



## Specimen Label

|        |       |                |           |
|--------|-------|----------------|-----------|
| COPPER | GROUP | NOT CLASSIFIED | HERBICIDE |
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# Harpoon® Granular Aquatic Herbicide

### Active Ingredient:

\*Copper Ethylenediamine Complex (CAS# 13426-91-0)..... 9.87%

Inert Ingredients: .....90.13%

Total .....100.00%

\*Harpoon contains 3.41% elemental copper equivalent to 1.36 lbs. per 40 lbs. of product

### 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 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.</li><li>• 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 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 by mouth 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>   |
| <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>   |
| HOTLINE NUMBER   |   |
| 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> . |   |
| <b>NOTE TO PHYSICIAN:</b> Probable mucosal damage may contraindicate the use of gastric lavage.  |   |

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## PRECAUTIONARY STATEMENTS

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### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER.** Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. 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.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

- Long-sleeve shirt;
- Long pants or coveralls;
- Shoes and socks;
- Chemical resistant gloves made out of any waterproof material; and
- Goggles or face shield.

#### 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 material that have been drenched or heavily contaminated with the 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.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS:

**Fish Advisory Statement:** This copper product is toxic to fish and aquatic organisms. Unlike most organic pesticides, copper is an element and will not break down in the environment and will therefore accumulate in sediment with repeated applications. Copper is a micronutrient, but its pesticidal application rate exceeds the amount of copper needed as a nutrient.

**Do not use in waters containing Koi and hybrid goldfish. Not intended for use in small volume, garden pond systems. Avoid treating waters with pH values <6.5, DOC levels >3.0, and alkalinity less than 50 ppm (e.g., soft or acid waters), as trout and other sensitive species of fish may be killed under such conditions if present.**

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## DIRECTIONS FOR USE

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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.

### PRODUCTION INFORMATION

This product is a chelated copper formulation that effectively controls Hydrilla, Egeria (Brazilian Elodea), Naiads, Coontail, Elodea, Water Lettuce, Water Hyacinth, Giant Salvinia, and other species having a sensitivity to copper absorption. In waters with low alkalinity (hardness), this product may also control Eurasian Watermilfoil and Horned, Sago, American, Curly-leaf, & 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 (excluding koi and hybrid goldfish) and fire ponds.

## **RESISTANCE MANAGEMENT**

Apply 40 pounds of product per acre-foot plant height (2.72 pounds active ingredient per acre-foot plant height).

Do not apply more than 320 pounds of product per acre-foot plant height per year (21.7 pounds active ingredient per acre-foot per year).

Do not apply more than 21.7 pounds active ingredient per acre-foot per year.

Do not make applications less than 14 days apart.

Water bodies or management units should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Water bodies or management units should be scouted after application to verify that the treatment was effective.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this of this product against a particular weed species to your local SePRO representative or call 1-800-419-7779. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further reproduction.

Implement the Early Detection, Rapid Response practice and Maintenance Control by using the following practices where possible:

- Identify weeds present in a management unit through scouting or history of the water body and understand the biology of target species.
- Applications should target weeds when populations are small and there is low biomass, early in the season to maximize efficacy.
- Applications should be made so that the herbicide contacts the weed. Use the appropriate application method for the use site/weed/chemical combination.
- Weed escapes should not be allowed to go to seed or produce asexual vegetative propagules.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple weed- control practices such as mechanical control, biological management practices, and rotation of mechanisms of action.
- Time applications to have the highest probability for control and minimize need for follow-up control measures. Apply during conditions that minimize herbicide degradation (light / temperature / microbes) and/or dissipation (water exchange).

### **Local resistant weeds:**

Contact your local SePRO sales representative, local water management agency, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed.

## **AQUATIC USES:**

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 biomass. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than ½ of the water body (excluding water infrastructure and constructed conveyances such as drainage canals, ditches and pipelines or intakes and aqueducts for drinking water or irrigation use) to avoid depletion of oxygen due to decaying vegetation. Wait at least 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. The application rates on this label are appropriate for water with pH values  $> 6.5$ , DOC levels  $> 3.0$  mg/L, and alkalinity greater than 50 mg/L. Avoid treating waters with pH values  $< 6.5$ , DOC levels  $> 3.0$ , and alkalinity less than 50 ppm (e.g., soft or acid waters), as trout and other sensitive species of fish may be killed under such conditions if present.

Consult your state department of natural resources or fish and game agency before applying this product to public waters. Permits may be required before treating such waters.

## **APPLICATION RESTRICTIONS:**

Do not apply this product in a way that will contact adults, children, or pets, either directly or through drift. Some states may require permits for the application of this product to public waters. Check with your local authorities. Do not enter or allow others to enter until application of product has been completed in the area.

## **PRE-TREATMENT CONSIDERATIONS:**

Injury may occur if concentrated Harpoon granules or treated water concentrations above 1.0 ppm of copper comes in contact with ornamentals, crops, grass, or other foliage.

**Pre-Application Dose Determination:** Aquatic plant treatments, applicators should conduct initial dose determination tests simulating a full-scale treatment program to determine the minimum efficacious concentrations for eliminating the target species, unless an effective dose is already known for the given target pest population.

## **HERBICIDE APPLICATION**

Quiescent or Slow Moving Water

### **SMALL AREA (SPOT) TREATMENT (under 5,000 sq. ft.)**

For treatment around small areas such as docks, rafts, water intakes, etc.

Apply product uniformly at the rates 2.0 lbs. product (29 oz.) per 1,000 square feet for each foot of plant growth height.

Example, use 4 lbs per 1,000 sq. ft. if plants are 2 foot tall or

0.068 lbs Cu (29 oz. product) per 1,000 square feet for each foot of plant growth height

Product may be applied with a hand scoop or spreader.

**Note:** In areas less than 1 ft. deep, reduce dosage by 2.4 oz. per inch of water per 1,000 sq. ft. so as to not exceed 1.0 ppm total copper.

## LARGE AREA TREATMENT (over 5,000 sq. ft.)

1. Identify form(s) of targeted submersed aquatic plants.
2. Estimate the targeted Plant Growth Height (in ft.) in the water column. This would be the distance from the base to the top of plants.
3. Calculate surface area (acres) of the treatment area (area of infestation) using the following formula:

$$\frac{\text{Length (ft)} \times \text{Width (ft)}}{43,560} = \text{Surface Acre}$$

4. Use either Dosage Rate of this product or pounds of copper needed to apply per Surface Acre based upon Plant Growth Height.

Surface Acres x Plant Height (ft) x lbs/Acre-ft Product = lbs Product required for treatment  
or

Surface Acres x Plant Height (ft) x Cu lbs/Acre-ft = lbs Cu required for treatment

**Table 1. Dosage Rate, Pounds of Product to Apply per Acre-ft based Plant Height\***

| Submersed (target) species (In water of medium to high hardness)   | ppm Copper | Per Plant Growth Height (from bottom) |                 |
|--|------------|---------------------------------------|-----------------|
|  |            | Product lbs/Acre-ft                   | Cu lbs/ Acre-ft |
| Hydrilla verticillata (Hydrilla)   | 0.75 -1.0  | 60 - 80                               | 2.04 – 2.72     |
| Egeria densa (Brazilian Elodea)  | 0.50 -0.75 | 40 - 60                               | 1.36 – 2.04     |
| Najas sp. (Southern/Northern Naiads)   | 0.50 -1.0  | 40 - 80                               | 1.36 – 2.72     |
| Ceratophyllum demersum (Coontail)  | 0.50 -1.0  | 40 - 80                               | 1.36 – 2.72     |
| Elodea canadensis (Common Elodea)  | 0.50 -1.0  | 40 - 80                               | 1.36 – 2.72     |
| <b>The following plants should only be treated in waters where calcium carbonate hardness is less than 150 ppm</b> |            |                                       |                 |
| Myriophyllum spicatum (Eurasian Watermilfoil)  | 0.75 -1.0  | 60 - 80                               | 2.04 – 2.72     |
| Potamogeton pectinatus (Sago Pondweed)   | 0.75 -1.0  | 60 - 80                               | 2.04 – 2.72     |
| Potamogeton nodosus (American Pondweed)  | 0.75 -1.0  | 60 - 80                               | 2.04 – 2.72     |

\*Select low range rate for Light to Moderate Growth and upper range rate for heavy infestations. 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 are areas where submersed vegetation growth has reached the water surface and/or bottom growth cover more than 65% of the treatment area.

5. Distribute this product evenly over the water surface directly over the targeted vegetation, adjusting rates based upon the height of the vegetation in the water column. A dry fertilizer spreader or blower may be used to ensure even distribution.

**Note:** Large area applications may require the use of more than one bag or container to achieve desired control.

## MAXIMUM ANNUAL APPLICATION RATES

### Direct treatment of whole waterbodies:

Maximum annual application rate of 21.9 lbs of metallic copper per acre-foot (8 applications per year at up to 1 ppm). This rate/frequency is calculated based on staggering the treatment of each half of the water body every 14 days (at a rate of 2.74 lbs metallic copper per acre-foot = 1 ppm) for eight months (244 days).

### Direct treatment to localized area of waterbody or water management units:

Maximum annual application rate of 46.6 lbs of metallic copper per acre-foot per year (17 applications per year at up to 1 ppm). This rate/frequency is calculated based on the maximum number of possible applications allowed based on a 14-day minimum (at a rate of 2.74 lbs metallic copper per acre-foot = 1 ppm) retreatment interval for eight months (244 days). Do not apply more than 46.6 lbs of metallic copper to a water management unit, regardless of the pest(s) targeted by applications.

### Pulse application method for controlling weeds in irrigation systems

Maximum annual application rate of 13 lbs metallic copper per year per 5 miles of conveyance per cubic foot per second (CFS). Apply copper into irrigation conveyance system or lateral at up to a maximum rate of 0.5 lbs metallic copper per cubic foot per second of water per 5 to 30-mile treatment depending on water hardness and alkalinity.

This method may only be used in constructed irrigation conveyance systems, laterals and aqueducts.

## OTHER TREATMENT CONSIDERATIONS

Confirm that target plants are either listed on this label or related to the listing provided. Not all aquatic plants are sensitive to this product.

- It may be necessary to test water hardness if there are trout present. Minimum water hardness is 50 ppm.
- Apply early in the day under calm, sunny conditions. This product works best when water temperatures are at least 60°F.
- Treat when and where growth first begins to appear or create a nuisance.
- Apply in a manner that will ensure even distribution of the chemical within the treatment area.
- Re-treat areas if re-growth begins to appear and seasonal control is desired. Allow one to two weeks between consecutive treatments.
- Allow seven to ten days to observe the effects of treatment (bleaching and breaking apart of plant material).
- Algae growth on and around target plants may interfere with the uptake of this product. Pre-treat these areas with Cutrine® Plus algaecide. Do not exceed 1.0 ppm of total copper when using this product in combination with copper-based algaecides.

## STORAGE & DISPOSAL

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

**PESTICIDE STORAGE:** Keep container closed when not in use. Keep pesticide in original container. Do not store or transport near feed or food.

**PESTICIDE DISPOSAL:** Wastes from use of this product must be used on site and according to use directions or disposed of at approved waste disposal facility.

### Container Handling

**Nonrefillable container (non-rigid, any size):** Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Offer for recycling if available. If recycling is not available, then dispose of empty bag in a sanitary landfill or by incineration if allowed by local authorities.

**Warranty Disclaimer:** SePRO Corporation warrants that this product conforms to the chemical description on the product label. Testing and research have also determined that this product is reasonably fit for the uses described on the product label. To the extent consistent with applicable law, SePRO Corporation makes no other express or implied warranty of fitness or merchantability nor any other express or implied warranty and any such warranties are expressly disclaimed.

**Misuse:** Federal law prohibits the use of this product in a manner inconsistent with its label directions. To the extent consistent with applicable law, the buyer assumes responsibility for any adverse consequences if this product is not used according to its label directions. In no case shall SePRO Corporation be liable for any losses or damages resulting from the use, handling or application of this product in a manner inconsistent with its label.

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