# Algae

#### **ALGAE IDENTIFICATION**







For use in fresh water lakes, potable water reservoirs, ponds (including golf course ponds), fish hatcheries, irrigation ditches, and other such slow moving or quiescent bodies of water.

#### **ACTIVE INGREDIENT**

Copper Triethanolamine Complex... 26.49% (CAS No. 82027-59-6)\*

 OTHER INGREDIENTS.
 73.51%

 TOTAL
 100.00%

\*Metallic copper equivalent, 8%

EPA Reg. No. 83742-1 EPA Est. No. 72344-MO-004

### KEEP OUT OF REACH OF CHILDREN CAUTION

See inside label booklet for First Aid, Additional Precautions, Directions for Use, and Storage and Disposal.

Water treated with Algae Defense® can be used immediately for recreational activities, for drinking, for watering livestock, and for irrigation of crops, golf courses, ornamental plantings, and turf areas.



#### FIRST AID

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 ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

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 obctor for further treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15 to 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.

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

For medical emergencies involving this product, call toll free 1-888-875-1724.

## PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed or absorbed through the skin. Harmful if inhaled. Causes moderate eye initiation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact can cause allergic reaction in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco or using tollet. He move and wash on ontaminated dothing before reus?

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Mixers, loaders, applicators, and other handlers must wear the following:
- Long-sleeve shirt,
- Long pants,
   Chemical-resistant gloves made of any waterproof material.
- · Shoes plus socks.

#### USER SAFETY REQUIREMENTS

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- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

   Description (DDF) immediately if posticide costs inside. Then used these while and its property in the property of the post inside.
- 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.

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.

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.

#### 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 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 ng/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 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 AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container to hold materials other than pesticides or dilute pesticides (rinsate). Triple rinse container (or equivalent) promptly after emptying. 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 1/4 full with water and recap. Shake for 10 seconds after the flow begins to drip. Repeat this procedure two more times. After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Offer for recycling if available or puncture and discard in sanitary landfill.

#### **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 are allowed in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

Algae Defense® is for the application to fresh water lakes, potable water reservoirs, ponds (including golf course ponds), fish hatcheries, irrigation canals, laterals, and ditches and other such slow moving or quiescent bodies of water. Algae Defense® successfully controls diverse algal types including branched, filamentous, and planktonic species. To obtain optimal control, apply Algae Defense® in accordance with label directions at the first appearance of algae bloom. Water treated with Algae Defense® must be used immediately to irrigate crops, qolf courses, ornamental plants, and turf areas.

Surface applications of Algae Defense® must be made using a land-based sprayer, or spray boat. Weighted trailing hoses are required for subsurface applications. Where appropriate, Algae Defense® must be applied as an invert emulsion, or as an admixture with a suitable polymer, (see specific instructions, and select only adjuvants approved for application in food crop production).

Decomposition of dead plant material will result in dissolved oxygen depletion and subsequent fish kill. High water temperatures and dense weed infestation are exacerbating factors. To avoid excessive oxygen depletion and fish kill, treat no more than ½ of the water body at one time. Do not apply more Algae Defense® than required for the treatment area, and allow at least 14 days before making application to the remaining portion of the water body. Avoid trapping fish between the shoreline and treatment areas by treating from the shore outward toward deeper, untreated water.

Algae in the water column or on the weed surfaces can reduce the effectiveness of aquatic herbicides against vascular weeds. Unless specifically prohibited by the mix partner label, Algae Defense® can be tank mixed with products containing the active ingredients, copper, fluridone, diquat and endothall, to improve aquatic weed control. If a product is tank mixed with Algae Defense®, the more stringent requirements of the Algae Defense® and mix partner labels must be met.

**NOTE:** Algae Defense® and solutions of Algae Defense® with cupric ion concentrations in excess of 1.0 ppm can cause non target plant injury. Do not allow sprays to drift over crops, ornamentals, grass or other desirable plants. Observe all label restrictions

For effective control, proper chemical concentration should be maintained for a minimum of three hours contact time. The application chart is based on static or minimal flow rates situations. Where significant dilution or loss of water from

unregulated inflows or outflows occur (raceways) within a three hour period, chemical may have to be metered in.

**FIRST:** Identify the algae growth present as one of the following types: Planktonic (suspended), Filamentous (mat forming), or Chara/Nitella.

**SECOND:** Determine the surface acreage and average depth of treatment area. (1 acre = 43,560 sq. ft.) Length x Width / 43,560 = Surface Acres

Refer to the chart below to determine gallons of Algae Defense® to apply per surface acre. Control of free floating genera is obtained at rates equivalent to 0.2 to 0.5 ppm metallic copper. Control of mat forming genera requires rates equivalent to 0.5 to 1.0 ppm metallic copper. Hard to control genera such as Chara and Phormidium require a rate of 0.5 to 1.0 ppm metallic copper to be applied at the first signs of algal growth. The lower ends of the required ranges can be used in soft water and low growth situations. Higher rates within the required ranges should be used in situations of hard water or high algae growth.

Algae Defense® can be applied directly, but a 10 to 20 fold dilution of Algae Defense® with water facilitates uniform application. Large mats of floating algae must be removed prior to treatment and a retreatment must occur after a 14 day interval following initial treatment.

Always consult your State Fish and Game Agency or other responsible agency before applying this product to public waters.

Best results are obtained when Algae Defense® is applied at the first appearance of algae and when water temperatures are above 60°F. Apply under calm conditions in a manner that uniformly distributes Algae Defense® throughout the treated area

**STRATIFIED LAKES:** (Summer Application) Lakes known to be stratified require treatment of the upper 6 feet of water only.

NON-STRATIFIED LAKES: (Spring/Fall Application) Non-stratified lakes require treatments based on the total water depth. To avoid adverse effects on fish population, treat no more than ½ of the water body at a time.

APPLICATION RATES GALLONS PER SURFACE ACRE					
Algae Type	ppm copper	1	Depth 2	In Feet 3	4
Planktonic	0.2-0.5	0.7-1.7	1.4-3.4	2.0-5.1	2.7-6.8
Filamentous	0.5-1.0	1.7-3.4	3.4-6.8	5.1–10.2	6.8-13.6
Chara/Nitella	0.5-1.0	1.7-3.4	3.4-6.8	5.1–10.2	6.8-13.6

#### ALGAE IDENTIFICATION

CHARA looks more like a rooted aquatic plant, but in fact it is classified as a type of algae. Chara it best identified by its gritty feel due to calcium deposits on its surface and distinct musky odor. Grows in thick patches around the edges of your pond. In severely infested areas, more than one application may be necessary.

FILAMENTOUS algae also known as "pond scum" or "moss" develops in yellowish or green mats on the water's surface. This form of algae may have a slimy, cottony or even coarse feel. Normally starting from the pond's edge or bottom.

**PLANKTONIC** algae are microscopic plants generally suspended in the first couple feet of water. When planktonic algae blooms it causes a pea soup or brownish appearance.







#### METHODS OF APPLICATION

**SURFACE APPLICATION:** Surface applications are appropriate for shallow depths of 4 feet or less. Use a diluted spray mixture and apply evenly across the surface of the water from a boat or from shore.

SUBSURFACE APPLICATION: Subsurface applications of Algae Defense® are required for water depths exceeding 4 feet. Weighted trailing hoses must be set to deliver the required rate of Algae Defense® to zones containing dense algae populations. Subsurface application can be used for direct or invert applications of Algae Defense®. Avoid dragging the bases on the bottom

**POLYMER APPLICATION:** Spray sinking, deposition, and retention can be improved by addition of a polymer to Algae Defense® itself or to a dilution of Algae Defense® in water. Follow the requirements on the polymer product label governing the use of that product in algae control.

The severity of algae infestation will dictate the distance that algae control will extend from the application point. Any subsequent applications must be made at points 3 hours downstream from the prior point of application. This step can be repeated as necessary until the entire infested area has been treated. Season long control can require periodic retreatment.

**Bottom Placement:** Using weighted, trailing hoses and water as the carrier, inject the diluted Algae Defense<sup>®</sup> plus diquat mixture 1 to 2 feet above the bottom.

FISH NOTE: Algae Defense® is toxic to fish and other aquatic invertebrates. The risk of fish toxicity generally decreases as the hardness of water increases.

IRRIGATION WITH TREATED WATER: Water treated with Algae Defense® in accordance with label directions shall be used for irrigation immediately after treatment

#### WARRANTY STATEMENT

AIRMAX®, INC. warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials or the manner of use or application, all of which are beyond the control of AIRMAX®, INC. In no case shall AIRMAX®, INC be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer.

The exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall not exceed the purchase price paid for this product or at AIRMAX®, INC.'S election, the replacement of this product.

AIRMAX°, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.



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See Label for Additional Precautions and Directions for Use.

ACTIVE INGREDIENT

Algae Defense® EPA Reg. No. 83742-1

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#### **KEEP OUT OF REACH OF CHILDREN** CAUTION

#### **FIRST AID**

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- Mixers, loaders, applicators, and other handlers must wear the following:
- Long-sleeve shirt. Long pants.
- Chemical-resistant gloves made of any waterproof material.
- Shoes plus socks.

#### USER SAFETY REQUIREMENTS

Users must

- . 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.
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