Applied Biochemists

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ACCEPTED
VIA NOTIFICATION
LABEL NOT REVIEWED

Nov. 5, 2019

New York State Department
of Environmental Conservation
Division of Materials Management
Pesticide Product Registration

Harpoon™

Classified for "RESTRICTED USE" in New York State under 6NYCRR Part 326

Aquatic Herbicide

FOR USE IN SLOW MOVING OR QUIESCENT BODIES OF WATER, INCLUDING GOLF COURSE, ORNAMENTAL, FISH AND FIRE PONDS; FRESH WATER LAKES, FISH HATCHERIES AND POTABLE WATER RESERVOIRS, CROP AND NON-CROP IRRIGATION CONVEYANCES (CANALS, LATERALS AND DITCHES).

This product is a chelated copper formulation that effectively controls listed species of the Hydrocharitaceae family including Hydrilla, Egeria (Brazilian Elodea), Naiads, Elodea, and Wild Celery. This product can also control Coontail, Water Lettuce, Water Hyacinth, Giant Salvinia, Common Salvinia, listed species of the Myriophyllum genus, and listed species of the Potamogetonaceae family.

ACTIVE INGREDIENT

COPPER –ETHYLENEDIAMINE COMPLEX*	
(CAS #13426-91-0)	23%
OTHER INGREDIENTS	77%
TOTAL	100%

*Metallic copper equivalent, 8.0%. One gallon contains 0.80 pounds of elemental copper.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Additional Precautions Inside Booklet

FIRST AID

If swallowed: 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.

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, and 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 for 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.

Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment.

In case of emergency call: 1-800-654-6911

NET CONTENTS:

☐ **30 GALLONS** (113.56 Liters)
SKU No. 395630A
5918095

0 38005 95615 2

☐ **265 GALLONS**
SKU No. 13265A
5918095

Sold By:
Applied Biochemists
1400 Bluegrass Lakes Pkwy
Alpharetta, GA 30004
1-800-558-5106

EPA Reg. No. 8959-54
EPA Est No. 42291-GA-1
EPA Est. No. 6836-PA-01
EPA Est. No. 1258-NY-004
EPA Est. No. 82299-GA-001

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION: Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. 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.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Mixers, loaders and applicators must wear:
Long-sleeved shirt and long pants, and shoes and socks.

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.

USER SAFETY RECOMMENDATIONS
Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. User should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should 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 to 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 include low pH (≤ 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.

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

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 these waters.

PHYSICAL OR CHEMICAL HAZARDS
This product is not compatible with other chemicals, e.g. strong oxidizers.

STORAGE & DISPOSAL:

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.
PESTICIDE STORAGE: Keep container closed when not in use. Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Do not reuse or refill container. Do not contaminate feed, feedstuffs, or drinking water. Do not store or transport near feed or food.

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.

Note: Always ensure application equipment has been cleaned and is in proper working condition before using this product. When application has been completed, thoroughly rinse spray tanks, hoses and or pumps with fresh water, disposing of diluted rinsate within the treatment area.

(For >5 gallon non-refillable containers only):
CONTAINER DISPOSAL: Nonrefillable container. Do not reuse container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ with water and recap. 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 container on its 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. Then offer for recycling or reconditioning if available or puncture and dispose of in approved landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Consult Federal, State or local authorities for approved alternative procedures.

{For 275 Gallon refillable container only}:
CONTAINER DISPOSAL: Refillable container. 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. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill container about 10 percent full with water. Agitate vigorously or recirculate water with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat rinsing procedure two more times. Then offer for recycling or reconditioning if available or puncture and dispose of in approved landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Consult Federal, State or local authorities for approved alternative procedures.

DIRECTIONS FOR USE

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

Spray Drift Management

A variety of factors including weather conditions (e.g., wind directions, wind speed, temperature, relative humidity) and the 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 15mph. 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 inversions 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.

For aerial application

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 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.

For groundboom application

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

PRODUCT INFORMATION

Pre-Treatment Considerations (All labeled sites):

Permits: Some states may require permits for the application of this product to public waters. Check with your local authorities. Water treated with this product can be used as a source of human and animal drinking water after further potable water treatment. Areas treated with this product may be used for fishing and swimming immediately after treatment.

For optimum results:

- This product should be applied early in the day under bright or sunny conditions when plants are actively growing and water temperatures are at least 60°F (15.5°C).
- Treat when growth first begins to appear or create a nuisance, if possible.
- Apply in a manner that will ensure even distribution of chemical within the treatment area.
- Reduced activity may occur in murky/shaded waters or where silt and/or scale has built up on plant leaf surfaces.

Algae growth and around target plants may interfere with uptake of this product. Pretreat these areas with **Cutrine® Plus** (EPA Reg. No. 8959-10) or other EPA registered algaecides. Do not exceed 1.0 ppm of total copper when using this product and Cutrine® Plus.

This product is a chelated copper formulation that effectively controls listed species of the Hydrocharitaceae family including Hydrilla, Egeria (Brazilian Elodea), Naiads, Elodea, and Wild Celery. This product can also control Coontail, Water Lettuce, Water Hyacinth, Giant Salvinia, and Common Salvinia. If the alkalinity (hardness) of the water is low; this product may also control Myriophyllum spp. such as Eurasian Watermilfoil; and listed species of the Potamogetonaceae family such as horned pondweed, sago pondweed, American pondweed, curlyleaf pondweed, and some floating leaf pondweeds. This product may be applied to slow moving or quiescent bodies of water, including lakes, fish hatcheries, potable water reservoirs, golf courses, and ornamental fish and fire ponds, crop and non-crop irrigation conveyances (canals, laterals, and ditches).

For broader spectrum aquatic weed control, this product may be tank mixed with other herbicides including diquat, fluridone and endothall. Refer to "Directions for Tank Mixes" for more information. Follow all precautions and guidelines on the labels of any product(s) used with this product.

Correct placement of this product is essential in order to provide acceptable penetration into plant tissues. Apply this product when weeds are actively growing, focusing on areas where the greatest concentration of foliage is located. Be certain to apply in such a way as to reach as much of the leafy surfaces as possible. The presence of silt or algae in the water or covering leaves can reduce the effectiveness of the application. In such cases, tank mixing this product with an algaecide, such as Cutrine® Plus (EPA Reg. No. 8959-10) may improve performance. Combined copper treatment must not exceed 1.0 ppm.

Application Methods: Equipment and methods should be used that accurately and efficiently apply product to target growth. This can include aircraft, sprayer, or spray boat equipment. Product can be applied as a subsurface injection, through weighted hoses, in an invert emulsion, or [1]mixed with a polymer, as appropriate (refer to specific instructions and use chemicals cleared for application to water and growing crops). To ensure uniform coverage of the area to be treated, this product may be applied diluted or undiluted in either a surface or subsurface application.

[1]Not for use in California

Effective control of treated weeds generally requires 12 to 24 hours contact time. Within 3 to 7 days following treatment, the aquatic weeds will drop below the surface of the water. This product may be re-applied in 10 to 14 days if suitable control is not achieved from the initial application. After they sink below the surface, it may take up to 6 weeks for the weeds to defoliate and decompose.

Apply only as directed on this label. Avoid contact of concentrated product with crops, ornamentals, grass or desirable plants. Injury may occur if undiluted this product or concentrations above 1.0 ppm of copper comes in contact with ornamentals, crops, grass, or other foliage. Do not exceed 1.0 ppm total copper.

For bodies of water containing fish treat only 1/3 to ½ of the water body at a time to avoid fish suffocation caused by oxygen depletion from decaying vegetation. To minimize this risk, wait 14 days before treating the remaining areas. Treatment should initiate along the shoreline and proceed outwards towards deeper water, to allow fish to move into untreated areas.

Application Rates for Aquatic Weed Control in Quiescent or Slow Moving Water

Light to Moderate Growth is defined as a treatment area where submersed plants have not reached the water surface ("topped out" and less than 65% of the bottom or water surface in the case of floating plants) is covered with target plants. Heavy Infestations is an area where submersed vegetation growth has reached the water surface and/or bottom growth or floating plants cover more than 65% of the treatment area. **Do not apply more than 1.0 ppm copper.**

Select low range rate for light to moderate growth and upper range rate for heavy infestations.

Table 1

Targeted Species In water of medium to high hardness:	Copper Level Required By Plant Density Low Density ppm Copper	 High Density ppm Copper
Hydrilla verticillata (Hydrilla)	0.75	1
Eichhornia crassipes (Water Hyacinth)	0.75	1
Pistia stratiotes (Water Lettuce)	0.75	1
Egeria densa (Brazilian Elodea)	0.5	0.75
Najas sp. (Southern/Northern Naiads)	0.5	1
Ceratophyllum demersum (Coontail)	0.5	1
Elodea canadensis (common Elodea)	0.5	1
The following should be treated only in water of low hardness: Low Hardness = Better defined as: Calcium Hardness less than 150ppm		
Myriophyllum spicatum (Eurasian Water milfoil)		0.75 - 1.0
Stuckenia pectinata (Sago Pondweed)		0.75 - 1.0
Potamogeton nodosus (American Pondweed)		0.75 - 1.0

Application Rate Calculation

Application Site Measurement (Lakes, Ponds, Reservoirs and Other Static or Low-Flow Waters): In lakes, reservoirs, ponds, and static canals, this label defines the application site as the location where this product is applied. Measure surface dimensions of the application site including length, width and average depth. Use the following formula to determine acre-feet:

Length (ft.) X Width (ft.) X Avg. Depth (ft.) / 43,560 = Acre-Feet

Accurate maps and electronic devices can aid in determining area measurements and depths of treatment areas. Multiply Application Rate (from the chart below), times Acre-Feet (or surface acres for floating plants) to determine volume of this product required.

(acre-ft.) X (gallons per acre-ft) = total gallons of this product required

Application Rates

ppm Copper desired	gallons per acre-ft
0.5 ppm	1.7
0.75 ppm	2.5
1.0 ppm	3.3

Example:
Pond dimensions: 200(ft) X 200(ft) X 4ft / 43560 = 3.67 acre-feet
To obtain 0.5 ppm of copper: (3.67 acre-ft) x (1.7gallons per acre-ft) = 6.24 gallons of this product required.

METHODS OF APPLICATION

1. APPLICATION USING SPRAY EQUIPMENT:

Surface: In shallow areas, such as along shoreline, this product can be effectively applied using backpack units or portable tank sprayers. Dilute this product with sufficient water to evenly and efficiently treat within the intended treatment area.

[1]Use with Polymer in Application: A sinking agent, approved for water and crops, can be mixed with this product. For each surface acre to be treated, prepare a solution using the correct rate of this product with water and the sinking agent to achieve a final application mix volume of 100 to 400 gallons. Blend the sinking agent into the herbicide mix following the agent's directions for use and maintaining continuous agitation while making application. The sinking agent will assist this product in reaching and adhering to the target plants. Applications are most effective when made on dense areas of growth and when applied moving slowly in opposite direction to the water flow.

[1]Not for use in California

2. SPRAY APPLICATION BY BOAT:

Surface: In shallow areas, such as along shorelines, boat-mounted tank-type power sprayers or portable water pumps equipped with appropriate dilution water and chemical intakes with calibration valves can be used to effectively apply this product through handheld spray wands or adjustable, tapered fire nozzles. Dilute this product with sufficient water to evenly and efficiently treat within the intended treatment area.

Subsurface Application: Applications in water depths of more than four feet are best made using a weighted trailing hose and applied where growth is most dense, to help assure contact with the foliage. Avoid dragging the hose through the bottom sediment.

[1]Polymer Application: If there is concern about extended contact time with the target plants, a polymer can be blended with this product or a premix of the herbicide and water. Manufacturer's directions and guidelines should be followed when using a polymer.

Invert Application: This product can be inverted using either tank mix or multi-fluid mixer techniques with invert oil approved for water and growing crops. For submersed plants, invert application should be made through weighted hoses dragged below the water surface. For heavy infestations, direct application is preferable. Care should be taken to prepare an invert emulsion to provide a heavy viscous consistency.

Suggested mixtures for invert application:
For Tank mix systems:
Three gallons of invert oil should be blended with 80 gallons of water and 8 gallons of this product.
Bi-fluid mixer systems:
Three gallons of invert oil should be blended with 60 gallons of water and 16 gallons of this product.

3. AIRCRAFT APPLICATION:

[1]Polymer Application: This product should be blended with a suitable polymer and applied at a rate of 20 gallons of total spray mix per surface acre. The polymer/herbicide blend must be continuously agitated during the application. Do not apply by aircraft when efficacy at depths below 4 ft. are required.

[1]Not for use in California

DIRECTIONS FOR TANK MIXES

Always refer to all product labels that will be used in the tank mix solution. Follow the mixing directions, product precautions and directions for use recommendations for each product. Do not mix this product with any other product if the label prohibits such mixtures. When using tank mixes, do not exceed the application rate of the product that is most restrictive. All mix example directions given below are calculated for application at rate of 20 gallons per surface acre. When algae is on or near target plants it may interfere with effectiveness of the treatment. Pretreat the algae in the affected area prior to conducting an herbicide tank mix. Pre-treatment with Cutrine® Plus (Reg. No. 8959-10) may improve control. If products are chemically compatible they may be tank mixed. Do not exceed 1.0 ppm copper when using this product and Cutrine® Plus, or any copper-based pesticide.

This product + Diquat dibromde (EPA No. 100-1091-8959). Helicopter applications may be done using mixes of 37.3% diquat and this product. Application can be made via surface spray or subsurface methods.

Species Treated:
Listed species of the Potamogetonaceae (Pondweeds) family, Hydrocharitaceae family, Pontaderiaceae (Waterhyacinth) family, Araceae (Water Lettuce) family, Lemnaceae family (Duckweed spp.), Haloragaceae family (Milfoils), Coontail, Giant Salvinia, Common Salvinia, Pennywort, Bladderwort, and Cattails.

MIX RATIOS: (Based on application rate of 20 gallons of tank mix per surface acre).

Water	100 gallons
This product	20 gallons
Diquat dibromide	10 gallons
Cutrine® Plus (Aquatic Algaecide)	2 gallons

This product + Endothall (EPA Reg. No. 70506-176). Application can be made via surface spray or subsurface methods.

Species Treated:
Listed species of the Potamogetonaceae (Pondweeds) family, Hydrocharitaceae family, Pontaderiaceae (Waterhyacinth) family, Araceae (Water Lettuce) family, Lemnaceae family (Duckweed spp.), Haloragaceae family (Milfoils), Coontail, Giant Salvinia, Common Salvinia, Pennywort, Bladderwort, and Cattails.

MIX RATIOS: (Based on application rate of 20 gallons of tank mix per surface acre).

Water	100 gallons
This product	20 gallons
Endothall	15 gallons

FLOWING WATER TREATMENT

DRIP SYSTEM/METERING PUMP APPLICATION

Effective aquatic plant control in flowing water (canals, ditches, laterals, etc.) is dependent upon maintaining suitable contact time with sufficient chemical concentrations. Other factors to consider include: type of growth present, degree of infestation, water temperature and weather conditions during and following treatment.

1. Prior to treatment, it is important to accurately determine **Water Flow Rates**. In the absence of weirs, orifices or similar devices which provide accurate water flow measurements, volume of flow may be estimated via the following formula:

Average Width (ft.) x Average Depth (ft.) x Velocity*(ft/sec) x 0.9 = Cubic Feet per Second (CFS)

Or

Water Flow Rate Gal/Min = Average Length (ft.) x Average Width (ft.) x Velocity*(ft/sec) x 0.9 x 7.5 Gallons/ Cubic Feet * 60 sec/min

*Velocity is the time it takes a floating object to travel a given distance. Dividing the distance traveled (ft) by the time (seconds) will yield velocity (ft/sec). Repeat measurement at least 3 times at the intended application site and use the average of these measurements.

2. Calculate volume of ditch, canal, lateral or receiving pond in cubic feet based upon water levels at the time of treatment by using the following formula:

Length (ft) x Average width (ft) x Average depth (ft) = Cubic Feet of Water

3. Calculate turnover time (the amount of time it takes for the water in the system to be replaced by new water). Convert to hours using the following formula:

$$\frac{\text{Canal Volume (ft}^3\text{)}}{\text{Flow Rate (CFS)}} \div 3600 = \text{Turnover Time (hrs.)}$$

After accurately determining the water flow rate in C.F.S. or gallons/minute, find the corresponding drip rate on Table 2.

Table 2.

WATER FLOW RATE		COPPER EDA PRODUCT DRIP RATE		
CFS	Gal/Min	Quarts/hour	mL/min	fl. oz./min
1	450	0.5 - 1.0	8 - 16	0.25 - 0.5

Calculate the amount of this product 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.
When this product is applied on irrigation ponds, for best control, hold water for a minimum of 3 hours before irrigating to ensure proper exposure of the targeted plants.

Pour the required amount of this product 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. Treatment period may have to be extended up to 6 hours in areas where control may be difficult due to high flows or significant growth. Periodic maintenance treatments may be required to maintain seasonal control.

NOTE: Use higher dosage range in cooler water (60°F - 70°F), under conditions of heavy growth and/or on matured plant growth. Lower dosage ranges may be used on maintenance control treatments, young plants and/or under minimal growth conditions in warmer waters (>70°F).

To calculate the total amount of this product required to maintain the drip rate in flowing water:

Based on the Water Flow Rates calculated in Step 1, select the Product Drip Rate from Table 2 and the Turnover Time calculated from Step 2, calculate the amount of product needed for water volume in treatment area.

THIS PRODUCT Required (qts) = Dosage Rate (qt/CFS/hr) x Flow Rate (CFS) x Turnover Time (hrs)

NOTE: Turnover Time is used for this calculation for total product needed by volume to be treated as it represents the time it takes for water to be replaced with new in the system. If turnover time is less than 3 hrs. substitute 3 hrs. into this calculation as this is the required contact/exposure time for efficacy.

4. For ditches, canals and laterals determine the number of drip/metering application sites required (based upon turnover time) by referring to the chart below:

Table 3.

TURNOVER TIME (Hrs)	NUMBER OF DRIP/METERING SITES
Less than 4.5	1
4.6 – 7.5	2
7.6 – 10.5	3
10.6 – 13.5	4
13.6 – 16.5	5

Sites where water is stored for a calculated retention time and are fed by a single input source will require a single dripper/metering system. Inflowing water should be treated at the appropriate dosage rate from Table 2 for the duration of the entire turnover time calculated in Section 3.

5. Calculate distance between drip/metering sites by using the following formula:

$$\frac{\text{Canal/Ditch/Lateral Length (ft)}}{\text{No. of Drip/Metering Sites}} = \text{Distance Between Drip/Metering Systems (ft)}$$

6. Calculate amount of this product required per **drip/metering** site by using the following formula:

$$\frac{\text{Total THIS PRODUCT Required (qts)}}{\text{No. of Drip/Metering Sites}} = \text{THIS PRODUCT Required Per Drip Metering Site (qts.)}$$

7. Calculate drip/metering duration per site by using the following formula:

$$\text{THIS PRODUCT Required Per Site (qts)} = \frac{\text{Drip Metering Duration (hrs) Per Site}}{\text{Dosage Rate (qt/CFS/hr) x Flow Rate (CFS)}}$$

8. Calculate Drip/Metering Rate by using the following formula to convert to oz./min or ml/min.

Flow Rate (CFS) x Drip Rate (qt/CFS/hr) x 0.533* = Drip Rate (oz/min.)

NOTE: 0.533 is a constant used to convert qt/hr to oz/min
METRIC CONVERSION: Drip Rate (fl. oz/min) x 29.57 = Drip Rate (ml/min)

Calibrate drip system, metering pump or similar dosage device to establish output rate determined in Step No. 8. This can be done using a watch with a second hand and a calibrated measuring cup, graduated cylinder or similar vessel.

If possible, calibrate all drip/metering devices prior to beginning actual treatment. Turn them on as simultaneously as possible, beginning with the device furthest upstream.

Begin with only the amount of product required at each site or record your start-up time and shut down drip/metering systems after the drip/metering duration time period determined in Step No. 7.

Results can vary depending upon plant species, density of vegetation, desired distance of control and flow rate, and impact of water quality on copper residues and efficacy. Consult with Applied Biochemists to determine optimal use rate and treatment period under local conditions. Retreatments may be required to maintain seasonal control.

WARRANTY

To the extent consistent with applicable law neither the manufacturer nor the seller makes any warranty, expressed or implied concerning the use of this product other than indicated on the label.
To the extent consistent with applicable law buyer assumes risk of use of this material when such use is contrary to label instructions. Read and follow the label directions.