

67690-9

8/14/2013

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL, SAFETY  
AND POLLUTION PREVENTION

Laurent Mézin  
SePRO Corporation  
11550 North Meridian St, Suite 600  
Carmel, IN 46032

MAR 14 2013

Subject: Labeling Amendment to CAPTAIN LIQUID COPPER ALGAECIDE  
EPA Registration No. 67690-9  
Decision No. 473339  
Submission Date: 12/6/12 and resubmission 3/5/13

Dear Dr. Mézin:

The master and supplemental labeling referred to above, submitted under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended to add directions for use for treating irrigation canals, and clarify retreatment intervals, is acceptable, provided you make the following change:

Master Label –

1. Pg 1 – in the “If swallowed” section of the first aid language, replace “o” with “to.”
2. Pg 9 – revise the following language “0.05 (6.4 ounces) to 0.55 (70 ounces)” to “0.05 (6.4 fluid ounces) to 0.55 (70 fluid ounces)”


Supplemental Label –

1. The following language must be added to pg 1 of the supplemental label, “It is a violation of Federal law to use this product in a manner inconsistent with its labeling.”
2. The following language must be added to pg 1 of the supplemental label, “Use of [product name] according to this labeling is subject to the use precautions and limitations imposed by the label affixed to the container for [product name].”
3. In the expiration statement, replace the “xx/xx/xxxx” date with the date three years from the date stamp of this letter.
4. Pg 2 – revise the following language “0.05 (6.4 ounces) to 0.55 (70 ounces)” to “0.05 (6.4 fluid

ounces) to 0.55 (70 fluid ounces)”

A copy of the master and supplemental labels stamped “Accepted with Comments” are enclosed for your records. Please submit one (1) final printed copy for the above mentioned labels before releasing the product for shipment. If you have any questions, please contact Dominic Schuler at (703) 347-0260 or via email at [schuler.dominic@epa.gov](mailto:schuler.dominic@epa.gov).

Sincerely,



(for)

Tony Kish  
Product Manager 22  
Fungicide Branch  
Registration Division (7504P)

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Captain®, 67690-9

[Front of label booklet, ALL containers]



# Captain®

## LIQUID COPPER ALGAECIDE

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

MAR 14 2013

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
67690-9

FOR USE IN STILL OR FLOWING AQUATIC SITES INCLUDING: GOLF COURSE, ORNAMENTAL, FISH, IRRIGATION AND FIRE PONDS AND AQUACULTURE INCLUDING FISH AND SHRIMP; FRESH WATER LAKES, PONDS, AND FISH HATCHERIES; POTABLE WATER RESERVOIRS, RIVERS, STREAMS, BAYS AND COVES; AND CROP AND NON-CROP IRRIGATION AND DRAINAGE SYSTEMS (CANALS, LATERALS AND DITCHES) AND CHEMIGATION SYSTEMS.

### Active Ingredient

Copper Ethanolamine Complex† (Mixed CAS#'s 82027-59-6 & 14215-52-2).....28.2%

Other Ingredients .....71.8%

TOTAL .....100.0%

†Metallic copper equivalent = 9.1%

## KEEP OUT OF REACH OF CHILDREN

### DANGER / PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call <b>INFOTRAC at 1-800-535-5053</b>.</p>	

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

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**Refer to inside of label booklet for additional precautionary information and directions for use including first aid and storage and disposal.**

**Notice:** Read the entire label before using. Use only according to label directions. **Before buying or using this product, read *Terms and Conditions of Use, Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies* inside label booklet.**

EPA Reg. No. 67690-9  
FPL20130305

EPA Est. No. \_\_\_\_\_  
[SPC-]\_\_\_\_\_

**SePRO Corporation 11550 N. Meridian Street, Suite 600, Carmel, IN 46032, U.S.A.**

**Algaecide**

**Net contents \_\_\_\_\_  
[Denote Refillable or Nonrefillable container]**

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[Label booklet text, ALL containers]

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**

**KEEP OUT OF REACH OF CHILDREN**

**DANGER / PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**Corrosive. Causes irreversible eye damage. Causes skin irritation. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Do not get in eyes, on skin, or on clothing. Avoid breathing mist or spray vapor. When handling, wear protective eyewear, clothing, and chemical-resistant gloves as described under the section of this label pertaining to Personal Protective Equipment (PPE). Wash skin thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.**

For applications in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm as metallic copper in any waters.

**FIRST AID**

<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
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<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call **INFOTRAC** at **1-800-535-5053**.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber ≥14 mils, or nitrile rubber ≥14 mils. If you want more options, follow the instructions for category A on an EPA chemical-resistant category selection chart.

**Mixers, loaders, applicators and other handlers must wear the following:**

- Coveralls worn over short-sleeved shirt and short pants;
- Socks and chemical resistant footwear;
- Chemical-resistant gloves (such as nitrile or butyl rubber);
- Protective eyewear (such as goggles, safety glasses, or face shield); and
- A chemical-resistant apron when mixing and loading or cleaning equipment.

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 material that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**USER SAFETY RECOMMENDATIONS****Users should:**

- Wash the outside of gloves before removing.
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic invertebrates. Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead algae and weeds. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than ½ of the water body to avoid depletion of oxygen due to decaying vegetation. Wait at least 10-14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State or local agency with primary responsibility for regulating pesticides before applying to public waters, to determine if a permit is required.

Certain water conditions including low pH ( $\leq 6.5$ ), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e. alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms. Do not use in waters containing trout or other fish species that are highly sensitive to copper if the alkalinity is less than 50 ppm. Fish toxicity generally decreases when the hardness of water increases. Captain must not be used in ornamental ponds containing Koi.

**DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read all directions for use carefully before applying this product. Use only according to label directions.

Do not apply this product in a way that concentrate will contact workers or other persons, either directly or through drift; only protected handlers may be in close proximity to the mixing area or application equipment while in use.

**Obtain Required Permits:** Consult with appropriate state or local pesticide and/or water authorities before applying this product in or around public waters. Permits and posting or treatment notification may be required by state, Tribal, or local public agencies.

## **PRODUCT INFORMATION**

Captain is a chelated copper formulation that is effective in controlling a broad range of green and blue-green (cyanobacteria) algae, including filamentous, planktonic and macrophytic. Captain is also an effective herbicide on submersed weed species with susceptibility to copper. The ethanolamines in Captain reduce the precipitation of copper with carbonates and bicarbonates in the water.

Use the lower concentrations/rates in softer water (<50 ppm alkalinity) or when treating species with greater susceptibility to Captain; use higher concentrations/rates in harder water (>50 ppm alkalinity) and when treating heavier infestations and/or less susceptible species.

### **Treatment Notes**

Performance of Captain is enhanced under certain conditions. It is recommended to consult a SePRO Aquatic Specialist for guidance in implementing a treatment program to achieve optimal results. The following apply to the use of Captain to achieve optimum effectiveness:

- Treat when growth first begins to appear (if possible) or when target vegetation is actively growing.
- Apply in a manner that will ensure even distribution of Captain within the treatment area.
- Use a high-pressure surface spray application to break up dense floating algal mats.
- In heavily infested areas, a second application may be necessary. Retreat areas if regrowth begins to appear or if seasonal control is desired. Repeating application of Captain too soon after initial application may have no effect.

### **Precautions and Restrictions**

- Do not apply Captain directly to, or otherwise permit it to come into contact with any desirable plants as injury may result.
- Do not apply in such a way that concentrated Captain comes in contact with crops, ornamentals, grass or other desirable plants.
- Wash spray equipment thoroughly before and after each application.
- Contents may cause bluing where marcite has been etched.

### **Spray Drift Management**

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

#### **Droplet Size**

Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

#### **Wind Speed**

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 250 feet downwind.

### **Temperature Inversions**

If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

### **Other State and Local Requirements**

Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

### **Equipment**

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

### **Additional requirements for aerial applications:**

- The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
- When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

### **Additional requirements for ground boom application:**

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

## **APPLICATION INFORMATION**

**For aquatic weed control (including algae and vascular plants), do not exceed a concentration of 1.0 ppm copper during any single application; wait a minimum of 14 days between retreatments. When treating aquaculture ponds when fish are present, do not exceed a concentration of 0.4 ppm during any single application when targeting nuisance algae; wait a minimum of 10 days between retreatments.**

### **Application Methods and Rates**

#### ***Surface Spray/Injection Algaecide Application***

For effective control, proper rates of Captain should be maintained for a minimum of three hours. The application concentrations/rates in Table 1 are based on static or minimal flow situations. Where significant dilution occurs from untreated waters or loss of water, within a three hour period, Captain may have to be metered in (refer to the *Drip System or Metering Pump Application for Flowing Water Treatments* section of this label).

Identify the algae growth present as one of the following types: planktonic (suspended), filamentous (mat-forming), or macrophytic algae (chara/nitella).

Determine the surface acreage (1 acre = 43,560 ft.<sup>2</sup>) and average depth of infested area. Refer to chart below to determine gallons of Captain to apply per surface acre.



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TABLE 1 Captain Application Rates (Gallons per surface acre)			
Algae Type or Species	Dose	Rates	Treatment Comments
	PPM Copper	Gallons per Acre Foot	
Planktonic (Suspended)	0.2 - 1.0 <sup>†</sup>	0.6 - 3.0	Apply lower rates for light infestations. Use higher rates on heavy blooms and where algae masses are clumped and accumulated.
Filamentous (Mat-forming)	0.2 - 1.0 <sup>†</sup>	0.6 - 3.0	Apply lower rates for early season applications, light infestations or treatment of regrowth. Apply higher rates on surface mats and species such as <i>Pithophora</i> , <i>Cladophora</i> , <i>Lyngbya</i> , and <i>Hydrodictyon</i> .
Macrophytic (Chara/Nitella/ Starry Stonewort)	0.4 - 1.0	1.2 - 3.0	Apply lower rates for new infestations or early season growth. Apply higher rates on older, established calcified plants. Apply as close to plant growth as possible.

<sup>†</sup> For planktonic and filamentous algae, Captain may be applied up to 1.0 ppm when growth conditions require higher rates and for difficult to control species.

For dense infestations of filamentous algae or where the species of *Hydrodictyon*, *Cladophora* or *Pithophora* are present, apply the higher rate in the rate range. Filamentous algae species are easier to control before floating to the water's surface (when they are forming on the pond/lake bottom). An adjuvant, such as d-limonene or similar surfactant, may be added for enhanced control of floating mats or difficult to control species of algae. Follow surfactant labeling instructions for application rates and use directions.

For planktonic (suspended) algae and free-floating filamentous algae mats, application rates should be based on treating to depths where algae are present (e.g. the upper 3 to 4 feet of water). For dense infestations and in certain other situations, it may be necessary to calculate rates based on the depth of known algae infestation (e.g. >4 feet) or require treating the entire water column in the target area. To calculate the application rate per surface acre, multiply the application rate in Table 1 (0.6 to 3.0 Gallon per Acre Foot) by the average depth of infestation, or average water depth if infestation reaches the entire water column.

As a surface or subsurface application, Captain may be applied diluted or undiluted, whichever is most suitable to ensure uniform coverage of the area to be treated. Dilution with water may be necessary at the lower application rates. Dilute the required amount of Captain with enough water to ensure even distribution in the treated area with the type of equipment being used. For best results, dilute Captain in water to provide a minimum spray mix of 20 to 50 gallons per acre; in areas with heavy infestations of filamentous algae, a total tank mix of >50 gallons per acre may be necessary; break up floating algae mats before spraying or while application is being made.

**Drip System or Metering Pump Application for Flowing Water Treatments  
For Use in Potable Water, Canals, Ditches, and Irrigation and Drainage Systems**

For optimal control, apply Captain as soon as algae begin active growth or interfere noticeably with normal delivery of water (clogging of lateral headgates, suction screens, weed screens, and siphon tubes). Delaying treatment could perpetuate the problem causing massing and

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compacting of plants. Heavy infestations and low flow may cause poor distribution resulting in unsatisfactory control. Under these conditions repeated applications or 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 waterflow measurements, volume of flow can be estimated by the following formula:

$$\text{Cubic feet per second (cfs)} = \text{average width (feet)} \times \text{average depth (feet)} \times \text{average velocity}^\dagger \text{ (feet/second)} \times 0.9$$

†The velocity can be estimated by determining the length of time it takes a floating object to travel a defined distance. Divide the distance (feet) by the time (seconds) to estimate velocity (feet/seconds). This measure should be repeated 3 times at the intended application site and then calculate the average velocity.

After accurately determining the water flow rate in cfs or gallons/minute, find the corresponding Captain rate in Table 2 or use the below formula.

$$\text{cfs} \times \text{desired concentration of copper (ppm)} = \text{quarts/hour of application}$$

TABLE 2 Captain Application Rates For Flowing Water				
Water Flow Rate		PPM Copper	Captain Rate	
CFS	Gal/min.		Quart/ hr.	mL / min.
1	450	0.2 - 1.0	0.2 - 1.0	3.2 - 15.7
2	900	0.2 - 1.0	0.4 - 2.0	6.3 - 31.5
3	1,350	0.2 - 1.0	0.6 - 3.0	9.5 - 47.3
4	1,800	0.2 - 1.0	0.8 - 4.0	12.6 - 63.0
5	2,250	0.2 - 1.0	1.0 - 5.0	15.8 - 78.5
10	4,500	0.2 - 1.0	2.0 - 10.0	31.5 - 157.7
100	45,000	0.2 - 1.0	20 - 100.0	315 - 1,577

Calculate the amount of Captain needed to maintain the drip rate for a treatment period of 3 hours by multiplying either:

**Quarts / hr x 3; Milliliters / Minute x 180; or Fluid ounces / Minute x 180.**

Rates will target 1.0 ppm copper concentration in the treated water for the treatment period. Lower concentrations may be used on highly susceptible algae species or if longer exposure times are maintained. Introduction of the chemical should be made in the channel at weirs or other turbulence-creating structures to promote the dispersion of the chemical. For injection periods longer than three hours (180 minutes), calculate the amount of Captain needed by multiplying the rate by the desired time in minutes or hours, as appropriate.

Use a drum or tank equipped with a valve or other volume control device that can be calibrated to maintain a constant drip rate. Use a stopwatch and appropriate measuring container to set the desired drip rate. Readjust accordingly if the canal flow rate changes during the treatment period. A small pump or other metering device may be used to meter Captain into the water more accurately. Application can be made using diluted or undiluted material.

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Results can vary depending upon species and density of algae and vegetation, desired distance of control and flow rate, and impact of water quality on efficacy. Periodic maintenance treatments may be required to maintain seasonal control. It is recommended to consult a SePRO Aquatic Specialist to determine optimal use rate, location of treatment stations and treatment period under local conditions.

**Slug Application Method for Flowing Irrigation Canals with no Functioning Potable Water Intakes**

Do not use this method of application in flowing canals with functioning potable water intakes at or downstream from the application site.

For optimal control, apply Captain as soon as algae begin active growth or interfere noticeably with normal delivery of water. Heavy infestations and low flow may cause poor distribution resulting in unsatisfactory control. Under these conditions repeated applications or increasing water flow rate during application may be necessary. Apply Captain into the irrigation canal or lateral at 0.05 (6.4 ounces) to 0.55 gallons (70 ounces) per CFS as a slug or dump application (see above for determining CFS). Depending upon water hardness, alkalinity, velocity and algae conditions, a slug application is typically required every 5 to 30 miles. High water hardness or alkalinity levels may require the use of higher rates within the rate range above to achieve control. When velocity levels are higher (>1 foot per second) distance between drop stations for slug applications can be increased.

**Chemigation System Application**

Captain may be applied for the maintenance of chemigation systems. To control algae in chemigation systems Captain should be applied continuously during water application. For continuous addition application apply 0.91 - 9.1 gallons of Captain per 1,000,000 (one million) gallons of water (0.3 - 3.0 gallons of Captain per acre-foot of water). This will produce a concentration of 0.1 to 1.0 ppm of copper. Do not exceed 1.0 ppm of copper or 0.91 gallons of Captain per 100,000 gallons of water. For additional guidance regarding specific calibrations or application techniques contact application equipment manufacturer, supplier, or pest control advisor. It is not necessary to agitate or dilute Captain in the supply tank before application to chemigation systems.

<b>TABLE 3</b>				
<b>Application Rates for Chemigation Systems</b>				
<b>Copper Concentration (ppm)</b>	<b>Amount of Captain</b>			
	<b>Per Acre-foot</b>		<b>Per Million Gallons</b>	
	<b>Gallons</b>	<b>Liters</b>	<b>Gallons</b>	<b>Liters</b>
0.1	0.3	1.1	0.9	3.4
0.2	0.6	2.3	1.8	6.8
0.3	0.9	3.4	2.8	10.6
0.4	1.2	4.5	3.7	14.0
0.5	1.5	5.7	4.6	17.4
0.6	1.8	6.8	5.5	22.8
0.7	2.1	7.9	6.4	24.2
0.8	2.4	9.1	7.3	27.6
0.9	2.7	10.2	8.3	31.4
1.0	3.0	11.3	9.1	34.4

## CHEMIGATION SYSTEM APPLICATION

- Apply Captain only through sprinkler and drip irrigation systems including: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; flood (basin), furrow, border or drip (trickle) systems.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact your SePRO Aquatic Specialist, State Extension Service, equipment manufacturer, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place (refer to the *Chemigation Systems Connected to a Public Water Supply* section of this label).
- A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. The injection system should be inspected, calibrated, and maintained before application of Captain begins.

### Chemigation Systems Connected to a Public Water Supply

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

### Sprinkler Chemigation Requirements

- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

### **Floor (Basin), Furrow and Border Chemigation Requirements**

- Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from back flow if water flow stops.
- Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
  - The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
  - The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
  - The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
  - The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
  - The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
  - Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### **Drip (Trickle) Chemigation Requirements**

- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### **Submersed Plant Control Applications**

Captain can be applied to control hydrilla (*Hydrilla verticillata*), egeria (*Egeria densa*), and other aquatic weeds with susceptibility to copper. Apply Captain at a rate to achieve 0.75 to 1.0 ppm copper (2.3 to 3.0 Gallons Captain/Acre foot). In heavily infested areas, a second application after the 14 day retreatment interval may be necessary.

### **Tank Mix Applications**

Captain can be tank mixed with other herbicides to improve efficacy; and to control algae in areas where heavy algae growth may cover target submersed plant species and interfere with herbicide exposure. Do not mix concentrates in tank without first adding water. To ensure compatibility, a jar test is recommended before field application. Captain must not be mixed with any product containing a label prohibition against such mixing and must be used in accordance with the more restrictive of the label limitations and precautions. No label dosage rates should be exceeded.

### **Hydrilla Control – Captain + Diquat Tank Mix**

Captain can be mixed with diquat (diquat dibromide) at 4 gallons Captain and 2 gallons diquat (Littora\*, Reward® - 2 lbs a.i./gallon) per acre. Lower rates of Captain may also enhance the activity of diquat. Captain should be applied at a minimum of 0.1 ppm in combination with diquat. Higher rates may be needed in areas with dense weeds.

### **STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store in a cool dry place. Do not store near feed or foodstuffs. In case of leak or spill, use absorbent materials to contain liquids and dispose in a manner consistent with the pesticide disposal instructions.

**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. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Handling**

**Nonrefillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Triple rinse containers too large to shake (capacity >5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**Triple rinse as follows:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

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**TERMS AND CONDITIONS OF USE**

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If terms of the following *Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies* are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, to the extent consistent with applicable law, use by the buyer or any other user constitutes acceptance of the terms under *Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies*.

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**WARRANTY DISCLAIMER**

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SePRO Corporation warrants that the product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SEPRO CORPORATION MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

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**INHERENT RISKS OF USE**

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It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of this product contrary to label instructions (including conditions noted on the label such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of SePRO Corporation or the seller. To the extent consistent with applicable law, all such risks shall be assumed by buyer.

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**LIMITATION OF REMEDIES**

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To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories) shall be limited to, at SePRO Corporation's election, one of the following:

- (1) Refund of purchase price paid by buyer or user for the product bought, or
- (2) Replacement of amount of the product used.

To the extent consistent with applicable law, SePRO Corporation shall not be liable for losses or damages resulting from handling or use of this product unless SePRO Corporation is promptly notified of such losses or damages in writing. In no case shall SePRO Corporation be liable for consequential or incidental damages or losses.

The terms of the *Warranty Disclaimer*, *Inherent Risks of Use*, and this *Limitation of Remedies* cannot be varied by any written or verbal statements or agreements. No employee or sales agent of SePRO Corporation or the seller is authorized to vary or exceed the terms of the *Warranty Disclaimer* or this *Limitations of Remedies* in any manner.

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Captain is a registered trademark of SePRO Corporation

Reward® is a trademark of Syngenta Group Company



[Base label for ALL containers]



# Captain®

## LIQUID COPPER ALGAECIDE

### Active Ingredients

Copper Ethanolamine Complex† (Mixed CAS#'s 82027-59-6 & 14215-52-2).....28.2%

Other Ingredients .....71.8%

**TOTAL** .....100.0%

†Metallic copper equivalent = 9.1%

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

### KEEP OUT OF REACH OF CHILDREN

### DANGER / PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

**Corrosive. Causes irreversible eye damage. Causes skin irritation. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Do not get in eyes, on skin, or on clothing. Avoid breathing mist or spray vapor. Do not get in eyes, on skin, or on clothing. When handling, wear protective eyewear, clothing, and chemical-resistant gloves as described under the section of this label pertaining to Personal Protective Equipment (PPE). Wash skin thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.**

For applications in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm as metallic copper in any waters.

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

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<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
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Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call **INFOTRAC at 1-800-535-5053**.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store in a cool dry place. Do not store near feed or foodstuffs. In case of leak or spill, use absorbent materials to contain liquids and dispose in a manner consistent with the pesticide disposal instructions.

**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. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Nonrefillable Container Handling:** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Then offer for recycling (if available) or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Refillable Container Handling:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**See attached booklet for complete container disposal directions including triple rinsing and pressure rinsing instructions.**

**Refer to label booklet for additional precautionary information and directions for use, including first aid and storage and disposal.**

**Notice:** Read the entire label before using. Use only according to label directions. **Before buying or using this product, read *Terms and Conditions of Use, Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies* inside label booklet.**

EPA Reg. No. 67690-9  
FPL20130305

EPA Est. No. \_\_\_\_\_  
[SPC-] \_\_\_\_\_

**SePRO Corporation 11550 N. Meridian Street, Suite 600, Carmel, IN 46032, U.S.A.**

**Algaecide**

**Net contents \_\_\_\_\_**

**[Denote Refillable or Nonrefillable container]**

## Supplemental Label



# Captain®

## LIQUID COPPER ALGAEICIDE

EPA Reg. No. 67690-9

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

MAR 14 2013  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
67690-9 *supplemental*

This supplemental label expires on xx/xx/xx and must not be distributed after this date.

**This supplemental labeling in addition to the product label on the container must be in the possession of the user at the time of application.**

Read the entire label affixed to the container and supplemental label before applying.

Attention: the updated label language includes the following:

### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic invertebrates. Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead algae and weeds. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than ½ of the water body to avoid depletion of oxygen due to decaying vegetation. Wait at least 10-14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State or local agency with primary responsibility for regulating pesticides before applying to public waters, to determine if a permit is required.

Certain water conditions including low pH ( $\leq 6.5$ ), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e. alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms. Do not use in waters containing trout or other fish species that are highly sensitive to copper if the alkalinity is less than 50 ppm. Fish toxicity generally decreases when the hardness of water increases. Captain must not be used in ornamental ponds containing Koi.

### **APPLICATION INFORMATION**

**For aquatic weed control (including algae and vascular plants), do not exceed a concentration of 1.0 ppm copper during any single application; wait a minimum of 14 days between retreatments. When treating aquaculture ponds when fish are present, do not exceed a concentration of 0.4 ppm during any single application when targeting nuisance algae; wait a minimum of 10 days between retreatments.**

**Slug Application Method for Flowing Irrigation Canals with no Functioning Potable Water Intakes**

Do not use this method of application in flowing canals with functioning potable water intakes at or downstream from the application site.

For optimal control, apply Captain as soon as algae begin active growth or interfere noticeably with normal delivery of water. Heavy infestations and low flow may cause poor distribution resulting in unsatisfactory control. Under these conditions repeated applications or increasing water flow rate during application may be necessary. Apply Captain into the irrigation canal or lateral at 0.05 (6.4 ounces) to 0.55 gallons (70 ounces) per CFS as a slug or dump application (see full label for determining CFS). Depending upon water hardness, alkalinity, velocity and algae conditions, a slug application is typically required every 5 to 30 miles. High water hardness or alkalinity levels may require the use of higher rates within the rate range above to achieve control. When velocity levels are higher (>1 foot per second) distance between drop stations for slug applications can be increased.

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FPL20130305

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