



ALGAE

Algaecide / Herbicide
Residual Control

FOR USE IN: LAKES; POTABLE WATER RESERVOIRS;
SWIMMING AREAS; FARM, FISH, INDUSTRIAL,
GOLF COURSE, ORNAMENTAL AND IRRIGATION
PONDS; CROP AND NON-CROP IRRIGATION
CONVEYANCE SYSTEMS; CANALS, DITCHES,
AND LATERALS; FISH HATCHERIES.
FOR LISTED ALGAE & WEED CONTROL

ACTIVE INGREDIENT

*Copper Sulfate Pentahydrate 19.8%

OTHER INGREDIENTS:..... 80.2%

TOTAL 100%

KEEP OUT OF REACH OF CHILDREN
CAUTION

EPA Reg. No. 72536-3-87370 EPA Est. 88802-FL-001

Distributed By:

BioNova Corp.

7300 North Kendall Drive, Suite 521

Miami, FL 33456

Net Contents: 1 GALLON (128 oz.)



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 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 or doctor. 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. [You may also contact 1-800-255-3924 for emergency medical treatment information.]

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER

Corrosive: Causes irreversible eye damage. Do not get in eyes or on clothing. Wear goggles or safety glasses when handling. Harmful if swallowed, inhaled, or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Avoid contact with skin. Wash thoroughly with soap and water after handling. As with all chemical applications, apply best management practices to avoid unnecessary contact with concentrate or spray mixture. For 24-hour assistance or information regarding spill, leak, fire, or exposure to this product, please call Chem-Tel at 1-800-255-3924.

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 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.

Do not contaminate water when disposing of equipment wash waters (See disposal instructions). Consult your local State Fish and Game Agency before applying this product to public waters. Permits may be required before treating such waters.

Potable Water: 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. Do not allow water containing in excess of 1 ppm copper derived from Pond20 Algae to flow into any water to be used as potable water.

Terrestrial Plants: Do not apply this product in its concentrated form directly to any crop plants, grass, or ornamental plants as injury may result.

APPLICATION AND HANDLING

This product is corrosive to cotton fabrics. Do not allow clothing to come in contact with concentrate or dilution. Application, handling, or storage equipment **MUST** consist of fiberglass, PVC's, polypropylenes, viton, most plastics, or stainless steel. Never use mild steel,

nylon, brass, or copper around full strength Pond20 Algae. Wash spray equipment after each application.

DIRECTIONS FOR USE

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

Permits for the use of this product in public water may be required. Check with local authorities.

STORAGE AND DISPOSAL

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

Pesticide Storage: Pond20 Algae is a concentrate and must be stored in its original container or handled and stored as outlined above (please see "APPLICATION AND HANDLING"). Do not allow Pond20 Algae to freeze; freezing may cause product separation. Seller makes no warranty for performance of the product that has been frozen.

Keep container closed when not in use. In case of a spill, neutralize with limestone or baking soda before disposal. May deteriorate concrete.

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.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Triple rinse all containers prior to disposal and then offer for recycling, if available, or puncture and dispose of in an approved manner, or dispose by incineration if allowed by local and state authorities. If disposal is by incineration, stay out of smoke.

Triple rinse 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 $\frac{1}{4}$ 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.

GENERAL INFORMATION

Pond20 Algae is effective in controlling a broad range of algae including: Chara, Spirogyra, Cladophora, Ulothrix, and Oscillatoria.

In addition, Pond20 Algae is effective in controlling rooted and floating aquatic plants such as Hydrilla, Potamogeton sp., and Water Hyacinth.

The formulation of Pond20 Algae protects against the precipitation of copper with carbonates and bicarbonates in the treated water and results in increased time of exposure for true residual activity. In addition, this formulation allows for application at any time - including overcast/cloudy conditions as well as during night-time hours.

For best results, apply when livestock water consumption is low or watering area is not in use.

ALGAECIDE APPLICATION

Pond20 Algae can be applied by pouring the correct amount into the water with thorough mixing, as a surface spray, or by injection (with thorough mixing). For effective control, the proper chemical concentration should be maintained for a minimum of three hours duration to assure adequate uptake.

The application rates in the chart below are based on static or low flow conditions. When significant dilution occurs from inflow of untreated waters within the three-hour period the chemical may need to be metered. (See drip system application)

- * Identify the algae growth present as one of the following: planktonic, filamentous, or Chara.
- * Determine the surface area and average depth to be treated.
- * Refer to the chart below to determine gallons of Pond20 Algae to apply per surface acre.

CHART 1
Application Rates
Gallons per Surface Acre

Algae Type	ppm Copper	Average Depth in Feet			
		1 ft.	2 ft.	3 ft.	4 ft.
Planktonic	0.2	1.0 gal.	2.2 gal.	3.2 gal.	4.3 gal.
Filamentous	0.2	1.0 gal.	2.2 gal.	3.2 gal.	4.3 gal.
Chara	0.4	2.2 gal.	4.4 gal.	6.6 gal.	8.8 gal.

For planktonic algae and free floating filamentous algal mats, application rates should be based on treating the upper 3 - 4 feet of water where the algae is growing. If fish population is present and algae growth is heavy in treatment area, treat only 1/2 to 1/3 of the water body at a time to avoid potential fish kill by oxygen depletion. In areas of heavy growth, plan your treatment to avoid trapping fish in coves or enclosed areas.

Before application, dilute the Pond20 Algae with sufficient water to ensure even application to the affected area. For quickest results, apply when conditions are calm and sunny. However, this product can be applied whenever weather allows or during night time hours. A hand or power sprayer may be used. Treat shoreline areas first and then continue treatment, as needed, into main water body.

For algacide application in waters used for livestock and other agricultural uses: For water holding or storage tanks, stock watering ponds, tanks, and troughs, apply ¼ fluid ounce of Pond20 Algae per 250 gallons of water (8 milliliters per 1,000 liters) to achieve the desired 0.4 PPM (mg/L) of copper for algae control. Product can be simply added to the water column (body of water) as the residual control will allow for even distribution throughout the water column. Where existing algae mats are present at time of treatment, most effective control will be obtained by breaking up mats and/or evenly dispersing diluted Pond20 Algae over the algae mats. Apply Pond20 Algae as needed to control and prevent algae growth; more frequent applications may be needed in times of higher water temperatures.

DETERMINE VOLUME OF TANK, TROUGH OR POND WATER TO BE TREATED. Measure length (L), width (W), and average depth (D) in feet (ft.) or meters (m) and calculate volume using one of the following formulas:

*For square or rectangular tanks, troughs and ponds:

$$L(\text{ft.}) \times W(\text{ft.}) \times D(\text{ft.}) \times 7.5 = \text{Gallon}$$

$$L(\text{m}) \times W(\text{m}) \times D(\text{m}) \times 1000 = \text{Liters}$$

*For circular or elliptical tanks, troughs and ponds:

$$L(\text{ft.}) \times W(\text{ft.}) \times D(\text{ft.}) \times 5.9 = \text{Gallons}$$

$$L(\text{m}) \times W(\text{m}) \times D(\text{m}) \times 786 = \text{Liters}$$

HERBICIDE APPLICATION

For rooted and submerged plants

Control of many rooted and submerged plants such as Hydrilla and Potamogeton can be obtained from use of Pond20 Algae to give copper concentrations at 0.4 – 1.0 ppm. Choose the application rate dependent upon the density and stage of growth and the water depth from the chart below.

Application Rates

Gallons per Surface Acre

Growth stage	ppm	Average Depth in Feet			
Relative Density	Copper	1	2	3	4
(Low Density)					
Early Season	0.4	2.2 gal.	4.4 gal.	6.6 gal.	8.8 gal.
(Moderate Density)					
Mid Season	0.7	3.8 gal.	7.6 gal.	11.4 gal.	15.2 gal.
(Heavy Density)					
Late Season	1.0	5.4 gal.	10.8 gal.	16.2 gal.	21.6 gal.

Application rates for depths greater than 4 feet may be obtained by adding the rates above to give the proper depth. Do not exceed a copper concentration of 1.0 ppm copper in the treated water.

FOR WATER HYACINTH CONTROL

The following mixture can be used as a control method for water hyacinth and other floating aquatic vegetation (Effective eradication requires stronger rates and/or mixtures with other herbicides - please call for specific information).

Mix 1 gallon of Pond20 Algae per 7 gallons of water. Apply this solution as a coverage spray to thoroughly wet all exposed vegetation. In areas of heavy infestation, multiple applications may be required. Applications may be repeated after 7-day intervals. Non-ionic adjuvants should be used with this product to improve dispersion and/or adhesion.

DRIP SYSTEM APPLICATION FOR FLOWING WATER

Pond20 Algae should be applied as soon as algae or plants begin to interfere with normal or desired water uses. Heavy infestations and flows may cause poor chemical distribution resulting in unsatisfactory control. Under these conditions, continuous feed systems offer advantage.

Prior to treatment, it is important to determine the water flow rates. In the absence of weirs or flow determining devices for this information, water flow may be estimated as shown below.

Avg. Width X Avg. Depth X Velocity in feet/sec. X 0.9 = CFS(Cubic Feet/Second)

Velocity is the time it takes for a floating object to move a given distance. This measurement should be made as the average of at least three determinations taken at the treatment location.

Calculate the drip rate of Pond20 Algae from the chart below (based on heavy algae growth).

Water Flow Rate		Pond20 Algae drip rate		
CFS	Gal./Min.	Qts./Hr.	ML/Min.	Fl. Oz./Min.
1	450	2.0	32	1.1
2	900	4.0	64	2.2
3	1350	6.0	94	3.3
4	1800	8.0	125	4.2
5	2250	10.0	157	5.5

Calculate the amount of Pond20 Algae needed to maintain the drip rate for a period of 4 hours by multiplying Qts./Hr. by 4, ML/Min. by 240, or Fl. Oz/Min. by 240. This dosage will maintain the copper level at 1.0 ppm for 4 hours (to be used as a general reference rate to control heavy algae growth). Effective control of most algae species can be obtained with copper levels between .5 – 1.0 ppm maintained for 4 - 6 hours. The chemical must be introduced at a point of turbulence.

Place the required amount of Pond20 Algae into a tank equipped with a needle valve and set the drip rate as required using a stop watch and a measuring tube. Readjust as required if flows change. Distance of control will vary. Treatment points should be determined in the field and placed at the required intervals for control. Periodic maintenance treatments may be required.

For Drip-system use in Livestock Watering Tanks: Tanks fed by a continuous flow of spring or well water may be equipped with a chemical drip system designed to meter-in Pond20 Algae based upon water flow rates. Systems should be adjusted to maintain a concentration of 0.4 PPM (mg/L) copper in incoming stock water. Pre-dilute Pond20 Algae 100:1 with water (a 1% solution) and calibrate metering valve to establish a drip rate of 1 fl. oz./min. per 10 gal./min. water flow rate or 40 ml/min. per 50 L/min. water flow rate. Treat continuously or as needed to control and prevent algae regrowth.

GENERAL TREATMENT NOTES

The following suggestions apply to the use of Pond20 Algae as an algaecide or herbicide:

- * The product works best at temperatures at or above 60 degrees F.
- * Treat when growth first appears or nuisance is first noted.
- * Apply in a manner to insure even distribution in the treatment area.
- * Retreat as required. Allow 1 to 2 weeks between treatments.
- * Formula for water-column treatment when water volume is known: Gallons of Pond20 Algae needed X 50,000 = Gallons of water to be treated X Desired ppm of treatment.

Conversion factors: cubic feet X 7.48 = gallons

one acre/foot = 326,000 gallons (one acre = 43,560 square feet)

To calculate number of gallons or liters:

For square or rectangular bodies of water: $L(\text{ft.}) \times W(\text{ft.}) \times D(\text{ft.}) \times 7.5 = \text{Gallons}$

$L(\text{m}) \times W(\text{m}) \times D(\text{m}) \times 1000 = \text{Liters}$

For circular or elliptical bodies of water: $L(\text{ft.}) \times W(\text{ft.}) \times D(\text{ft.}) \times 5.9 = \text{Gallons}$

$L(\text{m}) \times W(\text{m}) \times D(\text{m}) \times 786 = \text{Liters}$

LIMITED WARRANTY AND LIMITATION OF REMEDIES

Seller warrants that the product conforms to the chemical description and is reasonably fit for the purposes stated on the label for use under normal conditions, but makes no other warranties of FITNESS OR MERCHANTABILITY expressed or implied, or any other warranty if the product is used contrary to the label instructions or under abnormal conditions not foreseeable to the seller. To the extent consistent with applicable law, in no case shall the seller be liable for more than the cost of the product to the buyer, and will in no event be liable for any consequential, special or indirect damages connected with the use or handling of this product. This product is offered and the buyer or user accepts it subject to the forgoing terms, which may not be varied.

Sold by:

Bionova Corp.
7300 North Kendall Drive
Suite 521
Miami, Florida 33456

Is it important to know which type of algae or weed is in my pond?

YES. Certain types of algae require a more concentrated treatment than others. It is important to know exactly which type of algae you are treating to ensure that you do not over treat or under treat your pond. Examples of the different types of algae can be found below. Refer to this label and attached insert for appropriate use rates.

ALGAE



PLANKTONIC ALGAE: Microscopic growth often visible as a greenish tinge suspended in the upper few feet of water. Severe blooms may resemble peas soup and actually thicken the water.



FILAMENTOUS ALGAE: Individual filaments a series of cells joined end to end that give a thread-like appearance. Often referred to as pond scum or moss. Forms surface "mats". Growth begins at the bottom and rises to the surface as a bubble-filled mass. May also form fur-like growths on logs and rocks at the bottom.



CHARA ALGAE (Chara vulgaris): Leaf-like structures whorled around hollow stem. Dense growth attached, but not rooted to bottom. May "carpet" large areas of a lake or pond bottom. Strong musky odor when crushed. May have a gritty texture due to mineral deposits on the surface. Do not confuse with higher weeds.

SUBMERSED WEEDS



HYDRILLA (Hydrilla verticillata): Leaves whorled in groups. Hydrilla leaves have a serrated edge. Whorls of leaves are compact near the growing tips. Spacing between whorls increases further down the stem.



PONDWEED (Potamogeton species): Leaves are stiff, narrow and thread like. Stems branched with leaves alternately attached. Spreading leaves resemble a fan with an overall bushy appearance. Nutlets appear like beads on a string. Tiny green flower appears on a spike along with nutlets above the water surface.