

# **DRIP SYSTEM APPLICATION**

## General Information

### 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 ethanolamines 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.

### 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).

Limitations, Restrictions, and Exceptions

## 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.

- 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.

For Water Flow Rate:

- 1-5 cu ft / second

- 450-2250 gal/min

Method

[Drip](#)

Rates

[field\\_rates 0](#)

[field\\_rates 1](#)

[field\\_rates 2](#)

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Timings

[As soon as algae or targeted, rooted vascular species begins to interfere noticeably with normal delivery of water.](#)