



Drip-Rite™ 4000

Algaecide / Bactericide*

For lakes, ponds, reservoirs, canals,
and other water systems (*Non Public Health)

Active Ingredients:

Copper sulfate pentahydrate * 20%

Inert Ingredients:..... 80%

Total 100%

* Metallic copper equivalent = 5.0% CAS# 7758-99-8

EPA Reg. No. 65109-1-48498

EPA Est. No. 48498-CA-1

**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 the label, find someone to explain it to you in detail).

**See inside booklet for complete
Precautionary Statements, Directions for Use,
and Storage and Disposal instructions.**

Manufactured by:



Creative Marketing & Research, Inc.
P.O. Box 35000 • Fresno, CA 93745
(559) 499-2100

0105/0409(03)

FIRST AID

IF IN EYES:	<ul style="list-style-type: none">• 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.• Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• 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 SWALLOWED:	<ul style="list-style-type: none">• 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 the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF INHALED:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth, if possible.• Call a poison control center or doctor for treatment advice.
Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER – CORROSIVE. Causes irreversible eye damage. Do not get in eyes or on clothing. Harmful if swallowed, inhaled or absorbed through skin. May cause allergic skin reactions. Avoid contact with skin.

Personal Protective Equipment (PPE):

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Protective eyewear
- Shoes plus socks

Some materials that are chemical-resistant to this product are nitrile and polyvinyl chloride. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables are given, 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.
- 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 and Aquatic Organisms: 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 hazard, do not treat more than 1/2 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. In regions where ponds freeze in winter, treatment should be done 6 to 8 weeks before expected freeze time to prevent masses of decaying algae under an ice cover. 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), increase potential acute toxicity to non-target aquatic organisms. Trout and other species of fish may be killed at application rates recommended on the label, especially in soft or acidic waters as described above. Do not contaminate water when disposing of equipment wash-waters or rinsate.

Endangered Species Restrictions: It is a violation of Federal law to use any pesticide in a manner that results in the death of an endangered species or adverse modification of their habitat. The use of this product may pose a hazard to certain federally designated endangered species known to occur in specific areas of the following counties and their respective states: Lawrence, Wayne, Hancock, Claiborne, Hawkins, Sullivan (TN); Lauderdale, Limestone, Madison (AL); Grayson, Smyth, Scott, Washington, Lee (VA). To protect listed species in California, contact your County Agricultural Commissioner or refer to the Department of Pesticide Regulation's PRESCRIBE Internet Database: <http://www.cdpr.ca.gov/docs/endspec/precint.htm>

NON-FLAMMABLE. DO NOT FREEZE

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. 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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

APPLICATION AND HANDLING EQUIPMENT

Application, handling or storage equipment MUST consist of either fiberglass, PVCs, polypropylenes, most plastics, or stainless steel. Never use mild steel, nylon, brass, aluminum or copper around, or to store or handle full strength Drip-Rite 4000. Always rinse equipment free and clean of Drip-Rite 4000 each night with plenty of fresh clean water. Always store Drip-Rite 4000 above 32°F. Freezing may cause product separation. Seller makes no warranty for the performance of product which has been frozen.

GENERAL INFORMATION

Drip-Rite 4000 is an innovative unique formulation used for the suppression of bacterial odors and toxic gases in ponds containing organic matter. This product may also be used to control algae and bacteria in irrigation reservoirs, ponds, and potable water supplies. In still waters, Drip-Rite 4000 has a vertical dispersion rate of 20 feet per hour and a horizontal dispersion rate of 25 feet per hour. In flowing waters, dispersion is faster depending on turbulence and velocity of flow. Do not apply more than 1.0 ppm metallic copper.

Note: Effectiveness of Drip-Rite 4000 decreases as the alkalinity increases and is significantly reduced when the alkalinity exceeds approximately 150 ppm as CaCO_3 . As alkalinity increases, application rates towards the higher end of stated use ranges may be required.

Do not apply Drip-Rite 4000 to water less than 40 ppm alkalinity without first doing a preliminary toxicity test on fish in the water. Perform this test in a separate container. Drip-Rite 4000 may be very toxic to trout and other species in soft or acidic waters. This preliminary testing is necessary.

For potable water systems: If the impounded water is a source of potable water or for potable water systems or for livestock watering systems, do not exceed one gallon in 60,000 gallons under any circumstances (1 ppm metallic copper). Potable water sources treated with copper products may be used as drinking water only after proper additional potable water treatments. (Review General Algae Control Section of this label before proceeding).

If Drip-Rite 4000 is to be sprayed:

- DO NOT apply during temperature inversions.
- Apply only when wind velocity favors on-target deposition (approximately 3 to 10 mph).
- DO NOT apply if wind velocity exceeds 15 mph.
- Use only medium or coarse spray nozzles in ground booms or hand sprayers.

GENERAL ALGAE CONTROL

For algae control, apply in late spring or early summer when algae first appear. The dosages are variable and depend upon algae species, water hardness, water temperature, amount of algae present, as well as whether water is clear, turbid, flowing or static. Preferably, the water should be clear with temperatures above 60 degrees F (15.6 degrees C). Higher dosages are required at lower water temperatures, higher algae concentrations and hard waters. Effective control of most algae species can be obtained with copper levels between 0.2 – 1 ppm metallic copper. Application should be done by pouring or spraying Drip-Rite 4000 DIRECTLY FROM THE CONTAINER INTO THE LAKES, PONDS, and RESERVOIRS OR IRRIGATION CANALS. Several application points speed up dispersal. In irrigation canals, the preferred application is via the Drip Irrigation and Injection instructions contained on this label. Static water requires less chemical for algae control than does flowing water. Use higher dosages to control chara, nitella, and filamentous algae (pond scum) and lower dosages to control planktonic algae. If there is uncertainty about the dosage, begin with a lower dose and increase until control is achieved or until the maximum allowable level has been reached. Do not apply more than 1.0 ppm metallic copper.

Before treating bodies of water, consult proper state authorities such as the Fisheries Commission or Conservation Department to obtain any necessary permits. NOTE: If treated water is to be used as a source of potable water, the metallic copper residual must not exceed 1 ppm.

Calculations For The Amount (Volume In Cubic Feet) Of Water Impounded: If the amount of water to be treated is unknown, calculate water volume as follows: (1) Obtain surface area by measuring of regular shaped ponds or mapping of irregular ponds or by reference to previously recorded engineering data or maps. (2) Calculate average depth by sounding in a regular pattern and taking the mean of these readings or by reference to previously obtained data. (3) Multiply surface area in feet by average depth in feet to obtain cubic feet of water volume. (4) Alternatively, multiply surface area in acres by average depth in feet to obtain total acre/feet of water. (5) For circular or elliptical shaped bodies of water, volume can be obtained by multiplying 3.14 X the radius of the body of water squared (radius X radius) X the average depth [(2) above].

Calculation of Water Flow in Ditches, Streams, and Irrigation Systems: In ditches, streams, and canal type irrigations systems, the amount of water flow in cubic feet per second is found by means of a weir or other measuring device. Multiply the water volume in cubic feet times 7.5 to obtain gallons. If no weir or other measuring device is available, water flow and volume can be estimated as: Average width X Depth X Velocity in feet/second = Cubic Feet Per Second (CFS). Velocity can be determined by the time it takes for a floating object to move a given distance. This measurement should be made three to four times and the results should be averaged. Note: 1 C.F.S./hour = 27,000 Gallons.

Calculate Gallons of Water to be Treated as Follows: (1) To find the capacity of a water storage containment or impounded waters in gallons, multiply the water volume in cubic feet times 7.5. or (2) if Acre/feet calculations were used multiply Acre/feet by 326,000 to obtain total gallons of water. (3) For flowing water measure in Cubic Feet Per Second - 1 C.F.S./hour = 27,000 gallons of water.

Calculations of Active Ingredient to be Added if Recommended Usage Rate is Expressed in Parts Per Million (ppm): One gallon of Drip-Rite 4000 in 60,000 gallons of water yields 1 ppm of dissolved copper. If desired application rate is expressed in ppm: (1) Divide total gallons to be treated by 60,000 to yield total gallons of Drip-Rite 4000 required to yield 1 ppm copper. (2) Multiply the foregoing by the desired ppm treatment level to yield actual gallons required. Example: 240,000 gallons to be treated divided by 60,000 = 4 Gallons Drip-Rite 4000 to achieve 1 ppm copper. If a 0.2 ppm level is required, then $4 \times 0.2 = 0.8$ gallons Drip-Rite 4000 is required to achieve a 0.2 ppm copper concentration.

SPECIFIC INSTRUCTIONS

To Control Algae in Impounded Water, Lakes, Ponds, and Reservoirs: Apply 1 pint of Drip-Rite 4000 in each 7,500-300,000 gallons of water to be treated. One pint (16 ounces) of Drip-Rite 4000 per each 7,500 to 300,000 gallons yields a range of 1 ppm (7,500 gallons) metallic copper down to 0.025 ppm (300,000 gallons) metallic copper. For best results, apply to warm, still water on a sunny day when algae are near the surface.

Shoreline Application: In smaller lakes, ponds, and reservoirs, Drip-Rite 4000 is most easily applied by using either an electrically or manually operated hand spray device (sprayer). REMOVE THE SPRAY NOZZLE from the sprayer so that, when activated, the spray device dispenses a straight stream rather than a spray pattern. This will minimize or eliminate the potential for any drift and enable you to project the dispensed stream of Drip-Rite 4000 further away from the shore line than if the spray nozzle were attached. Always use a sprayer which is constructed of materials listed in the Storage and Handling Equipment listed on this label. Only use this method on calm days or when wind is less than 10 mph. Never use this method of application when wind is in excess of 15 mph or when you must stand down wind of the direction of application or in any position that could expose you to drift. Never treat more the $\frac{1}{2}$ of the body of water at one time. Wait 10 to 14 days between applications.

1. Based on your developed knowledge of the body of water, mark two points on opposing shorelines where, when drawing an imaginary line between them, $\frac{1}{2}$ the volume of water is on each side of the line. Verify your water volume calculations.
2. Determine the amount of Drip-Rite 4000 required to treat the portion of the body of water selected in #1 above. Dilution of Drip-Rite 4000 with clean water prior to application may be done so that uniform distribution is more easily accomplished.
3. Beginning at one mark on the shoreline, simultaneously begin walking towards the other mark while projecting a stream of Drip-Rite 4000 or Drip-Rite 4000 solution to a point approximately 5 feet from the shoreline.
4. When the opposing mark has been reached, reverse course and while walking back to the beginning mark, project a stream approximately 10 feet from the shoreline.
5. Repeat steps 3 & 4, increasing the distance of stream projection from the shoreline by 5 feet each time, until all Drip-Rite 4000 is dispensed.

In Irrigation Conveyance Systems: For continuous addition, add one pint Drip-Rite 4000 for each 7,500-300,000 gallons of water. Repeat on approximate 2-week intervals as required. For conveyance systems longer than 30 miles, it is recommended that the above dosage be dispersed among injection points every 5 to 30 miles. However, if the irrigation conveyance system is used for potable water, do not exceed the total dosage of one gallon in 60,000 gallons of water.

Sprinkler, Drip, or Other Types of Irrigation Equipment: Drip-Rite 4000 must be applied continuously for the duration of the water application. Mixing instructions for dilutions of Drip-Rite 4000 are 1 pint for each 7,500 to 300,000 gallons of water. Do not mix with basic substances. No agitation is required.

Drip Irrigation & Injection Instructions: Calculate the amount of Drip-Rite 4000 needed to maintain the drip rate for a period of 4 hours by multiplying Pints/Hour by 4 OR Fluid Ounces/Minute by 240. This dosage will maintain the copper level at the required ppm for 4 hours. Drip-Rite 4000 must be introduced at a point of turbulence to insure proper dispersion. Place the required amount of Drip-Rite 4000 into a tank equipped with a needle valve and set the drip rate as required using a stop watch and a measuring device. Alternatively, use a chemigation or dosing device calibrated and adjusted to inject the desired amounts of Drip-Rite 4000. Read-just as required if flow rates change. Distance of control will vary. Treatment points should be determined in the field and placed at required intervals for control. Periodic maintenance treatments may be required.

DRIP-RITE 4000 INJECTION OR DRIP RATE

<i>Water Flow Rate</i>		ALGAE GROWTH			
		<i>Moderate (1 ppm as copper)</i>		<i>Light (0.2 ppm as copper)</i>	
CFS	Gal./Min.	Pints/Hour	Oz./Min.	Pints/Hour	Oz./Min.
1	450	3.6	1.0	0.7	0.2
2	900	7.2	1.9	1.4	0.4
3	1,350	10.8	2.9	2.2	0.6
4	1,800	14.4	3.8	2.9	0.8
5	2,250	18	4.8	3.6	1.0

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a safe place away from pets and KEEP OUT OF THE REACH OF CHILDREN. Store away from excessive heat. Drip-Rite 4000 will freeze. Always keep container closed. Store Drip-Rite 4000 in its original container only. Bulk Drip-Rite 4000 shall be stored and handled in stainless steel, fiberglass, polypropylene, PVCs or plastic equipment. Keep away from galvanized pipe, brass, copper, and any nylon or aluminum storage handling equipment.

Pesticide Disposal: Excess Drip-Rite 4000 should be disposed of through use. Do not contaminate lakes, rivers or streams as this may cause fish kill. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, mixture or residue 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.

In the event of a spill, neutralize with limestone or baking soda before disposal. May deteriorate concrete container. Do not re-use empty container.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Triple rinse empty containers (or equivalent), then offer for recycling, if available, or puncture and dispose of in a sanitary landfill or, if permitted by state and local authority, by incineration. If burned, stay out of smoke.

LIMITED WARRANTY AND LIMITATION OF REMEDIES

To the extent consistent with applicable law: Seller warrants that the product conforms to the chemical description and is reasonably fit for the purpose stated on the label for the 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 or under conditions not foreseeable to the seller. In no case shall the seller be liable for more than the cost of this product to the buyer and will, in no event, be liable for any consequential, special or indirect damages (including lost profits) connected with the use or handling of this product. This product is offered and the buyer or user accepts it subject to the foregoing terms which may not be varied.

Specimen Label

Hydrology™
Water Treatment Technology



Drip-Rite™ 4000

Algaecide / Bactericide*

For lakes, ponds, reservoirs, canals,
and other water systems (*Non Public Health)

Active Ingredients:

Copper sulfate pentahydrate * 20%

Inert Ingredients: 80%

Total 100%

* Metallic copper equivalent = 5.0% CAS# 7758-99-8

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**See attached booklet for complete
Precautionary Statements, Directions for Use,
and Storage and Disposal instructions.**

If booklet is missing, please visit our Web site for
label information: www.HydrologyCMR.com

Manufactured by:



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NET CONTENTS:

5 gal / 18.9 L
 15 gal / 56.8 L

30 gal / 113.6 L
 55 gal / 208.2 L

260 gal / 984.2 L