

CUTRINE®-ULTRA

ALGAECIDE / HERBICIDE / CYANOBACTERIOCID

Pat. No. 5,407,899

EPA Reg. No. 8959-53

EPA Est. No. 42291-GA-1

**FOR USE IN LAKES – POTABLE WATER RESERVOIRS;
FARMS, FISH AND INDUSTRIAL PONDS; FISH HATCHERIES AND
RACEWAYS; CROP AND NON-CROP IRRIGATION CONVEYANCE
SYSTEMS: DITCHES, CANALS AND LATERALS**

ACTIVE INGREDIENTS:

COPPER AS ELEMENTAL.....*9.0%

INERT INGREDIENTS:.....91.0%

TOTAL:100.0%

CUTRINE-ULTRA contains 0.909 lbs. of elemental copper per gallon.

*From mixed Copper-Ethanolamine complexes in an emulsified formulation

**KEEP OUT OF REACH OF CHILDREN
DANGER**

FIRST AID	
If inhaled:	<ul style="list-style-type: none">- 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 on skin or clothing:	<ul style="list-style-type: none">- Take off contaminated clothing.- Rinse skin immediately with plenty of water for 15-20 minutes.- Call a poison control center or doctor for treatment advice.
If in eyes:	<ul style="list-style-type: none">- 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 swallowed:	<ul style="list-style-type: none">- Call a poison control center or doctor immediately for treatment advice.- Have person sip a glass of water if able to swallow.- Do not induce vomiting unless told to do so by a poison control center or doctor.- Do not give anything by mouth to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	

(See Additional Precautions on Back Panel)

NET CONTENTS : 2.5 GALLONS (9.46 Liters)



GENERAL INFORMATION

CUTRINE-ULTRA is a chelated copper formulation containing an emulsified surfactant/penetrant combination for highly effective control of coarse (thick cell-walled) filamentous algae, mucilaginous (colonial) planktonic algae, Chara and copper-sensitive vascular aquatic plants. **CUTRINE-ULTRA**, under field conditions, controls mat-forming, filamentous forms such as *Spirogyra*, *Cladophora*, *Hydrodictyon*, *Vaucheria*, *Ulothrix*, and *Lyngbya*; planktonic cyanobacteria such as *Anabaena*, *Aphanizomenon*, *Microcystis*, *Pseudanabaena*, *Oscillatoria*; and attached, bottom-growing forms such as *Chara*, *Nitella*, *Gleotrichia*. **CUTRINE-ULTRA** has also been proven effective in controlling the rooted aquatic plant, *Hydrilla verticillata*, *Egeria densa* and other copper-sensitive species. The ethanalamines in **CUTRINE-ULTRA** prevent the precipitation of copper with carbonates and bicarbonates in the water. Waters treated with **CUTRINE-ULTRA** may be used for swimming, fishing, drinking, livestock watering or irrigating turf, ornamental plants or crops immediately after treatment.

DIRECTIONS FOR USE

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

SURFACE SPRAY/INJECTION

ALGAEICIDE APPLICATION

For effective control, proper chemical concentration should be maintained for a minimum of three hours contact time. The application rates in the chart are based on static or minimal flow situations. Where significant dilution or loss of water from unregulated inflows or outflows occur (raceways) within a three-hour period, chemical may have to be metered in.

- Identify the algae growth present as one of the following types: Planktonic (suspended), Filamentous (mat-forming), or Chara/Nitella.
- Determine the surface acreage (1 acre=43,560 sq. ft.) and average depth of infested area.
- Refer to the chart below to determine gallons of **CUTRINE-PLUS** to apply per surface acre.

Application Rates
Gallons Per Surface Acre

ALGAE TYPE	PPM COPPER	DEPTH IN FEET			
		1	2	3	4
Planktonic	0.2 – 0.6	0.6 – 1.8	1.2 – 3.6	1.8 – 5.4	2.4 – 7.2
Filamentous	0.2 – 0.8	0.6 – 2.4	1.2 – 4.8	1.8 – 7.2	2.4 – 9.6
Chara/Nitella	0.4 - 1.0	1.2 - 3.0	2.4 - 6.0	3.6 - 9.0	4.8 - 12.0

Under conditions of heavy infestation or low oxygen levels, treat only 1/3 to 1/2 of the water body at a time to avoid fish suffocation caused by oxygen depletion from decaying algae. Before applying, dilute the required amount of **CUTRINE-ULTRA** with enough water to ensure even distribution with the type of equipment being used. For most effective results, apply under calm and sunny conditions when water temperature is at least 60°F. Break up floating algae mats before spraying or while application is being made. Use hand or power sprayer adjusted to rain-sized droplets or inject underwater in a manner to ensure even distribution of product.

Spray shoreline areas first to avoid trapping fish.

CUTRINE-PLUS Granular Algaecide may be used as an alternative in low volume flow situations, spot treatments or treatment of bottom-growing algae in deep water

HERBICIDE APPLICATION

CUTRINE-ULTRA:

Control of *Hydrilla verticillata*, *Egeria densa* and other copper-sensitive vascular aquatic plant species can be obtained from copper concentrations of 0.4 to 1.0 ppm resulting from **CUTRINE-ULTRA** treatment. Choose the application rate based upon stage and density of plant growth and respective water depth from the chart below.

Application Rates
Gallons/Surface Acre*

Growth/Stage Relative Density	PPM Copper	DEPTH IN FEET					
		1	2	3	4	5	6
Early Season Low Density	0.4	1.2	2.4	3.6	4.8	6.0	7.2
	0.5	1.5	3.0	4.5	6.0	7.5	9.0
Mid-Season Moderate Density	0.6	1.8	3.6	5.4	7.2	9.0	10.8
	0.7	2.1	4.2	6.3	8.4	10.5	12.6
Late Season/ High Density	0.8	2.4	4.8	7.2	9.6	12.0	14.4
	0.9	2.7	5.4	8.1	10.8	13.5	16.2
	1.0	3.0	6.0	9.0	12.0	15.0	18.0

* Application rates for depths greater than six feet may be obtained by adding the rates given for the appropriate combination of depths. Application rates should not result in excess of 1.0 ppm copper concentration within treated water.

CUTRINE®-ULTRA: REWARD®-TANK MIX*

On waters where enforcement of use restrictions for recreational, domestic and irrigation uses are acceptable, the following mixture can be used as an alternative *Hydrilla* control method.

Tank mix 3 gallons of **CUTRINE-ULTRA** with 2 gallons of **REWARD®**. Apply mixture at the rate of 5 gallons per surface acre. Dilute with at least 9 parts water and apply as a surface spray or underwater injection. Observe all cautions and restrictions on the labels of both products used in this mixture.

***REWARD®** is a trademark of Syngenta Corp.

PERMITS: Some states may require permits for the application of this product to public waters. Check with your local authorities.

DRIP SYSTEM APPLICATION

FOR USE IN POTABLE WATER AND IRRIGATION CONVEYANCE SYSTEMS

- CUTRINE®-ULTRA** should be applied as soon as algae or targeted, rooted vascular species begins to interfere noticeably with normal delivery of water (clogging of lateral head gates, suction screens, weed screens and siphon tubes). Delaying treatment could perpetuate the problem causing massing and compacting of plants. For heavy infestations and low flow conditions, increasing water flow rate during application may be necessary.
- Prior to treatment it is important to accurately determine water flow rates. In the absence of weirs, orifices, or similar devices, which give accurate water flow measurements, volume of flow may be estimated by the following formula:
Average Width (feet) x Average Depth (feet) x Velocity* (feet/second) x 0.9 =
Cubic Feet per Second (C.F.S.)

*Velocity is the time it takes a floating object to travel a given distance. Dividing the distance traveled (feet) by the time (seconds) will yield velocity (feet/second). This measurement should be repeated at least three times at the intended application site and then averaged.

- After accurately determining the water flow rate in C.F.S. or gallons/minute, find the corresponding **CUTRINE-ULTRA** drip rate on the chart below.

WATER FLOW RATE		CUTRINE-ULTRA DRIP RATE*		
C.F.S.	Gal/Min	Qts./Hr.	MI/Min.	FL.Oz./Min.
1	450	1	16	0.5
2	900	2	32	1.1
3	1350	3	47	1.6
4	1800	4	63	2.1
5	2250	5	79	2.7

- Calculate the amount of **CUTRINE-ULTRA** needed to maintain the drip rate for a period of 3 hours by multiplying Qts./Hr. x 3; ml/Min. x 180; or Fl. Oz./Min. x 180. Dosage will maintain 1.0 ppm Copper concentration in the treated water for the 3 hour period. Introduction of the chemical should be made in the channel at weirs or other turbulence-creating structures to promote the dispersion of chemical.
- Pour the required amount of **CUTRINE-ULTRA** into a drum or tank equipped with a brass needle valve and constructed to maintain a constant drip rate. Use a stopwatch and appropriate measuring container to set the desired drip rate. Re-adjust accordingly if flow rate changes during the 3 hour treatment period.
- Distance of control obtained down the waterway will vary depending upon density of vegetation growth. Periodic maintenance treatments may be required to maintain seasonal control.

GENERAL TREATMENT NOTES

The following suggestions apply to the use of **CUTRINE-ULTRA** as an algaecide or herbicide in all approved use sites.

For optimum effectiveness...

- Apply early in the day under calm, sunny conditions when water temperatures are at least 60°F.
- Treat when growth first begins to appear or create a nuisance, if possible.
- Apply in a manner that will ensure even distribution of the chemical within the treatment area.
- Re-treat areas if re-growth begins to appear and seasonal control is desired. Where fish are present, allow one to two weeks between consecutive total volume treatments or test for recovery of oxygen levels before re-treatment.
- Allow seven to ten days to observe the effects of treatment (bleaching and breaking apart of plant material).

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

CORROSIVE. Causes substantial but temporary eye damage. Causes skin burns. Do not get in eyes, on skin or clothing. Harmful if swallowed or absorbed through skin.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear long-sleeve shirt and long pants, socks plus shoes, goggles or face shield and rubber gloves.

USER SAFETY RECOMMENDATIONS: Users must wash hands before eating, drinking, chewing gum, using tobacco, or using toilet. Users must remove PPE clothing immediately after handling this product. Wash gloves outside before removing. As soon as possible, wash thoroughly and change into clean clothing. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENVIRONMENTAL HAZARDS:

This product may be toxic to trout and other species of fish. Fish toxicity is dependent upon the hardness of water and sensitivity of the fish species present. Do not use in water containing trout if the carbonate hardness of water does not exceed 50 ppm. Do not use in waters containing Koi and hybrid goldfish. Not intended for use in small volume, garden pond systems.

STORAGE & DISPOSAL:

Do not contaminate water, food or feed by storage or disposal. **PESTICIDE STORAGE:** Keep container closed when not in use. Open dumping is prohibited. **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, reconditioning or disposal in approved landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE: Neither the manufacturer nor the seller makes any warranty, expressed or implied concerning the use of this product other than indicated on the label. Buyer assumes risk of use of this material when such use is contrary to label instructions. Read and follow the label directions carefully.

© Applied Biochemists 2002 09/02