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 State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours.

PPE required for early entry to treated areas is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water. In: Coveralls, chemical-resistant gloves made of any waterproof material, shoes plus socks, and protective eye wear (goggles, face shield, or safety glasses).

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPIS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter until spray has dried.

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and the method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

DROPLET SIZE: Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

WIND SPEED: Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (application and wait at least 14 days between treatments. Begins treatment along the shore and proceed outward in bands to allow fish to move into untreated water. NOTE: If treated water is to be used as a source of potable water, the metallic copper residual must not exceed 1 ppm (4 ppb Copper Sulfate Crystals).

CALCULATIONS FOR THE AMOUNT OF WATER IMPOUNDED AND FOR THE AMOUNT OF COPPER SULFATE CRYSTALS TO BE USED:

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) Multiply surface area in acres by average depth in feet to obtain total acre-feet of water volume.

CALCULATE WEIGHT OF WATER TO BE TREATED AS FOLLOWS: (1) Multiply volume in cubic feet by 62.44 to obtain total pounds of water; or (2) Multiply volume in acre feet by 2,720,000 to obtain pounds of water.

CALCULATIONS OF ACTIVE INGREDIENT TO BE ADDED: To calculate the amount of Copper Sulfate Crystals needed to achieve the recommended concentration, multiply the weight of water by the recommended concentration of Copper Sulfate Crystals. Since recommended concentrations are normally given in parts per million (ppm), it will first be necessary to convert the value in parts per million to a decimal equivalent. For example, 2 ppm is the same as 0.000002 when used in this calculation. Therefore, to calculate the amount of Copper Sulfate Crystals to treat 1 acre-foot of water with 2 ppm Copper Sulfate Crystals (or 0.5 ppm metallic copper), the calculation would be as follows: 0.000002 X 2,720,000 = 5.44 lbs. Copper Sulfate Crystals.

CALCULATION OF WATER FLOW IN DITCHES, STREAMS, AND IRIGATION SYSTEMS: The amount of water in cubic feet per second is found by means of a weir or other measuring device.

SPECIFIC INSTRUCTIONS

SEWER TREATMENT – ROOT DESTROYER

ROOT CONTROL GENERAL INFORMATION: Plant roots can penetrate through small cracks and poorly sealed joints of sewer lines. If not controlled, these small roots will continue to grow larger in number causing breakage, reduced flow, and eventually, flow stoppage. Copper Sulfate Crystals has been known to be an effective means to control roots in residential and commercial sewers.

COMMERCIAL, INSTITUTIONAL, AND MUNICIPAL SEWERS: ROOT CONTROL IN SEWERS: As a preventative measure, apply into each junction or terminal manhole 2 pounds of Copper Sulfate Crystals every 6 to 12 months. At time of reduced flow (some water flow is essential), add Copper Sulfate Crystals. If flow has not completely stopped, but has a reduced flow due to root masses, add Copper Sulfate Crystals in the next manhole above the reduced flow area. For complete stoppage, penetrate the mass with a rod to enable some flow before treatment. ROOT CONTROL IN STORM DRAINS: Apply when water flow is light. If no water flow, as in dry weather, use a hose to produce a flow. Apply 2 pounds Copper Sulfate Crystals per drain per year. It may be necessary to repeat treatments in 6 month intervals, if drains become nearly plugged.

SEWER PUMPS AND FORCE MAINS: At the storage well inlet, place a cloth bag containing 2 pounds of Copper Sulfate Crystals. Repeat in 6 or 12 month intervals, if necessary.

RESIDENTIAL OR HOUSEHOLD SEWER SYSTEMS: When a reduced water flow is first noticed, and root growth is thought to be the cause, treat with Copper Sulfate Crystals. It is not recommended to stop until a stoppage occurs because some water flow is necessary to move the Copper Sulfate Crystals to the area of root growth. Usually, within 3 to 4 weeks, after roots have accumulated sufficient copper sulfate, the roots will die and begin to decay and water flow should increase. As the roots re-grow, follow-up treatments with Copper Sulfate Crystals will be required. Applications may be made each year in the spring after plant growth begins, or during late summer or early fall, or any time a reduced water flow, thought to be caused by root growth, occurs.
COPPER SULFATE CRYSTALS REQUIRED
FOR TREATMENT OF DIFFERENT GENERA OF ALGAE

The general algae listed below are commonly found in waters of the United States. Use the lower recommended rate in soft waters (less than 50 ppm hardness) and the upper recommended dose in hard waters (above 50 ppm hardness). Always consult State Fish and Game Agency before applying this product to municipal waters.

<table>
<thead>
<tr>
<th>ORGANISM</th>
<th>0.25 to 0.50 ppm</th>
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<td>Cyanophyceae (Blue-green)</td>
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<tr>
<td>Chrysophyceae (Radiolarians)</td>
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Copper Sulphate Crystals (Cu) ppm / lbs/acre

*NOTE: All treatments should be done according to local laws and regulations. The product must be used only for the control of aquatic algae and must not be used in swimming or other water bodies.

Copper Sulphate Crystals (Cu) pmp / lbs/acre

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*NOTE: All treatments should be done according to local laws and regulations. The product must be used only for the control of aquatic algae and must not be used in swimming or other water bodies.
Preparation of Bordeaux Spray Mixture: Fill a tank 1/4 full with water. Then, with agitator running, mix in Copper Sulfate Crystals through a copper, brass, or stainless steel screen. The mixture of copper in the tank is 3/4 full. Mix in the hydrated copper spray line through the screen and finish filling the tank with water.

Almond, Apple, Apricot, Cherry, Peach, Nectarine, Plum, Prune: Brown Rot Blossom Blight – Prepare a 10-10-100 Bordeaux mixture and apply as a dormant spray in late fall or early spring. Do not apply more than 32 lbs (6.8 lbs metallic copper) per acre per application. Minimum retreatment interval is 7 days. Do not exceed 72 lbs (16.8 lbs metallic copper) per acre.

Olive: Olive Leaf Spot (Peacock spot), Olive Knot – Prepare a 10-10-100 Bordeaux mixture. Apply in autumn before heavy winter rains to prevent peacock spot. In wet winters, a spray may be needed every 10-14 days. A 10-10-100 mixture, 5 to 10 lbs of actual copper, may be used to help protect against olive knot. Apply a 10-10-100 Bordeaux mixture before heavy rains in the fall or early spring. The spray must be applied at least 10 days prior to full bloom in the spring. Do not apply more than 24 lbs (6.0 lbs metallic copper) per acre per application. Minimum retreatment interval is 30 days. Do not exceed 72 lbs (16.8 lbs metallic copper) per acre.

Almond, Apple, Apricot, Cherry, Peach: Shot Hole Fungus – Prepare a 10-10-100 Bordeaux mixture and apply as a dormant spray in late fall or early spring. Do not apply more than 32 lbs (6.8 lbs metallic copper) per acre per application. Minimum retreatment interval is 7 days. Do not exceed 72 lbs (16.8 lbs metallic copper) per acre.

Blueberries: Bacterial Canker (Not for use in California) – Prepare and apply an 8-8-100 Bordeaux mixture in the fall before heavy rains begin and again 4 weeks later. Do not apply more than 8.4 lbs (2.1 lbs metallic copper) per acre per application. Minimum retreatment interval is 7 days. Do not exceed 33.6 lbs (8.4 lbs metallic copper) per acre per application.

Bull’s (Easter Lily): Botrytis Blight – Prepare a 10-10-100 Bordeaux mixture and apply as a dormant spray to 1 acre. Apply for thorough coverage beginning at the first sign of disease and repeat as needed to control disease at 7 to 10 day intervals. Use the shorter intervals during periods of frequent rains or when severe disease conditions prevail. Avoid spray just before flower cutting season if residues are a problem. Do not apply more than 10 lbs (2.5 lbs metallic copper) per acre. Do not exceed 40 lbs (10 lbs metallic copper) per acre per application. Minimum retreatment interval is 7 days. Do not exceed 72 lbs (18 lbs metallic copper) per acre per application.

Cranberries: For Leaf and Canoe and Pseudomonas Blight – prepare and apply an 8-8-100 Bordeaux mixture in the fall before heavy rains begin and again 4 weeks later. Do not apply more than 8 lbs (2.0 lbs metallic copper) per acre per application. Minimum retreatment interval is 7 days. Do not exceed 40 lbs (10 lbs metallic copper) per acre per application.

Cheery (Sweet): Dead Bud, Bacterial Canker (Pseudomonas Syringae) – Prepare a 12-12-100 Bordeaux mixture and apply at fall and again in late winter. Apply to 1/2 acre per application. The spray may be used in wet winters. Do not exceed 32 lbs (8 lbs metallic copper) per acre per application. Minimum retreatment interval is 7 days. Do not exceed 40 lbs (10 lbs metallic copper) per acre per application.

Copper (all ornamentals, Gladiolus): Botrytis Blight – Prepare a 8-8-80 Bordeaux mixture and apply as a foliar spray to 1 acre. Apply for thorough coverage beginning at the first sign of disease and repeat as needed to control disease at 7 to 10 day intervals. Use the shorter intervals during periods of frequent rains or when severe disease conditions prevail. Avoid spray just before flower cutting season if residues are a problem. Do not apply more than 8 lbs (2 lbs metallic copper) per acre per application. Minimum retreatment interval is 7 days. Do not exceed 32 lbs (8 lbs metallic copper) per acre per application.

Cranberry (not blended): copper per acre per application. Minimum retreatment interval is 5 days. Do not exceed 72 lbs (18 lbs metallic copper) per acre per application.

DANGER - PELIGRO

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Take all precautions necessary to prevent exposure to the metabolites of this product and to limit contact with humans and domestic animals. If present, avoid exposure to the metabolites of this product.

Protective clothing and equipment should be worn when handling this product. When in the vicinity of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed sign shall be followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word "STOP". Below the symbol shall be the words "PESTICIDES IN IRRIGATION WATER". All words shall consist of letters at least 2 ½ inches tall, and all letters and the symbol shall be posted prior to application and must remain posted until foliage has grown to cover the treated area. The printed sign shall be followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word "STOP". Below the symbol shall be the words "PESTICIDES IN IRRIGATION WATER". All words shall consist of letters at least 2 ½ inches tall, and all letters and the symbol shall be posted prior to application and must remain posted until foliage has grown to cover the treated area. The printed sign shall be followed.
RESIDENTIAL USE LABELING

AB BRAND COPPER SULFATE CRYSTALS
Note in the State of New York: This product is a restricted use agricultural pesticide (RUP) in waters of the New York State. Pesticide applicator certification or a special use permit is required for sale, possession, or use.

ACTIVE INGREDIENT

BYWEIGHT COPPER SULFATE PENTAHYDRATE* 99.0% OTHER INGREDIENTS

TOTAL ………………………..……………………............… 100.0%

*CAS #7758-99-8 COPPER AS METALLIC, 25.1%
See back panel for specific pesticide use directions and state restrictions.

KEEP OUT OF REACH OF CHILDREN
DANGER - PELIGRO

Do not use or refill this container. Trip container (or equivalent) promptly after emptying. Trip container (or equivalent) promptly after emptying. Trip container (or equivalent)

FIRST AID

If in eyes: Hold eye open and run water gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue to rinse eye. Call a poison control center or doctor for treatment advice. If swallowed: Call a poison control center or doctor immediately for treatment advice. 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 15-20 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 by mouth to mouth or mouth to mask. Call a poison control center or doctor for further treatment advice.

Hazardous Waste representative at the nearest EPA Regional

CONTAINER HANDLING: Nonrefillable container (bag). Do not

CONTAINER HANDLING: Nonrefillable container. Do not

Pesticide wastes are acutely hazardous and may contaminate water through runoff. The product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are prone to produce runoff that contains this product. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

STORAGE AND DISPOSAL

Nonetheless, certain water conditions including low pH (5.0-5.5), low dissolved organic carbon (DOC) levels (3.0 mg/l, or lower), and low water temperature (i.e. alkalinity less than 50 mg/l) increases the potential acute toxicity to non-target aquatic organisms.

For terrestrial use, this pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. The product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are prone to produce runoff that contains this product. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Toxicity of Copper Sulfate Crystals to the distribution box located between the septic tank and the leach lines. To achieve effective root control in the leach lines it is necessary to transfer Copper Sulfate Crystals from the septic tank to the leach lines using a garden hose similar to the directions for the distribution box does not have an opening leading to the leach lines. Repeat in 6 or 12 month intervals, if necessary.


NOTE: For all sewer line treatment applications do not use more than 2 lbs Copper Sulfate Crystals (0.5 lbs. metallic copper) per application. Minimum retreatment interval is 6 months. The treatment area varies per ground conditions per year end. PER EPA guidelines, do not exceed 8 lbs Copper Sulfate Crystals (2 lbs. metallic copper) per year.

APPLICATION METHODS TO CONTROL ALGAE IN IMPROVED WATERS, LAKES, PONDS AND RESERVOIRS:

There are several methods by which Sewage Algae may be controlled. Probably the most satisfactory and simplest method is to dissolve the Copper Sulfate Crystals in water and to spray this water over the body of water from a boat. A small hand sprayer may be used for this purpose. Fire crystals may be broadcast directly on the water surface from a properly equipped boat. Where the situation permits, Copper Sulfate Crystals may be applied under the water using a dragging burlap bag containing Copper Sulfate Crystals. The crystals are placed in burlap bags and dragged through the water by means of a boat. Begin treatment along the shoreline and proceed outward until one-third to one-half of the total area has been treated. Care should be taken that the course of the boat is such as to cause even distribution of the material throughout the treated area until the minimum dosage is achieved and all crystals have been dissolved. Large burlap bags of 200 lbs. or more may be used for this purpose. Note: EPA sets the maximum application rate at 4 ppm Copper Sul- fate Crystals (1 ppm metallic copper); however, 1 to 2 ppm Copper Sulfate Crystals may be added to treat local gran of algae. Minimum retreatment interval is 14 days.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by disposal or storage. PESTICIDE STORAGE: Store in original container and place in a locked storage cabinet.

PESTICIDE & CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Trip container (or equivalent) promptly after emptying. Trip container (or equivalent) promptly after emptying. Trip container (or equivalent) promptly after emptying.

WARRANTY STATEMENT

To the extent consistent with applicable law neither the manufacturer nor the seller makes any warranty, expressed or implied, regarding the use of this product. To the extent consistent with applicable law buyer assumes risk of use of this material when such use is contrary to label instructions. Read and follow the label directions.

ENVIRONMENTALLY HAZARDOUS SUBSTANCES SOLID, S.O.S. (CUPRIC SULFATE) UN0077, RQ

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