her supervision) must placard all access areas to the treatment area. Detailed instructions for placarding are presented in the Rotenone SOP Manual. Placards must be placed every 250 feet along the shoreline of the treated area OR, at public access points (e.g., trailheads, roads and trails). Placards must contain the following information: (1) DANGER/PELIGRO; (2) DO NOT ENTER WATER/NO ENTRE AGUA; Pesticide Application; (3) Prenfish Toxicant; (4) the purpose of the application; (5) the start date and time of application; (6) end date and time of application; (7) "Recreational access (e.g., wading, swimming, boating, fishing etc) within the treatment area is prohibited while rotenone is being applied"; (8) "Do not swim or wade in treated water while placard is displayed"; (9) "Do not consume dead fish from treated water"; and (10) the name, address, and telephone number of the responsible agency or entity performing the application.

Signs must remain legible during the entire posting period For lotic (flowing water) and lentic (standing water) applications of ≤ 0.09 ppm active rotenone (≤ 1.8 ppm 5% formulation), signs can be removed once application is complete. For lotic applications > 0.09 ppm active rotenone (>1.8 ppm 5% rotenone formulation), signs can be removed 72 hours after the application is complete. For lentic applications > 0.09 ppm active rotenone (>1.8 ppm 5% rotenone formulation), signs can be removed following 24-hour bioassay demonstrating survival of bioassay sentinel fish or 14 days, whichever is less.

Monitoring and Notification Requirements for Water

Aquaculture: For treated water bodies used for aquaculture, the Certified Applicator or designee under his/her direct supervision must prohibit the restocking of fish unless monitoring samples confirm rotenone concentrations are below the level of detection for 3 consecutive samples taken no less than 4 hours apart. Detailed guidance for monitoring levels of rotenone in water is presented the Rotenone SOP Manual (SOP 16).

Drinking Water: For applications > 40 ppb or 0.04 ppm active rotenone (> 0.8 ppm 5% rotenone formulation) in waters with drinking water intakes or hydrologic connections to wells, 7 to 14 days prior to application, the Certified Applicator of designee under his/her direct supervision must provide notification to the party responsible for the public water supply or individual private water users against the consumption of treated water until: (1) active rotenone < 0.04 ppm as determined by analytical chemistry, or (2) fish of the Salmonidae or Centrichidae families can survive for 24 hours, or (3) dilution with untreated water yields a calculation that active rotenone is < 0.04 ppm, or (4) distance or travel time from the application sites demonstrates that active rotenone is < 0.04 ppm. See Rotenone SOP Manual (SOP 16) for guidance on notification and bioassay and chemical analysis techniques and dilution, distance, and travel time criteria.

Specifications to Control Spray Drift

RELEASE HEIGHT:

Spray must be released at the lowest height consistent with pest control and flight safety.

BOOM LENGTH:

The boom length must not exceed 75% of the wing span or 90% of the rotor blade diameter. Orient nozzles backward with minimal downward angle into slip stream.

SWATH ADJUSTMENT:

When applications are made with the cross wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind. Leave at least one swath unsprayed at the downwind edge of the treated area.

DROPLET SIZE:

Use low drift nozzles designed to produce larger spray droplets with fewer driftable fines. Apply as a medium or coarser spray (ASAE standard 572).

WIND SPEED:

Do not apply when wind speeds are > 12 miles per hour.

DETERMINING TREATMENT RATE

Use this product only at locations, rates, and times authorized and approved by appropriate State and Federal Fish and Wildlife Agencies. The actual treatment rate and rotenone concentration needed to control fish varies widely, depending on the type of water environmental factors including pH, temperature, depth, turbidity, and the target species. The tables below are a general guide for the proper rates and concentrations for complete kills of target species. The Certified Applicator must conduct bioassay using site water (or water of similar quality) and target species (or surrogate species of similar sensitivity) to refine the treatment rate with the maximum limit allowed. Detailed guidance bioassays and designing treatment for complete kills of target species are presented in the Rotenone SOP Manual (SOP 5). Rates must be within the range specified on the label.

FOR USE IN PONDS, LAKES, AND RESERVOIRS

The tables below are a general guide for the proper rates and concentrations. This product disperses readily laterally and vertically. For complete coverage, it is best to apply this material to water bodies that are not thermally-stratified. However, this material will eventually penetrate below the thermocline in thermally-stratified bodies of water.

Computation of Water Body Volume: To determine volume of any given body of water, make a series of transects across the body of water taking depths at regular intervals. Add the depths and divide by the number of measurements made to determine the average depth. Multiply this average depth by total surface area in order to determine the volume to be treated. Volume is expressed as acre-feet (AF) or cubic meters (m^3). Surface area can be determined by Global Positioning System (GPS) instrumentation and topographic maps. See Rotenone SOP Manual for further guidance.

Amount of Prenfish Toxicant Needed for Specific Uses: To determine the approximate number of gallons (or liters) needed, find your "Type of Use" in the first column of the tables below and then divide the corresponding numbers in the fourth column, "AF (or m^3) per Gallon (or Liter) Liquid" into the number of AF or m^3 in your body of water. For example, a normal use of 0.05 ppm active rotenone will require 33 gallons of 5% active rotenone liquid for 100 AF.

Table - Recommended rotenone treatment concentrations and number of acre-feet (AF) standing water covered by one gallon (5% A.I.) product. Adjust amount of product according to the actual rotenone content on Ingredient Statement on label.

Type of Use	Parts per Million (ppm)		AF per Gallon Liquid
	Product (5% A.I.)	Active Rotenone	
Normal	0.5 - 1.0	0.025 - 0.05	6.0 to 3.0
Tolerant Species	1.0 - 3.0	0.05 - 0.15	3.0 to 1.0
Tolerant Species in Organic Ponds	2.0 - 4.0	0.1 - 0.2	1.5 to 0.75

Table - Recommended rotenone treatment concentrations and number of cubic meters (m^3) standing water covered by one liter of (5% A.I.) product. Adjust amount of product according to the actual rotenone content on Ingredient Statement on label.

Type of Use	Parts per Million (ppm)		m^3 per Liter Liquid
	Product (5% A.I.)	Active Rotenone	
Normal	0.5 - 1.0	0.025 - 0.05	2000 to 1000
Tolerant Species	1.0 - 3.0	0.05 - 0.15	1000 to 333
Tolerant Species in Organic Ponds	2.0 - 4.0	0.1 - 0.2	500 to 250

Recommended Pre-Mixing and Method of Application: Pre-mix with water at a rate of 10% of product to site water. Uniformly apply over water surface or through underwater lines. Divide water body into manageable sections, delineated by marker buoys or flags or GPS coordinates, and treat within 48 hours to avoid deactivation. See Rotenone SOP Manual (SOP 8) for additional guidance.

Deactivation: Water treated with this product will deactivate (neutralize) under natural conditions within one week to one month depending upon temperatures, alkalinity, etc. Rapid deactivation can be accomplished by adding potassium permanganate to the water at the same rate as Prenfish Toxicant in parts per million, plus enough additional to meet the organic demand of the untreated water. See Rotenone SOP Manual (SOP 6 and 7) for guidance.

Restocking after Treatment: Typically, wait 2 to 4 weeks after treatment prior to restocking. 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 AND RIVERS

In order to treat a stream you must: (1) Select the concentration of active rotenone; (2) Compute the flow rate of the stream; (3) Select an exposure time; (4) Select dilution of product and calculation of application rate; (5) Estimate the amount of product needed; and (6) Follow the method of application. For practicality, flows > 25 ft^3/s (> 0.708 m^3/s) should have undiluted product applied, and flows < 25 ft^3/s (< 0.708 m^3/s) should have diluted product applied. For streams associated with a treatment of standing body of water, to prevent movement of fish from the pond, lake, or reservoir, the stream treatment should begin before and continue throughout treatment of the pond, lake or reservoir until mixing has occurred.

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RESTRICTED USE PESTICIDE

Due to acute inhalation, acute oral, primary eye and primary dermal toxicity and due to toxicity to fish and other aquatic organisms. 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.

PRENFISH TOXICANT

Liquid Emulsifiable Fish Toxicant

For Control of Fish in Lakes, Ponds, Reservoirs, and Streams

THE APPLICATOR IS RESPONSIBLE FOR CONFORMING TO THE LABEL. IMPORTANT GUIDANCE ON THE SAFE AND EFFECTIVE USE OF THIS PRODUCT IS PROVIDED IN THE *ROTENONE SOP MANUAL*, AVAILABLE FROM THE REGISTRANT OR THE AMERICAN FISHERIES SOCIETY AT www.fisheries.org/units/rotenone.

ACTIVE INGREDIENTS:

Rotenone	5.0% w/w
Cube Resins other than rotenone	5.0%
OTHER INGREDIENTS[1]	90.0%
[1] Contains Petroleum Distillates — Total	100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER - POISON

See additional Precautionary Statements below.

FIRST AID Have product container or label with you when obtaining treatment advice.	
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Do not give any liquid to the person. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor at for treatment advice.
	Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may contact 1-800-222-1222 for emergency medical treatment information. You may also contact the National Pesticide Telecommunication Network at 1-800-858-7378 for information including health concerns, medical emergencies or pesticide incidents.
	NOTE TO PHYSICIAN: Contains petroleum distillate. Vomiting may cause aspiration pneumonia. Symptoms of exposure include numbness, lethargy & incoordination. Decontamination, symptomatic and supportive treatment is recommended.

envincio

EPA Reg. No. 655-422
EPA Est. No. 655-GA-1

Manufactured By
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folder: 46807-2_Prentiss_655-422
colors: black
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created: CCL St. Louis
alt: 07-31-13 ek
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