



# ALGAECIDE

Controls Algae and Cyanobacteria in potable water reservoirs, ponds, lakes, irrigation conveyance systems, ditches, canals, & laterals

Manufactured for:  
Arch Chemicals, Inc.  
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Alpharetta, GA 30004  
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EPA Reg. No. 7364-9-1258  
EPA Est. No. 42291-GA-001

## SPECIMEN LABEL

This specimen label is intended as informational purposes only and not for use as container labeling.

SCAN TO VIEW ON YOUR MOBILE PHONE



## ACTIVE INGREDIENTS:

Chelates of copper gluconate (CAS# 527-09-3).....12.5%  
Chelates of copper citrate (CAS# 10402-15-0).....12.9%

**OTHER INGREDIENTS**.....74.6%

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

**Contains 5% copper, 0.512 lbs. of copper per gallon (62 g/l)**

KEEP OUT OF REACH OF CHILDREN

## CAUTION

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.)

**Read Entire Label Before Using This Product**

## PRODUCT INFORMATION

This product is a liquid, water soluble copper formulation designed to effectively control a broad range of algae and cyanobacteria growth in potable water sources including reservoirs, lakes, ponds and related water conveyance systems. Citric and gluconic acids in the formulation provide added chemical stability to the copper when used in alkaline waters. Control of certain forms of algae and cyanobacteria in these water sources can aid in the reduction of taste and odor problems associated with 2-methylisoborneol and geosmin production from these organisms. Dosage rates and frequency of treatment should be based upon the sensitivity of species present, the extent/biomass of the bloom and the depth of the growth present in the water column.

## 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.

## 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.

Per NSF criteria, maximum usage level of this product in potable waters is 9.2 mg/L (0.46 ppm metallic copper.)

**Pre-Treatment Considerations:** Consult your proper state authorities such as Dept. of Natural Resources, Fisheries Commission, Health Dept. or Environmental Agency to obtain necessary permits. Initial treatment with this product should be considered at the onset of nuisance bloom conditions as evidenced by initial taste and odor complaints; high cell counts or chlorophyll *a* concentrations; high MIB or geosmin concentrations; visible surface scum formations; low Secchi disk readings; significant daily fluctuations in dissolved oxygen; and/or sudden increases in pH. Monitoring of several of these parameters on a regular basis will assist in optimizing the timing of treatments and reducing the amounts of this product needed for seasonal control. Identification of primary nuisance species or genera may also be helpful in determining and refining dosage rates.

**Identify Target Organism(s):** If target species or genera are known, determine dosage from Table 1 for the corresponding organism(s) and the level of growth present. If multiple target organisms are present, select the higher rate. If positive identification cannot

be made, treatment rates should be determined based upon the algae growth form as indicated in Table 2.

**Calculate Volume of Water to be Treated:** Treatment volume should be calculated based upon the surface area and depth of growth. Surface mats of filamentous algae often extend underwater and may be attached to bottom substrates. Similarly, planktonic cells are dispersed within the water column depending upon light or temperature conditions. Measure Average Depth of Growth at several locations within the targeted treatment area and calculate Volume of Water to be Treated as follows:

$$\text{Avg. Length (ft.)} \times \text{Avg. Width (ft.)} \times \text{Avg. Depth of Growth} = \text{Cubic Feet of Water}$$

$$\frac{\text{Cubic Feet of Water}}{43,560} = \text{Acre-Feet}$$

-or-

$$\text{Cubic Feet of Water} \times 7.48 = \text{Gallons}$$

Note: 1 acre foot = 326,000 gallons

**Determine Dosage Rate:** Use the PPM Copper Concentration selected from Table 1 or Table 2 to determine Dosage Rate from Table 3.

**Table 1. PPM COPPER REQUIRED FOR CONTROL OF SOME GENERA OF ALGAE AND CYANOBACTERIA WITH THIS PRODUCT**

(Use lower range concentrations in soft waters where algae growth is light to moderate. Use higher range concentrations in moderate to hard waters where algae growth is moderate to heavy.)

0.06 to 0.12 ppm	0.12 to 0.25 ppm	0.25 to .40 ppm	0.40 to 0.5 ppm	0.6 to 0.75 ppm
Anabaena Microcystis Aphanizomenon Fragilaria Spirogyra Ulothrix Uroglena	Ceratium Euglena Microspora Oscillatoria Synedra Tabellaria Zygnema	Chlorella Cymbella Haematococcus Palmella Phormidium Cladophora	Ankistrodemus Pithophora Chara Nitella Pandorina Scenedesmus Hydrodictyon	Desmidiium Eudorina Nostoc

**Table 2. PPM COPPER REQUIRED FOR CONTROL OF ALGAE GROWTH FORMS/BIOMASS (Abundance) WITH THIS PRODUCT**

(Use the following concentrations in areas where algae genera have not been positively identified. Use lower concentration in soft waters and higher range concentrations in moderate to hard waters.)

Abundance	Growth Form	
	Planktonic	Filamentous
Light	0.06 - 0.12	0.2 - 0.3
Moderate	0.12 - 0.25	0.3 - 0.5
Heavy	0.30 - 0.40	0.4 - 0.5
Severe	0.50 - 1.00	0.6 - 1.0

**Table 3. Dosage Rate (Gallons)**

ppm copper	0.06	0.10	0.12	0.20	0.25	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
Per Acre-Foot	0.32	0.53	0.64	1.06	1.33	1.59	2.13	2.66	3.19	3.72	4.25	4.78	5.31
Per Million Gallons	0.97	1.63	1.96	3.26	4.08	4.89	6.52	8.15	9.78	11.4	13.0	14.7	16.3

Total Quantity of this product required can be determined by multiplying Dosage Rate times Total Volume of Water to be Treated. Do not exceed 1.0 ppm copper dosage rate.

## METHOD OF APPLICATION:

### For Reservoirs, Lakes, Ponds:

If treated water is destined for use as drinking water, the applied metallic copper must not exceed 1 ppm.

- For best results, begin applications early in the season when algae and/or cyanobacteria problems become evident and water temperature above 60°F or 15.6°C.
- Before applying, dilute this product with enough water to ensure even distribution with the type of equipment being used. Break up floating mats of filamentous algae or scum formations before spraying or while application is being made.
- Use rain-sized droplets (0.5 mm or larger) for spraying surface algae mats and cyanobacterial scum formations. Subsurface injection should be used where growth extends into deeper water. This product will disperse within the water column, however, apply as evenly as possible throughout the target area.
- Spray shoreline areas first to avoid trapping fish. In areas of heavy infestation, treat only one-third to one-half of the water volume at one time to avoid fish suffocation caused by oxygen depletion from decaying algae. Allow sufficient time between treatments to allow for oxygen recovery as indicated by D.O. measurements in the water column. In regions where ponds freeze in winter, treatment should be done six (6) to eight (8) weeks before expected freeze time to prevent masses of decaying algae under an ice cover.

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.

## GENERAL TREATMENT FACTORS AND CONSIDERATIONS:

The following suggestions apply to the use of this product as an algaeicide or cyanobactericide in all labeled sites:

- Begin applications early in the day under calm, bright conditions when water temperatures are at least 60°F (15.5°C).
- Treat when growth first begins to appear and create a nuisance, if possible.
- Apply in a manner that will ensure even distribution of the chemical within the treatment area.
- Re-treat areas if regrowth begins to appear and seasonal control is desired. Allow dissolved oxygen levels to recover between consecutive treatments.
- Visible reduction in algae growth should be observed in 24 to 48 hours following application with full effects of treatments sometimes taking 7 – 10 days depending upon algae forms, weather, degree of infestation and water temperatures.
- Before applying, dilute this product with enough water to ensure even distribution with the type of equipment being used. Break up floating mats of filamentous algae or scum formations before spraying or while application is being made.
- Use rain-sized droplets for spraying surface algae mats and cyanobacterial scum formations. Subsurface injection should be used where growth extends into deeper water. This product will disperse within the water column, however, apply as evenly as possible throughout the target area.
- Spray shoreline areas first to avoid trapping fish.
- Allow sufficient time between treatments to allow for oxygen recovery as indicated by D.O. measurements in the water column.
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## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### Hazards to Humans and Domestic Animals

**CAUTION:** Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear long sleeved shirt, long pants, shoes, and socks.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

- Long-sleeve shirt
- Long pants
- Shoes and socks
- Gloves

#### 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. 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 ( $\leq 6.5$ ), 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 water containing trout if the carbonate hardness of water does not exceed 50 ppm. Do not use in water containing Koi and hybrid goldfish. Not intended for use in small volume, garden pond systems.

## FIRST AID

#### If Swallowed:

- Call a poison control center 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 a doctor.
- Do not give anything by mouth to an unconscious person.

#### If in eyes:

- Hold eyelids open and rinse slowly with water for 15 – 20 minutes.
- Remove contact lenses if present after 5 minutes then continue rinsing eye.
- Call 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 poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center, doctor, or going for treatment.

#### IN CASE OF EMERGENCY CALL 1-800-654-6911

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. Measure against circulatory shock, respiratory depression and convulsions may be needed.

## APPLICATION AND HANDLING EQUIPMENT

Application, handling or storage equipment must consist of either, fiberglass, PVC's, polypropylenes, Viton, most plastic, aluminum or stainless steel. Never use mild steel, nylon, brass or copper around full strength of this product. Always rinse equipment free and clean of this product each night with plenty of fresh, clean water. Concentrate will destroy cotton and nylon materials. Seller makes no warranty for the performance of product that has been frozen.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE STORAGE:** Keep pesticide in original container. Keep container closed when not in use. Do not contaminate feed, feed-stuffs, or drinking water. Store at temperatures above 32°F. This product will freeze. Keep away from galvanized pipe and nylon storage handling equipment. If container is damaged, place the container in a plastic bag. In the event of a spill, neutralize with limestone or baking soda before disposal. Concentrate 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 container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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. 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.