## SPECIMEN LABEL

COPPER

**GROUP** 

**NOT CLASSIFIED** 

**HERBICIDE** 

## VodaGuard C®

### Algaecide

Long Lasting Water Source Protection Against Algae Blooms

 Active Ingredient
 96.0%

 Copper Sulfate Pentahydrate\*
 96.0%

 Other Ingredients
 4.0%

 Total
 100.0%

\*Copper As Metallic, 24.35%

## ACCEPTED

07/22/2020

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 95535-1

# 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 FOLLOWING PAGES FOR ADDITIONAL PRECAUTIONARY STATEMENTS

FIRST AID		
If in eyes:	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, thencontinue rinsing.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
If swallowed:	<ul> <li>Immediately call a poison control center or doctor.</li> <li>Do not induce vomiting unless told to by the poison control center or doctor.</li> <li>Do not give any liquid to the person.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>	
If on skin or clothing:	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
If inhaled:	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>	

#### **HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-892-0099 for emergency medical treatment information.

For general information on product use, etc., call the National Pesticides Information Center (NPIC) at 1-800-858-7378, 8:00 am – 12:00 pm Pacific Time, Monday – Friday; email: npic@ace.orst.edu; or website: http://npic.orst.edu/. You may also contact the Poison Control Center at 1-800-222-1222 for emergency medical treatment information.

#### **NOTE TO PHYSICIANS**

Probable mucosal damage may contraindicate the use of gastric lavage.

#### Manufactured for:

Amvodaguard, Inc. 314 Estate Court Midland, ON, Canada, L4R 5H2 913-416-0962

Imported by: AgroShield LLC, 413 N. Main Street, Suite 100 Buffalo WY 82834 USA info@agro-shield.com

EPA Reg. No. 95535-1

EPA Est. No. 92012-RUS-1

**NET CONTENTS** 

#### PRECAUTIONARY STATEMENTS

#### **HAZARDS TO HUMANS & DOMESTIC ANIMALS**

**DANGER / PELIGRO Corrosive.** Causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through skin or inhaled. Do not get in eyes, on skin, or on clothing. Avoid breathing dust. Wear protective eyewear, such as 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.

#### **Engineering Controls**

Pilots must use an enclosed cab that meets the definition listed in the WPS for agricultural pesticides [40 CFR 170.305].

#### 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
- Shoes plus socks
- Goggles or face shield

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated by this product. Do not reuse them. 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.

#### **USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands thoroughly with soap and water after handling, 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 Advisory Statement:

This copper product is toxic to fish and aquatic organisms. Unlike most organic pesticides, copper is an element and will not break down in the environment and will therefore accumulate in sediment with repeated applications. Copper is a micronutrient, but its pesticidal application rate exceeds the amount of copper needed as a nutrient.

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.

#### 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.

READ ENTIRE LABEL AND PAMPHLET. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS

#### Restrictions

- Pilots must use an enclosed cab that meets the definition listed in the WPS for agricultural pesticides [40CFR 170.305].
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Do not apply to shallow water bodies less than three feet deep, or to areas where surface water is
- stagnant.
- 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.
- 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 nontarget aquatic organisms.

#### **RESISTANCE MANAGEMENT:**

Apply 2 - 18 lb of product (17.28 lb ai) per acre.

Maximum annual application rate of 21.9 lbs of metallic copper per acre-foot (8 applications per year at up to 1 ppm). This rate/frequency is calculated based on staggering the treatment of each half of the water body every 14 days (at a rate of 2.74 lbs. metallic copper per acre-foot = 1 ppm) for eight months (244 days). In situations where rapidly reproducing toxic algal species pose a public health threat to drinking or recreational water resources, applicators must receive authorization from applicable state, local or tribal water resources authorities to apply copper in excess of 21.9 lbs of metallic copper per acre-foot (8 applications per year at up to 1 ppm).

Do not make applications less than 14 days apart.

Water bodies or management units should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Water bodies or management units should be scouted after application to verify that the treatment was effective.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- · A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your retailer, representative or call 1-515-419-9524. If resistance is suspected, treat alagae escapes with a herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further reproduction.

Implement the Early Detection, Rapid Response practice and Maintenance Control by using the following practices where possible:

- Identify weeds present in a management unit through scouting or history of the water body and understand the biology of target species.
- Applications should be made so that the herbicide contacts the algae. Use the appropriate application method for the use site/weed/chemical combination.
- Algal escapes should not be allowed to go to seed or produce asexual vegetative propagules.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple
- weed-control practices such as mechanical control, biological management practices, and rotation of MOAs.
- Time applications to have the highest probability for control and minimize need for follow-up control
  measures. Apply during conditions that minimize herbicide degradation (light
  /temperature/microbes) and/or dissipation (water exchange)."

Contact your local sales representative, local water management agency, or extension agent to find out if suspected resistant algae to this MOA have been found in your region. If resistant biotypes of target algae have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of actions for each target algae.

#### **Aquatic Uses**

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 biomass. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than ½ of the water body (excluding water infrastructure and constructed conveyances such as drainage canals, ditches and pipelines or intakes and aqueducts for drinking water or irrigation use) to avoid depletion of oxygen due to decaying vegetation. Wait at least 14 days between treatments. Begin treatment along the shore and proceed outward 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.

Application of algaecides to high density blooms of cyanobacteria can result in the release of intracellular contents into the water. Some of these intracellular compounds are known mammalian hepato- and nervous system toxins. Therefore, to minimize the risk of toxin leakage, manage cyanobacteria effectively in order to avoid applying this product when blooms of toxin-producing cyanobacteria are present at high density. In situations where rapidly reproducing toxic algal species pose a public health threat to drinking or recreational water resources, applicators must receive authorization from applicable state, local or tribal water resources authorities to apply copper at intervals shorter than 14 days should the circumstance demand.

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. The application rates on this label are appropriate for water with pH values > 6.5, DOC levels >3.0 mg/L, and alkalinity greater than 50 mg/L. Avoid treating waters with pH values <6.5, DOC levels >3.0, and alkalinity less than 50 ppm (e.g., soft or acid waters), as trout and other sensitive species of fish may be killed under such conditions if present.

Consult your state department of natural resources or fish and game agency before applying this product to public waters. Permits may be required before treating such waters.

#### APPLICATION INSTRUCTIONS

Apply VodaGuard C using equipment designed for granular dusting. Dusting can be done manually from the bank, a boat, or from an airplane, depending on the total area of the water body and the optimal application strategy. Apply in small/medium water bodies (under 250 acres) from the edge of the water body, in upstream/downwind locations to minimize risk to the operator and allow the wind and currents to carry the particles alongside algae/cyanobacteria aggregates. When using a boat, apply the required rate downwind in the vicinity of algal/cyanobacterial concentrates. For large water bodies, apply treatment upstream/downwind using boats or aerial application at close proximity to algal/cyanobacterial concentrations. Always apply the granules upstream/downwind to allow winds and currents to carry the algicide particles to the desired location around algae/cyanobacteria aggregation. Water hardness, temperature of the water, the type and amount of algae/cyanobacteria to be controlled, and the amount of water flow are to be considered in using VodaGuard C to control algae/cyanobacteria. Treated water resource should be monitored systematically for the presence of harmful algae/cyanobacteria using adequate and precise apparatus. Begin treatment as soon algal/cyanobacterial cell numbers reach 5,000-20,000 cells / ml (and below 10 µg chlorophyll-a per liter). Dusting should be applied in small-medium reservoirs (smaller than 100 acres) from one edge of the reservoir and off-wind so (1) wind and currents can carry the particles where algae/cyanobacteria concentrates are and (2) to minimize risk to the operator.

In larger water bodies, treatment should be applied off-wind using boats or aerial application at the maximum proximity to the algal / cyanobacterial's zone of contamination. Minimum retreatment interval is

14 days. If treatment is delayed until algal/cyanobacterial cell numbers exceed 20,000 cell/ml (or equivalently above 10 µg chlorophyll-a per liter), then an increase in the quantities of VodaGuard C will be required as well as in treatment frequency. It is not recommended, however, to treat heavy blooms (over than 20,000 algae/cyanobacteria per ml or 10 µg chlorophyll-a per liter) as it is most likely that a mass of dead cells will be floating on the water surface and may result in bad odors and in oxygen loss from mass decomposition of dead algae / cyanobacteria. This loss can cause fish suffocation. Therefore, in heavy blooms (over than 20,000 cells/ml of algae/cyanobacteria or over 10 µg chlorophyll-a per liter), to minimize this hazard, treat no more than one-half of the water area in a single operation and wait at least 14 days between treatments. Always apply the granules off wind and let the wind and currents to carry them to the desired location were algae / cyanobacteria cell masses are concentrated. Algal growth is difficult to control with VodaGuard C when water temperatures are low (less than 15.5°C) or when the water alkalinity is above 50 ppm. It is usually best to treat algae on a sunny day at morning hours. If there is some doubt about the quantities to apply, it is best to start with the lower concentration given in the Specific Instructions below.

When preparing the VodaGuard C hydrophobic granules for dusting the container should be made of plastic, glass, or a painted, enameled, or copper-lined metal container.

#### **APPLICATION RATE:**

**Pre-Application Dose Determination:** For algae and aquatic plant treatments, applicators should conduct initial dose determination tests simulating a full-scale treatment program to determine the minimum efficacious concentrations for eliminating the target species, unless an effective dose is already known for the given target pest population.

Treatment is applied per surface area according to the table below. Determination of the infested area should be done as follows: (1) in small infested reservoirs, less than 400 acres, 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) In water bodies larger than 400 acres (or smaller ponds with a defined contaminated zone) outline the infested area by a combination of the following instruments: a multiparameter sonde equipped with a GPS (to detect specific pigments that are proxy for algae/cyanobacteria biomass), satellite imaging, etc. NOTE: evaluation of the state of the infestation should be done by professional person. NOTE: It is not recommended to apply VodaGuard C in shallow ponds that are below 1 meter depth without a proper calculation for the final copper concentration (of 0.5-2 mg/liter of copper ions).

#### **CALCULATIONS OF VODAGUARD C TO BE DUSTED:**

Use the amount suggested at the Table below. Minimum retreatment interval is 14 days. NOTE: For best control of harmful algae / cyanobacteria infestations, it is essential to begin VodaGuard C treatment when harmful cell number is at the range of 5,000-20,000 cell / ml (and below 10 µg chlorophyll-a per liter). NOTE: The active ingredient in the VodaGuard C is copper sulfate which becomes less effective as the alkalinity (pH) increases. Its effectiveness is significantly reduced when the bicarbonate alkalinity exceeds 150 ppm.

#### TREATMENT OF DIFFERENT GENERA OF ALGAE

The genera of photosynthetic microorganisms from the algae or cyanobacteria linage listed in the table below are commonly found in waters of the United States.

NOTE: Use the lower recommended rate in soft waters (less than 50 ppm methyl orange alkalinity) and the higher concentration in hard waters (above 50 ppm alkalinity). Always consult State Fish and Game Agency before applying this product to municipal waters.

APPLICATION METHODS TO CONTROL ALGAE IN LAKES, IMPOUNDED WATERS, PONDS AND RESERVOIRS: The best method by which to apply VodaGuard C granules to algae-infested water is by dusting it over a well-defined contamination-zone, at early bloom stages, when harmful algal / cyanobacteria numbers are at 5,000-20,000 cells / ml (and below 10 µg chlorophyll-a per liter). This can be done by hand, a boat or an airplane, depending on the area of the infested zone and its proximity to reservoir's bank. When a small duster is mounted in a properly equipped boat, application can be broadcast directly on the water surface at the edge of the infested zone. Note that the direction of the wind is an important factor - always dust off-wind. Do not use this method unless completely familiar with this type of application.

NOTE: Maximum application quantity is 2.0 g/m² VodaGuard C (about 0.5 ppm Copper per 1m depth, or lower for deeper water bodies). EPA sets the maximum application rate at 4 ppm copper ions (per total volume of the water body); It is best, however, to use the quantities mentioned in the Table of 0.25 - to 2.0 g/m² VodaGuard C per specific phytoplankton genera. Minimum retreatment interval is 14 days.

PHYLUM	DOSE RATE*
Cyanobacteria	2 to 18** lbs./acre (2.25-20 kg/ha)
Green Algae	2 to 18** lbs./acre (2.25-20 kg/ha)
Diatoms	2 to 14** lbs./acre (2.25-15.5 kg/ha)
Protozoa (Flagellates)	2 to 18** lbs./acre (2.25-20 kg/ha)

<sup>\*</sup> Use the lower recommended rate in soft waters (less than 50 ppm methyl orange alkalinity) and the higher concentration in hard waters (above 50 ppm alkalinity).

<sup>\*\*</sup> At heavy infestations, the maximal VodaGuard C application can reach 4.0 g/m2 as long as final copper ions concentration do not exceed 1.0 ppm.

#### Maximum annual application rate

Maximum annual application rate of 21.9 lbs of metallic copper per acre-foot (8 applications per year at up to 1 ppm). This rate/frequency is calculated based on staggering the treatment of each half of the water body every 14 days (at a rate of 2.74 lbs. metallic copper per acre-foot = 1 ppm) for eight months (244 days). In situations where rapidly reproducing toxic algal species pose a public health threat to drinking or recreational water resources, applicators must receive authorization from applicable state, local or tribal water resources authorities to apply copper in excess of 21.9 lbs of metallic copper per acre-foot (8 applications per year at up to 1 ppm).

#### SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, and relative humidity) and the method of application (ground or aerial) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

WIND SPEED: Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 76 meters downwind.

TEMPERATURE INVERSIONS: If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below duster height. Do not make applications into areas of temperature inversions or stable atmospheric conditions. OTHER STATE AND LOCAL REQUIREMENTS: Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

EQUIPMENT: All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates. For aerial applications:

- The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- Release granules at the lowest height consistent with efficacy and flight safety. Do not release
  granules at a height greater than 3 meters above the water surface unless a greater height is
  required for aircraft safety.
- When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

#### RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release dust at a height greater than 10 ft. above the water surface, unless a greater application height is necessary for pilot safety.

#### TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud(under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

#### **WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND

#### CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect drift.

FOR SURFACE APPLICATION:

Do not apply granules at height greater than 1.2 meters above the water surface.

#### STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep pesticide in original container. Do not use in food or drink containers.

PESTICIDE DISPOSAL: Pesticide wastes may be 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 HANDLING: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration.

#### DISCLAIMER, RISKS OF USING THIS PRODUCT, LIMITED WARRANTY AND LIMITATION OF LIABILITY

The label instructions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the 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 **Amvodaguard Inc.**. To the extent permitted under applicable law, all risks shall be assumed by the user.

Amvodaguard Inc. warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for use therein described when used in accordance with the Directions for Use set forth in the Complete Directions for Use booklet (Directions), subject to the risks referred to above.

To the extent permitted under applicable law, any damage arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages, such as loss of profits or values or any other special or indirect damages.

**Amvodaguard Inc.** makes no other express or implied warranty including any other express or implied warranty of FITNESS or MERCHANTABILITY.

If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.

The sale of this product does not include a license under any patent owned by Amvodaguard Inc.