

HARPOON[®] GRANULAR

Aquatic Herbicide

For use in slow moving or quiescent bodies of water, including golf courses, ornamental, fish and fire ponds; fresh water lakes, fish hatcheries and potable water reservoirs. Areas treated with Harpoon[®] Granular Aquatic Herbicide may be used for fishing and swimming immediately after treatment.

Active Ingredient

*Copper Ethylenediamine Complex
(CAS# 13426-91-0.....9.87%
Inert Ingredients..... 90.13%
Total.....100.0%

*Harpoon[®] contains 3.41% elemental copper equivalent to 1.7 lbs per 50lbs 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.)

See Additional Precautions on Back Panel

Manufactured For:
Applied Biochemists
1200 Bluegrass Lakes Pkwy
Alpharetta, GA 30004
For product questions, call 1-800-558-5106

EPA Reg. No. 8959-55
EPA Est. No. 42291-GA-1

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FIRST AID

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, then continue rinsing the eye. Call a poison control center or doctor for treatment advice.

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. Do not give anything by mouth to an unconscious person.

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.

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.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. If a medical emergency arises contact Lonza Emergency Action Network in the US call 1-800-654-6911 or outside the US call 423-780-2970. For help with a spill, leak, fire or exposure involving this material call CHEMTREC 1-800-424-9300.

GENERAL INFORMATION

Harpoon® Granular 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), Harpoon® may also control Eurasian Watermilfoil and Horned, Sago, American, Curly-leaf, & Floating-leaf Pondweeds. Harpoon® Granular 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.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read entire label and use strictly in accordance with precautionary statements and directions.

GENERAL 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. Do not exceed 1.0 ppm total copper in treated water.

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 rate of 2.0 pounds (29 oz.) per 1,000 square feet for each foot of plant growth height. (for example, use 4 lbs per 1,000 sq. ft. if plants are 2 foot tall). **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:

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

4. Refer to Table 1 to determine lbs. of Harpoon Granular to apply per Surface Acre based upon Plant Growth Height.
5. Distribute Harpoon Granular 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. For small area (spot) treatments (see below), product may be applied with a hand scoop or spreader.

Table 1 Pounds of HARPOON® Granular to Apply per Surface Acre*				
Submersed (target) species (In water of medium to high hardness)	ppm copper	Plant Growth Height (from bottom)		
		1 ft.	2 ft.	3 ft.
Hydrilla verticillata (Hydrilla)	0.75 -1.0	60 - 80	120 - 160	180 - 240
Egeria densa (Brazilian Elodea)	0.50 -0.75	40 - 60	80 - 120	120 - 180
Najas sp. (Southern/Northern Naiads)	0.50 -1.0	40 - 80	80 - 160	120 - 240
Ceratophyllum demersum (Coontail)	0.50 -1.0	40 - 80	80 - 160	120 - 240
Elodea canadensis (Common Elodea)	0.50 -1.0	40 - 80	80 - 160	120 - 240
The following plants should only be treated in waters where calcium carbonate hardness is less than 150 ppm				
Myriophyllum spicatum (Eurasian Watermilfoil)	0.75 -1.0	60 - 80	120 - 160	180 - 240
Potamogeton pectinatus (Sago Pondweed)	0.75 -1.0	60 - 80	120 - 160	180 - 240
Potamogeton nodosus (American Pondweed)	0.75 -1.0	60 - 80	120 - 160	180 - 240

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. Do not apply more than 1.0 ppm copper.

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 Harpoon® Granular.
- It may be necessary to test water hardness if there are trout. Minimum water hardness is 50 ppm.
- Apply early in the day under calm, sunny conditions. HARPOON® Granular 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).
- Under conditions of heavy infestation, treat only 1/3 to 1/2 of the water body at a time to avoid fish suffocation caused by oxygen depletion from decaying algae.
- Algae growth on and around target plants may interfere with the uptake of HARPOON® Granular. Pre-treat these areas with Cutrine® Plus algaecide. Do not exceed 1.0 ppm of total copper when using HARPOON® Granular in combination with copper-based algaecides.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Wear: Long-sleeved shirt and long pants, socks, shoes, and gloves.

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.

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
- 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. Users 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. Wash outside of gloves before removing.

ENVIRONMENTAL HAZARDS:

This pesticide is toxic to fish and aquatic invertebrates. Water 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 including 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 hazardous to 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 does not exceed 50 ppm. **Do not use in waters containing Koi and hybrid goldfish. Not intended for use in small volume, garden pond systems.**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

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: Pesticide wastes are acutely hazardous. Open dumping is prohibited. Improper disposal of excess pesticide 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.

CONTAINER DISPOSAL:

Completely empty liner or bag by shaking sides and bottom to loosen clinging particles. Empty residue into application equipment, then dispose of liner in a sanitary landfill or by incineration, if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in same manner.