



**Phoenix**

ENVIRONMENTAL CARE

AQUATIC HERBICIDE

# Current®

**For use in Fresh Water Lakes, Potable Water Reservoirs, Ponds (including Golf Course Ponds), Fish Hatcheries, and Other Such Slow Moving or Quiescent Bodies of Water**  
*Water treated with Current may be used immediately after treatment for recreational activities.*

**Active Ingredient:**

Copper sulfate pentahydrate ..... 31.27%\*

**Inert Ingredients:**..... 68.73%

**Total** .....100.00%

\*8.0% elemental copper

One Gallon Contains 0.8 Pounds of Elemental Copper

## KEEP OUT OF REACH OF CHILDREN CAUTION

### FIRST AID

<b>IF SWALLOWED</b>	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.
<b>IF IN EYES</b>	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.
<b>IF ON SKIN OR CLOTHING</b>	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.
<b>IF INHALED</b>	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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-888-875-1724 for emergency medical treatment information.

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.**

**Phoenix Environmental Care, LLC**

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EPA Reg. No. 81943-1

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Avoid contact with skin and eyes. Wash thoroughly with soap and water after handling. Do not apply this product in a manner as to directly expose workers or other persons.

## ENVIRONMENTAL HAZARDS

This product may be toxic to fish. Trout and other species of fish may be killed at application rates recommended on this label. Generally, fish toxicity is reduced as water hardness increases. Consult State Fish and Game Agency before applying this product to public waters. Do not allow spray to drift.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store product in a cool dry place and in original container only. Keep container closed when not in use.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or 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 if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## DIRECTIONS FOR USE

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

## GENERAL INFORMATION

Current may be applied to fresh water lakes, potable water reservoirs, ponds (including golf course ponds), fish hatcheries and other such slow moving or quiescent bodies of water.

Weeds Controlled:

Brazilian Elodea (*Egeria densa*), Common Elodea (*Elodea canadensis*), Coontail (*Ceratophyllum demersum*), Hydrilla (*Hydrilla verticillata*), Southern/Northern Naiads (*Najas* sp.), Water Lettuce (*Pistia stratiotes*), and Water Hyacinth (*Eichhornia crassipes*).

Additional Weeds Controlled in Soft Waters:

Eurasian Watermilfoil (*Myriophyllum spicatum*), Sago Pondweed (*Potamogeton pectinatus*), and American Pondweed (*Potamogeton nodosus*).

Unless specifically prohibited by the mix partner label, Current may be tank mixed with fluridone, diquat, and endothal, as part of a broader spectrum weed control program (specific instructions for tank mixes are given in the directions for use). If a product is tank mixed with Current, the most stringent requirements of the Current and mix partner labels must be met.

Because Current works through absorption into the plant, it must be applied in a way that maximizes contact with the target aquatic weeds. Apply Current during periods of active weed growth to the leaf surfaces in areas of dense weed foliage. Algae and silt in the water column, or on the weed surfaces, will reduce the herbicidal effect of Current by competitively removing the product from the water column. Interference with Current's activity due to the presence of algae can be mitigated by tank mixing Current with a copper based algacide, such as Symmetry, or pre-treating the area with Symmetry.

Surface applications of Current may be made using a land-based sprayer, or spray boat. Weighted trailing hoses are recommended for subsurface applications. Where appropriate, Current can be applied as an invert emulsion, or as an admixture with a suitable polymer, (see specific instructions, and only select adjuvants approved for application in food crop production). In order to assure uniform coverage of the treated area, the applicator may use Current as an undiluted product or may make an initial dilution prior to application.

Because it must be adsorbed into the plant to be effective, applications of Current should be made when contact times of at least 12 to 24 hours can be obtained. Effective treatment is indicated by the submergence of target vegetation 3 to 7 days after treatment. If necessary, repeat applications of Current may be made. Applicator should wait 10-14 days before re-treatment. The full effect of the treatment will require up to six weeks after the initial effect is observed.

Solutions of Current with cupric ion concentrations in excess of 1.0 ppm may cause non target plant injury. Do not allow sprays to drift over crops, ornamentals, grass or other desirable plants. Observe all label restrictions.

Decomposition of dead plant material can result in dissolved oxygen depletion and subsequent fish kill. High water temperatures and dense weed infestation are exacerbating factors. To avoid excessive oxygen depletion and fish kill, treat no more than 1/2 of the water body at one time. Do not apply more Current than required for the treatment area, and allow 10 to 14 days before making application to the remaining portion of the water body. Avoid trapping fish between the shoreline and treatment areas by treating from the shore outward toward deeper, untreated water.

## WATER USE RESTRICTIONS

The residue of copper in potable water reservoirs must not exceed 1 ppm.

### Application Rates for Aquatic Weed Control or Suppression in Quiescent or Slow Moving Water\*

*Hydrilla verticillata* (Hydrilla) is controlled at application rates equivalent to 0.75 – 1.0 ppm Cu<sup>++</sup>.

Weeds suppressed at application rates ranging from 0.50 to 1.0 ppm Cu<sup>++</sup> are: *Egeria densa* (Brazilian Elodea), *Najas* sp. (Southern/Northern Naiads), *Ceratophyllum demersum* (Coontail), and *Elodea canadensis* (Common Elodea).

Weeds suppressed at application rates ranging from 0.75 to 1.0 ppm Cu<sup>++</sup> are: *Eichhornia crassipes* (Water Hyacinth), *Myriophyllum spicatum*\*\* (Eurasian Watermilfoil), *Pistia stratiotes* (Water Lettuce), *Potamogeton nodosus*\*\* (American Pondweed), and *Potamogeton pectinatus*\*\* (Sago Pondweed).

\* Light weed infestation allows use of lower rate, and high weed density requires higher rate.

\*\* Control can be obtained in low hardness waters.

## APPLICATION RATE CALCULATION

For large treatment areas it is most convenient to determine the surface area in acres and the average depth in feet.

The average depth is defined as the cumulative total of a series of depth measurements divided by the number of measurements made. The accuracy of the average will increase with increasing measurements.

The area of a rectangular treatment area is its length in feet times its width in feet, and the area of a circular treatment is the square of its radius (in feet) that is then multiplied by 3.14. The result of either calculation is area in square feet. This result is divided by 43,560 to give the area in acres.

The amount of material to be applied to this multi-acre site is calculated by using the following formula and the desired copper concentration:

$$\text{Target [Cu}^{++}\text{] (ppm) x Ave. Depth (feet) X Surface Area (acres) X 3.34 = Gallons of Current}$$

Table 1 provides the results of this calculation on a per acre basis for 1 to 10 foot average water depths in 1 foot increments for target copper concentrations of 0.5, 0.75, and 1.0 ppm.

**Table 1. Application Rate Data for Large Treatment Areas**

Average Water Depth of Treatment Site (feet)	Gallons of Current per Surface Acre to Achieve the Desired Copper Concentration		
	0.5 ppm	0.75 ppm	1.0 ppm
1	1.7	2.5	3.3
2	3.3	5.0	6.7
3	5.0	7.5	10.0
4	6.7	10.0	13.4
5	8.4	12.5	16.7
6	10.0	15.0	20.0
7	11.7	17.5	23.4
8	13.4	20.0	26.7
9	15.0	22.5	30.1
10	16.7	25.1	33.4

For smaller treatment areas it is more convenient to calculate the amount of Current necessary in terms of ounces per 1,000 square ft.

The raw surface area in square feet is divided by 1000 to give the number of thousand square foot increments and this value is entered into the following calculation.

$$\text{Target [Cu}^{++}\text{] (ppm) x Ave. Depth (feet) X Surface Area (1000 sq. ft.) X 10 = Ounces of Current}$$

Table 2 provides the results of this calculation on a per 1000 square feet basis for 1 to 10 foot average water depths in 1 foot increments for target copper concentrations of 0.5, 0.75, and 1.0 ppm.

**Table 2. Application Rate Data for Smaller Treatment Areas**

Average Water Depth of Treatment Site (feet)	Fluid Ounces of Current per 1,000 Square Feet to Achieve the Desired Copper Concentration		
	0.5 ppm	0.75 ppm	1.0 ppm
1	5.0	7.5	10.0
2	10.0	15.0	20.0
3	15.0	22.5	30.0
4	20.0	30.0	40.0
5	25.0	37.5	50.0
6	30.0	45.0	60.0
7	35.0	52.5	70.0
8	40.0	60.0	80.0
9	45.0	67.5	90.0
10	50.0	75.0	100.0

## METHODS OF APPLICATION

### SPRAY BOAT

**Surface Application:** Surface applications are appropriate for shallow depths of 4 feet or less.

**Subsurface Application:** Subsurface applications of Current are recommended for water depths exceeding 4 feet. Weighted trailing hoses should be set to deliver the recommended rate of Current over the leaf surfaces in zones containing dense foliage. Subsurface application can be used for direct or invert applications of Current. Avoid dragging the hoses on the bottom.

**Invert Application:** Tank mix or bi-fluid mixer techniques can be used to produce inverts with Current. Inverts are not suited for surface application and should only be applied subsurface through submerged, weighted trailing hoses. Do not drag hoses on the bottom.

The invert emulsion disperses into tiny adherent droplets which will deposit on submerged leaf surfaces and over time these droplets will break to release the herbicide in close proximity to the plant. The ideal invert emulsion will be heavier than water and will have a thick viscous consistency. It will deliver the product quickly enough to allow absorption, but not so fast as to be carried away from the application site.

Choose approved adjuvants before producing an invert emulsion with Current. Example invert preparations are provided below to serve as a guide only. Test the system to be used prior to application to ensure good results. The properties of the invert system can be modified through small adjustments to the component ratios.

**Table 3. Approximate Invert System Ratios**

Mixer System	Water (gallons)	Invert Oil (gallons)	Current (gallons)
Tank Mix	80	3	8
Bi-Fluid	60	3	16

Direct application of Current is preferable to invert application in areas of dense weed populations as a streaking effect may be observed following invert application in such cases. This effect is a result of localized control along the paths taken by the weighted hoses. Allow adequate time for Current to work, immediate reapplication of Current may not increase effectiveness.

**Polymer Application (Except CA):** Spray sinking, deposition, and retention may be improved by addition of a polymer to Current itself or to a dilution of Current in water. Follow the recommendations on the polymer product label governing the use of that product in aquatic weed control.

**SPRAY EQUIPMENT**

**Surface Application:** Surface applications are appropriate for shallow depths of 4 feet or less.

**Polymer Application (Except CA):** Use the recommended rate of sinking agent in spray solution of Current plus water. Make up the spray solution so as to apply Current at the recommended rate in a total volume of 100 to 400 gallons per acre. Agitation must be initiated prior to the addition of the polymer and maintained throughout the application. The polymer-Current mixture will have a stringy consistency and will cling to the aquatic weed surfaces. Applications to slow moving water should be made to the densest mass of foliage at a speed of 4 to 5 mph in a direction opposite to the water flow.

**TANK MIXING**

Unless specifically prohibited by the mix partner label, Current may be tank mixed with products containing the active ingredients fluridone, diquat, and endothall, as part of a broader spectrum aquatic weed control program. If a product is tank mixed with Current the more stringent requirements of the Current and mix partner labels must be met. Algae on plant surfaces will interfere with the action of Current aquatic herbicide. Improved control can be obtained in such cases by prior application of Symmetry. Table 4 gives example directions for tank mixes of Current with fluridone, diquat and endothall based products.

**Table 4. Example Tank Mixes for Current and Diquat, Endothall, and Fluridone Products**

Mix Partner	Amount Of Mix Partner	Amount of Current	Amount of Water	Additive	Rate	Application Method
1. Diquat (35.3%)	10 gal.	20 gal	100 gal	2 gal Nalquatic	20 gal/A	Surface Spray or subsurface injection
2. Endothall (40.3%)	15 gal	20 gal	100 gal	N/A	20 gal/A	Surface spray or subsurface injection
3. Fluridone (41.7%)	1.5 qt	20 gal	100 gal	N/A	20 gal/A	Surface spray or subsurface injection

Notes:

1: Weeds controlled by this tank-mix are: Bladderwort, Cattail, Common Elodea, Common Salvinia, Coontail, Curlyleaf Pondweed, Duckweed, Eurasian Watermilfoil, Floatingleaf Pondweed, Hydrilla, Leafy Pondweed, Pennywort, Richardson Pondweed, Sago Pondweed, Slender Naiad, Small Pondweed, Southern Naiad, Water Hyacinth, and Water Lettuce.

2: Weeds controlled by this tank-mix are: American Pondweed, Chara, Cladophora, Coontail, Najas Elodea, Pithophora, Potamogeton, Sago Pondweed, Spirogyra, Vallisneria, Watermilfoil, and Zannichellia.

3: Weeds controlled by this tank-mix are American Pondweed, Bladderwort, Brazilian Elodea, Common Duckweed, Common Elodea, Coontail, Fanwort (Cabomba), Naiad, Najas Elodea, Paragrass, Sago Pondweed, Spatterdock, and Watermilfoil.

**WARRANTY STATEMENT**

As the manufacturer, PHOENIX warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials or the manner of use or application, all of which are beyond the control of PHOENIX. To the fullest extent permitted by law, the manufacturer shall not be liable for consequential, special or indirect damages resulting from the use or handling of this product. PHOENIX MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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