



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

March 21, 2024

Timothy Joseph
Senior Project Manager
Old Bridge Chemicals, Inc. c/o Landis International, Inc.
P.O. Box 5126
Valdosta, GA 31603-5126

Subject: Label Amendment - Registration Review Mitigation for Copper Compounds
Product Name: OLD BRIDGE COPPER SULFATE
EPA Registration Number: 46923-4
Application Date: February 4, 2019
Decision Number: 590993

Dear Timothy Joseph

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Copper Compounds Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling

before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact DeMariah Koger by phone at (202)-566-2288, or via email at Koger.demariah@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a stylized flourish at the end.

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

ENCLOSURE: Stamped label

COMMERCIAL LABEL

COPPER	GROUP	M1	FUNGICIDE
COPPER	GROUP	NON-CLASSIFIED	HERBICIDE

Old Bridge Chemicals, Inc.

OLD BRIDGE COPPER SULFATE

Net Weight:

50, 2000 pounds (22.68, 907.2 kg)

EPA Reg. No. 46923-4

EPA Est. No. 46923-NJ-1

ACTIVE INGREDIENT

Copper Sulfate Pentahydrate*: CAS # 7758-99-899.0%

OTHER INGREDIENTS1.0%

TOTAL100.0%

* Metallic Copper Equivalent: 25.2%



Certified to ANSI/NSF 60

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).

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 eye.• Call a poison control center or doctor for treatment advice.
If Swallowed:	<ul style="list-style-type: none">• Call 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 mouth-to-mouth, if possible.• Call 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 the poison control center or doctor for treatment advice.

HOT LINE SERVICE

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

You may contact 800-275-3924 for emergency medical information.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

See additional precautionary statements and directions for use [on side/back panel] [inside pamphlet, booklet, leaflet].

ACCEPTED

Mar 21, 2024

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under

EPA Reg. No. 46923-4

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Do not get in eyes or on clothing. 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 to these waters.

PERSONAL PROTECTIVE EQUIPMENT

Mixers, Loaders, Applicators and other handlers must wear the following:

- Long sleeve shirt,
- long pants,
- shoes plus socks,
- protective eyewear such as glasses with side shields,
- chemical resistant gloves made of: barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride ≥ 14 mils, or viton ≥ 14 mils.,
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Follow manufacturer's instructions for cleaning or 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 materials that have been drenched or heavily contaminated with product's concentrate. Do not reuse them.

Engineering Controls

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

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 the outside of gloves before removing.

ENVIRONMENTAL HAZARDS

AQUATIC USES: This pesticide 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. Water 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 $\frac{1}{2}$ 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 (<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 the potential acute toxicity to non-target aquatic organisms.

Restrictions: For algae use except for treatment of rice to control algae: No more than $\frac{1}{2}$ of the water body may be treated at one time. 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. For all algae use (including use of rice to control algae), the minimum retreatment interval is 14 days.

TERRESTRIAL USES: This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous

to aquatic organisms adjacent to treated areas. 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 wash water or rinseate.

STORMWATER ADVISORY STATEMENT: This product may be applied for the purposes of root intrusion control in storm drains or storm sewers than can discharge directly or indirectly into ephemeral or permanent waterbodies. This product must not be used in any municipal or public storm sewer or “MS4” system, or any storm drain system otherwise covered under an NPDES MS4 discharge permit. Copper will accumulate with repeated applications in the waterbodies to which treated storm drains/sewers discharge.

To the extent possible, avoid simultaneous treatments of multiple drain systems that discharge to the same waterbody. Staggering applications to individual stormwater collection points to allow interceding storm events to clear the product from previously treated drains can help reduce the impact to aquatic organisms in receiving waterbodies. Development of and adherence to, a pesticide management plan for storm drains is encouraged.

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 for your State or Tribe, consult the 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 greenhouse 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 protection equipment (PPE), and restricted-entry period. 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 restricted entry interval of 48 hours. PPE required for early entry to treated areas that is permitted by the Worker Protection Standard that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, shoes plus socks, chemical resistant gloves made waterproof material such as polyethylene or polyvinyl chloride and goggles or face shield.

NON-AGRICULTURAL USE REQUIREMENTS

The requirement 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 WPS applies when the product is used to produce agricultural plants on farms, forest, nurseries or green-houses. Applicators and other handlers who handle this product for any use NOT covered by the Worker Protection Standard (CFR 40 Part 170) must wear long sleeve shirt, chemical resistant gloves made of water-proof material such as rubber or latex, shoes plus socks and protective eyewear. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Do not allow adults, children or pets to enter treated areas until sprays have completely dried or if applied dry until dust settles.

MANDATORY SPRAY DRIFT MANAGEMENT

For aerial applications:

- Do not release spray at a height greater than 10 feet above the vegetative canopy or water unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speed exceeds 15mph at the application site. If the windspeed is greater than 10mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the application area.
- Do not apply during temperature inversions.

For ground boom application:

- Apply with the spray release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable conditions.

Controlling Droplet Size – Ground Boom

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles – Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT – Aircraft

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

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

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 spray drift.

Engineering Control Statements

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

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, Old bridge copper sulfate contains a Group M1 fungicide. Any fungal population may contain individuals naturally resistant to Copper Sulfate Crystals and other Group M1 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of Old bridge copper sulfate or other Group M1 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease developments, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact your pesticide distributor or university extension specialist to report resistance.

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 Old bridge copper sulfate retailer or representative. If resistance is suspected, treat weed escapes with an 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 target weeds when populations are small and there is low biomass, early in the season to maximize efficacy.
- Applications should be made so that the herbicide contacts the weed. Use the appropriate application method for the use site/weed/chemical combination.
- Weed 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 weeds to this MOA have been found in your region. If resistant biotypes of target weeds 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 weed.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

ALGAE CONTROL

When using Copper Sulfate to control algae, there are many factors to consider such as water hardness, temperature of the water, type and quantity of vegetation to be controlled and the amount of water flow. Algae can be controlled more easily and effectively if treatment with Copper Sulfate is made soon after algae growth has started. Under such circumstances, small amounts of Copper Sulfate can effectively control algae in water. However, if treatment is delayed until large amounts of algae are present larger quantities of Copper Sulfate will be required. Control of algae in water systems is not always permanent. Usually algae is more difficult to control with Copper Sulfate when water temperatures are low. The dose rates for Copper Sulfate are based on a water temperature of 60 ° F or higher. Larger amounts of Copper Sulfate will be required in hard water. Normally, larger quantities of Copper Sulfate will be required to kill algae in water that is flowing than in a body of stagnant water. If possible, curtail the flow of water before treatment and hold dormant for about three days after treatment or until algae have begun to die. When preparing a Copper Sulfate solution in water, it is best that the mixing vessel be made of plastic or glass. Metal containers lined with plastic or painted or enameled are permissible. Galvanized containers are to be avoided. It is best to treat algae on calm, sunny days when heavy mats of filamentary algae are most likely to be floating on the surface where it can be sprayed directly. When in doubt about the concentration to be used, it is recommended to start with a lower concentration and gradually increase the concentration until the algae is killed.

CALCULATIONS FOR AMOUNT OF WATER AND COPPER SULFATE PENTAHYDRATE TO BE USED

A. Calculate water volume as follows:

1. Obtain surface area by measuring regular shaped ponds or mapping irregular ponds or by use of a previously recorded data or maps.
2. Calculate average depth by measuring depth in a regular pattern and taking the mean of these readings or by use of previously recorded data.
3. Multiply surface area in square feet by average depth in feet to obtain cubic feet of water volume, or
4. Multiply surface area in acres by average depth in feet to obtain total acre feet of water volume. *For a body of water that contains fish, only ½ of the area may be treated at one time. After calculating the area of the body of water as instructed above, divide this number by 2. Use that number to calculate weight of water and amount of Copper Sulfate Pentahydrate required to treat half of the body of water.

B. 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 total pounds of water.

C. Calculate amount of Copper Sulfate Pentahydrate to add:

To calculate the weight of Copper Sulfate Pentahydrate needed to achieve the desired concentration, multiply the weight of water in pounds by the recommended concentration. Since the recommended concentrations are given in parts per million (ppm), first convert the value to a decimal equivalent. A value of 1 ppm is equivalent 0.000001 as a decimal value. Thus, the amount of Copper Sulfate Pentahydrate required to treat 1 acre-foot (2,720,000 pounds) of water with 1 ppm of Copper Sulfate Pentahydrate would be $0.000001 \times 2,720,000 = 2.72$ lbs. Copper Sulfate Pentahydrate.

FOR SMALL PONDS: Follow the directions in "A" above. Calculate the weight of the water to be treated by multiplying the volume in cubic feet (ft³) by 62.44 to obtain total pounds of water. For 1 ppm of Copper Sulfate Pentahydrate multiply

the pounds by 0.000001. The result is pounds of Copper Sulfate Pentahydrate. The amount of Copper Sulfate Pentahydrate to treat a pond 100 ft. by 100 ft. by 2 ft. deep: $100 \times 100 \times 2 = 20,000 \text{ ft}^3$
 $20,000 \text{ ft}^3 \times 62.44 \text{ lbs.} = 1,248,800 \text{ lbs. of water} \times 0.000001 = 1.25 \text{ pounds of Copper Sulfate Pentahydrate.}$

Treatment of algae can result in oxygen loss from decomposition of dead algae. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait 14 days between treatments. Begin treatments along the shore and proceed outwards 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 ppm Copper Sulfate Pentahydrate).

SPECIFIC INSTRUCTIONS

AQUATIC USES (EXCLUDING SWIMMING POOLS, SPAS, HOT TUBS, FOUNTAINS AND AQUATIC AGRICULTURE): 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 1/2 of the water body and wait at least 14 days between treatments to avoid depletion of oxygen due to decaying vegetation (excluding water infrastructure and constructed conveyances such as drainage canals, ditches and pipelines or intakes and aqueducts for drinking water or irrigation use).

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 algacides to high density bloom 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 (≤ 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 $> 3.0 \text{ mg/L}$, 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.

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.

CONTROL ALGAE AND THE POTAMOGETON PONDWEEDS, LEAFY SAGO, IN IRRIGATION CONVEYANCE SYSTEMS: Use the continuous application method, selecting proper equipment to supply Copper Sulfate Crystal at 0.25 to 0.5 pounds product (0.0625 to 0.125 pounds metallic copper) per hour for each cubic foot per second of flow for twelve hours of each 24 hours. For the best control, begin Copper Sulfate additions when water is first turned into system to be treated and continue throughout the irrigation season. Copper Sulfate Crystal becomes less effective for mature plants. Copper Sulfate Crystal becomes less effective as the bicarbonate alkalinity increases and is substantially reduced above 150 ppm as CaCO_3 . Mechanical or other means may then be required to remove excess growth.

Maximum annual application rate of 13 lbs metallic copper per year per 5 miles of conveyance per cubic foot per second (CFS). Apply copper into irrigation conveyance system or lateral at up to a maximum rate of 0.5 lbs metallic copper per cubic foot per second of water per 5 to 30-mile treatment depending on water hardness, alkalinity and algae concentration.”

This method may only be used in constructed irrigation conveyance systems, laterals and aqueducts.

TO CONTROL ALGAE SUCH AS FILAMENTOUS GREEN PIGMENTED FLAGELLATES AND DIATOMS IN IRRIGATION CONVEYANCE SYSTEMS: Begin continuous addition when water is first turned on using suitable equipment to uniformly deliver 0.1 to 0.2 pounds of Copper Sulfate Crystal (0.025 to 0.05 pounds metallic copper) per hour per cubic foot per second of flow for 12 of each 24 hours. (note: Copper Sulfate Crystal comes in several “free flowing” crystal sizes but should be selected to match requirements of your feeder.)

TO CONTROL ALGAE IN IMPOUNDED WATER, LAKES, PONDS AND RESERVOIRS: There are several methods by which to apply Copper Sulfate to impounded water. Probably the simplest and the most satisfactory method is to dissolve the Copper Sulfate crystals in water and spray the solution over the body of water. Copper Sulfate may be broadcast directly on the water surface from boat. A small pump mounted in the boat can easily be used for this purpose. A specially equipped air blower can be used to discharge these size crystals at a specific rate over the surface of the water. When using this method, the wind direction is an important factor. Do not use this method unless completely familiar with this type of application. Copper Sulfate is also designed to be used as a dry application from airplanes, using a maximum of 10.64 pounds (2.66 pounds metallic copper) per acre-foot. Where the situation permits, Copper Sulfate may be applied under the water by dragging burlap bags filled with Copper Sulfate through the water by means of a boat. A tear-resistant permeable bag may be towed via watercraft to disperse copper into the upper water column for treatment of weeds and algae. Operators should ensure the application path is clear of any obstacles that may rupture or otherwise damage the bag containing the copper once deployed. Care should be taken that the course of the boat is such as to cause even distribution of the chemical. In large lakes, it is customary for the boat to travel in parallel lines about 20 to 100 feet apart. Continue dragging the burlap bags over the treated area until the minimum dosage is achieved and all the crystals have been dissolved. For all application methods described, begin treatment along the shoreline and proceed outward until $\frac{1}{3}$ to $\frac{1}{2}$ of the total area has been treated. No more than $\frac{1}{2}$ of the water body may be treated at one time. The minimum treatment interval is 14 days. If the treated water is to be used as a source of potable water, the metallic copper concentration must not exceed 1 ppm (4 ppm Copper Sulfate).

The maximum annual application rate is 21.9 lbs metallic copper (87.6 lbs product) 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/10.96 lbs product 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 (87.6 lbs product) per acre-foot (8 applications per year at up to 1 ppm).

COPPER SULFATE REQUIRED FOR TREATMENT OF DIFFERENT GENERA OF ALGAE:

The genera of algae listed below are commonly found in impounded water, lakes, ponds, and reservoirs in the United States. Use the lower recommended rate of Copper Sulfate in soft waters (less than 50 ppm methyl orange alkalinity) and higher concentration in hard water (above 50 ppm alkalinity).

Always consult State Fish and Game Agency before applying this product to municipal waters.

PRODUCT CONCENTRATION:	$\frac{1}{4}$ to $\frac{1}{2}$ ppm	$\frac{1}{2}$ to 1 ppm	1 to $1\frac{1}{2}$ ppm	$1\frac{1}{2}$ to 2 ppm
POUNDS PRODUCT/ ACRE FOOT:	0.67 to 1.3	1.3 to 2.6	2.6 to 3.9	3.9 to 5.3
POUNDS METALLIC COPPER/ACRE FOOT:	0.168 to 0.325	0.325 to 0.65	0.65 to 0.975	0.975 to 1.325
Cyanophyceae (Blue-Green)	Anabaena Anacystis Aphanizomenon Gloeotrichia Gomphosphaeria Polycystis Rivularia	Cylindrospermum Oscillatoris Pleustonema	Nostoc Phormidium	Calothrix Symploca

PRODUCT CONCENTRATION:	¼ to ½ ppm	½ to 1 ppm	1 to 1½ ppm	1½ to 2 ppm
POUNDS PRODUCT/ ACRE FOOT:	0.67 to 1.3	1.3 to 2.6	2.6 to 3.9	3.9 to 5.3
POUNDS METALLIC COPPER/ACRE FOOT:	0.168 to 0.325	0.325 to 0.65	0.65 to 0.975	0.975 to 1.325
Chlorophyceae (Green)	Closterium Hydrodictyon Spirogyra Ulothrix	Botryococcus Cladophora Coelastrum Drapamaldia Enteromorpha Gloeocystis Microspora Tribonema Zygnema	Chlorella Crucigenia Desmidium Golenkinia Oocystis Palmelia Pithiphora Staurostrum Tetraedron	Ankistrodesmus Chara Nitella Scenedemus
Diatomaceae (Diatoms)	Asterionella Fragilaria Melorisa Navicula	Gomphonema Nitzschia Stephanodiscus Synedra Tabellaria	Achnanthes Cymbella Neidium	---
Protozoa (Flagellates)	Dinobryon Synura Uroglena Volvox	Ceratium Cryptomonas Euglena Glenodinium Mallomonas	Chlamydomonas Haematococcus Peridinium	Eudorina Pandorina

CONTROL OF ALGAE AND BACTERIAL ODORS IN SWIMMING POOLS: To treat and prevent algae and odors, apply 1 tablespoon of Old bridge copper sulfate for every thousand gallons of pool water. This will result in a concentration of 1.0 ppm of dissolved copper. Prior to application, the pH of the pool should be 7.2-7.6. Dissolve the Old bridge copper sulfate in water in a plastic container and pour the solution into the pool around the edge of the pool. Never add Old bridge copper sulfate while swimming. As soon as the solution disperses in the pool water, you may reenter the pool.

Using a copper test kit (this may be purchased at any pool supply store) check copper levels every 2 weeks. As needed, apply a maintenance dosage of ½ tablespoon per thousand gallons of pool water to maintain a 0.7 to 1.0 ppm concentration. Do not exceed a 1.0 ppm copper concentration. Prior to application, the pH of the pool should be 7.2-7.6. Dissolve the required amount of Old bridge copper sulfate in a plastic container and pour the solution into the pool around the edge of the pool.

Most pool shock products may be used with this product. During heavy usage, shock pool once a week and use a filter clarifier. Old bridge copper sulfate is a very simple and easy way to maintain your pool water looking crystal clear year-round with very little maintenance. When used as directed Old bridge copper sulfate may be used for all pools (consult your pool professional on plaster or finished concrete pools before adding).

Discharge Directions: Before draining a treated pool, contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool or spa water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities.

[Optional Claims: This Pool Maintenance formula: Is simple to use; Has no chlorine smells; May be used with any type of filter system; Controls algae and bacterial odors; Has very little effect on pH; Unlike other products Old bridge copper sulfate will not evaporate out of your water; Compatible with most pool chemicals.]

FRESHWATER SNAIL CONTROL

To kill parasites causing "swimmers itch" it is necessary to kill the various species of host snails with a maximum 1.5 ppm Old bridge copper sulfate (0.375 ppm metallic copper). In a body of water containing fish, only half of the area may be treated at once. Use the section CALCULATIONS FOR AMOUNT OF WATER AND COPPER SULFATE PENTAHYDRATE TO BE USED to calculate the amount of Copper Sulfate Pentahydrate crystals you will need to apply to the area to be treated. Apply Copper Sulfate crystals to the surface of the water or dissolve in water and make a surface spray. Keep swimmers and livestock out of the pond for 5 days following treatment; doubling this period in very soft waters.

Do not make more than two applications per year. In the case where only half of the pond is being treated, it counts as half an application. In the state of New York, copper sulfate is considered a restricted use pesticide for snail control.

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. This is an effective means to control roots in residential and commercial sewers. Do not apply more than maximum annual application rate of 1 lb. metallic copper (4 lbs. product) per linear foot per year.

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 of this product (0.5 pounds metallic copper) by pouring directly into drain. No more than 2 pounds of product (0.5 pounds metallic copper) may be applied per drain per year. Maximum annual application rate of 0.5 lbs. metallic copper (2 lb. product) per drain per year. This product may not be used in municipal or public storm drains and storm sewers.

SEWER PUMPS AND FORCE MAINS: At the storage well inlet, place a cloth bag containing 2 lbs of this product (0.5 pounds metallic copper). Repeat every six months 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 this product. It is important not to wait until a stoppage occurs because some water flow is necessary to move this product to the area of root growth. Usually, within 3 to 4 weeks, after roots have accumulated sufficient Copper Sulfate Pentahydrate, the roots will die and begin to decay, and water flow should increase. As the roots re-grow, follow-up treatments with this product may be required every 6 months. Applications may be made each year in the spring after plant growth begins, during late summer or early fall, or anytime a reduced water flow, thought to be caused by root growth, occurs. Apply 1 pound of this product (0.25 pounds metallic copper) every six months to household sewers. Add this product to sewer lines by pouring about ½ pound increments into the toilet bowl nearest the sewer line and flush. Repeat this process until recommended dose has been added. Or remove cleanout plug and pour entire recommended quantity directly into the sewer line. Replace the plug and flush toilet several times. Do not apply Copper Sulfate through sink or tub as it will corrode metal drains. If system is equipped with septic tank, Copper Sulfate will precipitate in the septic tank and little will pass into the absorption drain field. To treat drain field pipes, add 2 pounds of Copper Sulfate (0.5 pounds metallic copper) once a year to the distribution box located between the septic tank and the drain field. If the distribution box does not have an opening, it would be advisable to install a clean out plug opening into the outlet pipe from the septic tank leading to the drain field for effective root control in the drain field pipes.

***NOTE:** Do not use a sewer additive where prohibited by State Law. State Law prohibits the use of this product in sewer systems in the State of Connecticut. Not for sale or use in California counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma for root control in sewers. Not for sale or use in septic systems in the State of Florida.

CROP USE DIRECTIONS

TO CONTROL ALGAE IN RICE FIELDS (Domestic and Wild): Application should be made when algae has formed on the soil surface in the flooded field. Applications are most effective when made prior to algae leaving the soil surface and rising to the surface of the water. For a 3-inch flood depth, apply Copper Sulfate at a rate of 2.72 lbs. (0.68 pounds metallic copper) per acre at the first sign of algae. Apply Copper Sulfate crystals to the surface of the water or dissolve in water and make a surface spray. For a 6-inch flooded depth, use 5.44 lbs. (1.36 pounds metallic copper) per acre. Adjust the rate according to the average water depth, not to exceed the maximum application rate of 4 ppm of Copper Sulfate (1 ppm metallic copper), which is equivalent to 10.88 lbs. of Copper Sulfate (2.72 pounds metallic copper) per acre-foot of water. The minimum retreatment interval is 14 days. The maximum annual application rate must not be greater than 5.48 lbs metallic copper (21.9 lbs product) per acre-foot per year for control of algae in water-seeded rice straw.

TO CONTROL TADPOLE SHRIMP IN RICE FIELDS: Application should be made to the flooded rice fields anytime the pest appears from planting time until the seedlings are well rooted and have emerged through the water. For a 3-inch flood depth, apply 6.75 pounds (1.69 pounds metallic copper) per acre. For a flood depth of 6 inches, use 13.6 lbs. (3.4

pounds metallic copper) per acre. Apply Copper Sulfate crystals to the surface of the water or dissolve in water and make a surface spray. Adjust the rate according to the average water depth, not to exceed the maximum application rate of 10 ppm of Copper Sulfate (2.5 ppm metallic copper), which is equivalent to 27.2 pounds of Copper Sulfate (6.8 pounds metallic copper) per acre of water. The maximum annual application rate must not be greater than 13.7 lbs. metallic copper (54.8 lbs product) per acre-foot per year for control of tadpole shrimp.

In aquatic rice fields for control of tadpole shrimp and algae, do not exceed one application per field during any 24-month period. This statement applies only to crops intended for organic certification, and otherwise shall not conflict with any conventional label requirement. The maximum annual application rate must be no greater than 13.7 lbs. of metallic copper per acre-foot per year.

Rice – Foliar Application

Copper may be applied at a maximum rate of 3.6 pounds product (0.9 pounds of metallic copper) per application with 2 applications per year (7.2 pounds product/1.8 pounds metallic copper annual maximum).

Non-Bordeaux Applications

Crop: Pest	Season	Copper Mixture	Max. Rate per Application (lbs product/A)	Max. Rate per Year (lbs. product/A)	Minimum Retreatment Interval	Use Notes
Apple: Fireblight	Dormant up to Silver Tip Stage	5 lbs. of product/ 100 gals of water	Dormant Use: 24 lbs. (6 lbs. metallic copper) Silver-Tip Use: 24 lbs. (6 lbs. metallic copper)	64 lbs. (16 lbs. metallic copper)	N/A – Only one application per year	Spray uniformly to the point of runoff. Do not apply after silver tip stage. After silver tip, severe burn will occur on any exposed green tissue. DO NOT mix lime to make a Bordeaux spray for this treatment.
Grape: Powdery Mildew	Dormant	4 lbs. product/ 100 gals of water	12 lbs. (3 lbs. metallic copper)	80 lbs. (20 lbs. metallic copper)	3 days	Apply in spring before bud-swell and before any green tissue is present. Apply in a high-volume spray of 300 gals water per acre. Direct spray to thoroughly wet the dormant vine, especially the bark of the trunk, head or cordons.
Potatoes: Late Blight (suppression)	Vine-Kill	Ground equipment: (10 lbs. per acre in 10 to 100 gals of water) Aerial equipment: 10 lbs. per acre in 5 to 10 gals of water with Diquat	10 lbs. (2.5 lbs. metallic copper)	100 lbs. (25 lbs. metallic copper)	5 days	Apply to enhance vine-kill and suppress late blight-apply at vine-kill stage. Additional applications can be made with Diquat if needed to within 7 days of harvest. Old bridge copper sulfate may be applied alone until harvest to suppress late blight. NOTE: This product can be mixed with Diquat for use on potatoes in accordance with the most restrictive of label limitations and precautions. No label dosage rates should be exceeded.

BORDEAUX SPRAY MIXTURE

Understanding Bordeaux Formulations: If the Bordeaux mixture instructions read 10-10-100, the first figure indicates the number of lbs of Old bridge copper sulfate. The second figure is the lbs of hydrated spray lime and the third figure is the gallons of water to be used. Use as a full coverage spray. In the instructions below, weight of copper sulfate in lbs is followed by weight expressed as metallic copper, e.g., 1 lb Old bridge copper sulfate equals 0.25 lb metallic copper.

Preparation of Bordeaux Spray Mixture: Fill a tank 1/4 full with water. Then, with agitator running, mix in product through a copper, bronze, stainless steel or plastic screen. Add water so the tank is 3/4 full. Mix in the hydrated spray lime through the screen and finish filling the tank with water.

Crop: Pest	Season	Bordeaux Mixture	Max. Rate per Application (lbs product/A)	Max. Rate per Year (lbs. product/A)	Minimum Retreatment Interval	Use Notes
Almond, Apricot, Peach, Nectarine: Shot Hole Fungus	Dormant late fall or early spring	10-10-100	32 lbs (8 lbs metallic copper)	72 lbs (18 lbs metallic copper)	7 days	Apply as a dormant spray in late fall or early spring.
Almond, Apricot, Cherry, Peach, Nectarine, Plum, Prune: Brown Rot Blossom Blight	Late Dormant	10-10-100	32 lbs (8 lbs metallic copper)	72 lbs (18 lbs metallic copper)	7 days	Apply as a late dormant spray when buds begin to swell.
Blueberries: Bacterial Canker (Not for use in California)	Fall	8-8-100	8.4 lbs (2.1 lbs metallic copper)	33.6 lbs (8.4 lbs metallic copper)	7 days	Prepare and apply in the fall before heavy rains begin and again 4 weeks later.
Bulbs (Easter Lily): Botrytis Blight		10-10-100	10 lbs (2.5 lbs metallic copper)	300 lbs (75 lbs metallic copper)	7 days	Apply as a foliar spray with 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 persist. Avoid spray just before flower cutting season if residues are a problem. Do not apply any additional copper pesticide to this land for 36 months.
Bulbs (all other ornamentals, Tulip, Gladiolus): Botrytis Blight		8-8-80 Bordeaux	8 lbs (2 lbs metallic copper)	80 lbs (20 lbs metallic copper)	7 days	Apply as a foliar spray with 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 persist. Avoid spray just before flower cutting season if residues are a problem.
Caneberries: For Leaf and Cane Spot and Pseudomonas Blight	Fall	8-8-100	8 lbs (2.0 lbs metallic copper)	40 lbs (10 lbs metallic copper) per acre per year.	7 days	Apply in the fall before heavy rains begin and again 4 weeks later.
Cherry (Sweet): Dead Bud, Bacterial Canker (Pseudomonas Syringae)	Fall-Late winter	12-12-100	32 lbs (8 lbs metallic copper)	72 lbs (18 lbs metallic copper)	7 days	Apply at leaf fall and again in late winter before buds begin to swell. In wet cool Northwest U.S. winters, a third spray may be needed between above sprays.
Cherry (Sour): Leaf Spot	Spring	10-10-100	6 lbs (1.5 lbs metallic copper) (60 gallons Bordeaux Mixture)	72 lbs (18 lbs metallic copper)	5 days	Apply as a full coverage spray after petal fall or as recommended by the State Extension Service.
Citrus ¹ : Bacterial Blast	Fall	10-10-100	12.6 lbs (3.15 lbs metallic copper)	50.4 lbs (12.6 lbs metallic copper)	7 days	Apply a spray in late October to early November or before fall rains begin. Make a complete coverage spray using 10 to 25 gals per mature tree.
Citrus ¹ -Lemon, Orange, Grapefruit: Phytophthora Brown Rot	Fall-Winter	3-4.5-100	12.6 lbs Copper Sulfate Crystals (3.15 lbs metallic copper)	50.4 lbs (12.6 lbs metallic copper)	7 days	Apply only where there is no history of copper injury or use a 3-2-6-100 (Zinc Sulfate-Copper Sulfate Crystals-Hydrated Lime-Gallons of water) Bordeaux mixture. Spray 6 gals on skirt of tree 3 to 4 ft high and 2 to 4 gals on trunk and ground under

Crop: Pest	Season	Bordeaux Mixture	Max. Rate per Application (lbs product/A)	Max. Rate per Year (lbs. product/A)	Minimum Retreatment Interval	Use Notes
						tree. If <i>P. hibernalis</i> is present, use 10 to 25 gals to completely cover each tree. Apply in November or December just before or after first rain. In severe brown rot season, apply second application in January or February.
Citrus ¹ -Lemon, Orange, Grapefruit: Septoria Fruit, Leaf Spot; Central California – Brown Rot, Zinc, Copper Deficiencies	Fall	3-2-6-100 (Zinc Sulfate-Copper Sulfate Crystals-Hydrated Lime-Gallons of water)	12.6 lbs (3.15 lbs metallic copper)	50.4 lbs (12.6 lbs metallic copper)	7 days	Apply 10 to 25 gals to completely cover each tree. Apply in October, November or December before or just after first rain.
Grape: Downy Mildew		2-6-100	12.0 lbs (3.0 lbs metallic copper)	80.0 lbs (20.0 lbs metallic copper)	3 days	Apply spray beginning when downy mildew is detected. Repeat as needed to achieve and maintain control. This mixture and its use will exhibit some phytotoxicity on most varieties.
Olive: Olive Leaf Spot (Peacock spot)	Fall-Winter	10-10-100	24 lbs (6.0 lbs metallic copper)	72 lbs (18 lbs metallic copper)	30 days	Apply in autumn before heavy winter rains to prevent peacock spot. In wet winters, a repeat spray may be needed in mid-winter. In areas with less than 10 inches of annual rainfall, a 5-5-100 Bordeaux may be used.
Olive: Olive Knot	Winter-Spring	10-10-100	24 lbs (6.0 lbs metallic copper)	72 lbs (18 lbs metallic copper)	30 days	Apply before heavy winter rains and again in the spring. Injury may occur in areas of less than 10 inches of rainfall.
Peach: Leaf Curl	Late Fall – Early Spring	10-10-100	32 lbs (8 lbs metallic copper)	72 lbs (18 lbs metallic copper)	7 days	Apply at leaf fall or as a dormant spray in late fall or early spring before buds begin to swell.
Walnuts: Walnut Blight	Spring	15-10-100	16 lbs (4.0 lbs metallic copper) per acre per application.	DO NOT exceed 128 lbs (32 lbs metallic copper) per acre per year.	7 days	Apply in early Spring pre-bloom before catkin blooms are showing (10-20% pistillate) before or after rain. Use only if Bordeaux mixture has been shown to be non-phytotoxic in your area. If desired, add one-half gallon of summer oil emulsion per 100 gals of water. NOTE: Addition of summer oil emulsion to pre-bloom and early bloom sprays may result in plant injury.

1. Adding foliar nutritionals to spray mixtures containing Old Bridge Copper Sulfate or other products and applying to citrus during the post-bloom period when young fruit is present may result in spray burn.

CHEMIGATION INSTRUCTIONS

Apply this product only through one or more of the following types of systems: sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation system(s). Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential area, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is

open to the public such as golf courses or retail greenhouses. Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period. At the top of the sign shall be the words "KEEP OUT", 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 a color that sharply contrasts with their immediate background. This sign is in addition to any sign posted to comply with the Worker Protection Standard.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS:

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into the reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. See Treatment Instructions, below.

SPRINKLER CHEMIGATION:

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. This pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

TREATMENT INSTRUCTIONS:

Do not apply when wind speed favors drift beyond the area intended for treatment. When mixing, fill nurse tank half full with water. Add Copper Sulfate Crystals slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the compatibility jar test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all cautions and limitations on the label of all products used in mixtures. Copper Sulfate Crystals should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool and dry place. If paper bag, super sack, or jug is damaged place in a plastic bag. Shovel any spills into a plastic bag and seal with tape. Keep pesticide in original container. Do not put concentrate or dilutions of concentrate 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: Non-refillable container: Do not reuse or refill this container.

Super Sack and Paper Bags: Completely empty bag into application equipment, then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Plastic Jugs: Triple rinse container promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill the container ¼ full with water and recap. Shake for ten seconds. Pour rinsate into application equipment or a mix tank or store for future use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or, if allowed by State and Local authorities, by burning. If burning, stay out of smoke.

CONDITIONS OF SALE LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

Read and follow all package directions carefully. Purchaser and user assume all risks associated with improper use, or application or other factors beyond Old Bridge's control. Old Bridge warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the risks referred above. **OLD BRIDGE MAKES NO AND THE LAW SHALL NOT FIND ANY EXPRESSED OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.** To the extent consistent with applicable law, purchaser's use and sole remedy against Old Bridge for any cause of action related to the handling or use of this product shall be for damages, for the amount of which shall not exceed the price paid for the product that causes the alleged loss, damages, injury, or other claim to the extent consistent with applicable law. In no event shall Old Bridge be liable for special, indirect, incidental or consequential damages or expenses. By purchasing or using this product, purchaser or user accept the foregoing conditions of sale and limitation of warranty, liability, and remedies.

ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S. (CUPRIC SULFATE), 9, UN3077, PGIII, RQ CAS NO. 7758-99-8

For Technical Information and MSDS Call Old Bridge Chemicals at (732) 727-2225
or e-Mail: sales@OldBridgeChem.com

**OLD BRIDGE CHEMICALS, INC.
554 Waterworks Road
Old Bridge, New Jersey 08857**

NON-COMMERCIAL LABEL

COPPER	GROUP	M!	FUNGICIDE
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Old Bridge Chemicals, Inc.

OLD BRIDGE COPPER SULFATE

Net Weight:

50, 2000 pounds (22.68, 907.2 kg)

EPA Reg. No. 46923-4

EPA Est. No. 46923-NJ-1

ACTIVE INGREDIENT

Copper Sulfate Pentahydrate*: CAS # 7758-99-899.0%

OTHER INGREDIENTS1.0%

TOTAL100.0%



* Metallic Copper Equivalent: 25.2%

Certified to ANSI/NSF 60

**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).

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 eye.• Call a poison control center or doctor for treatment advice.
If Swallowed:	<ul style="list-style-type: none">• Call 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 mouth-to-mouth, if possible.• Call 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 the poison control center or doctor for treatment advice.

HOT LINE SERVICE

Have the product container or label with you when calling a poison control center or doctor, or for going for treatment.
You may contact 800-275-3924 for emergency medical information.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

See additional precautionary statements and directions for use [on side/back panel] [inside pamphlet, booklet, leaflet].

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Do not get in eyes or on clothing. 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 to these waters.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear the following:

- Long sleeve shirt,
- long pants,
- shoes plus socks,
- protective eyewear such as goggles, face shield or safety glasses
- chemical resistant gloves made of: barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride ≥ 14 mils, or viton ≥ 14 mils.

Follow manufacturer's instructions for cleaning or 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 materials that have been drenched or heavily contaminated with 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.
- 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. Wash the outside of gloves before removing. As soon as possible, was thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

AQUATIC USES (excluding swimming pools, spas, hot tubs, fountains and aquatic agriculture): This 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. Water 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. The oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than $\frac{1}{2}$ 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 (<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 the potential acute toxicity to non-target aquatic organisms.

TERRESTRIAL USES: This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly drained soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms adjacent to treated areas. Do not apply directly to water, or to area where surface water is present, or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing or equipment wash water or rinsate.

Stormwater Advisory Statement: This product may be applied for the purposes of root intrusion control in storm drains or storm sewers than can discharge directly or indirectly into ephemeral or permanent waterbodies. This product must not be used in any municipal or public storm sewer or "MS4" system, or any storm drain system otherwise covered under an

NPDES MS4 discharge permit. Copper will accumulate with repeated applications in the waterbodies to which treated storm drains/sewers discharge.

To the extent possible, avoid simultaneous treatments of multiple drain systems that discharge to the same waterbody. Staggering applications to individual stormwater collection points to allow interceding storm events to clear the product from previously treated drains can help reduce the impact to aquatic organisms in receiving waterbodies. Development of and adherence to, a pesticide management plan for storm drains is encouraged.

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 adults, children, or pets, either directly or through drift. Do not allow adults, children, or pets to enter the treated area until dusts have settled.

GENERAL INSTRUCTIONS FOR USE IN ALGAE CONTROL

When using Copper Sulfate to control algae, there are many factors to consider such as water hardness, temperature of the water, type and quantity of vegetation to be controlled and the amount of water flow. Algae can be controlled more easily and effectively if treatment with Copper Sulfate is made soon after algae growth has started. Under such circumstances, small amounts of Copper Sulfate can effectively control algae in water. However, if treatment is delayed until large amounts of algae are present larger quantities of Copper Sulfate will be required. Control of algae in water systems is not always permanent. Usually algae is more difficult to control with Copper Sulfate when water temperatures are low. The dose rates for Copper Sulfate are based on a water temperature of 60°F or higher. Larger amounts of Copper Sulfate will be required in hard water. Normally, larger quantities of Copper Sulfate will be required to kill algae in water that is flowing than in a body of stagnant water: If possible, curtail the flow of water before treatment and hold dormant for about three days after treatment or until algae have begun to die. When preparing a Copper Sulfate solution in water, it is best that the mixing vessel be made of plastic or glass. Metal containers lined with plastic or painted or enameled are permissible. Galvanized containers are to be avoided. It is best to treat algae on calm, sunny days when heavy mats of filamentary algae are most likely to be floating on the surface where it can be sprayed directly. When in doubt about the concentration to be used, it is recommended to start with a lower concentration and gradually increase the concentration until the algae is killed.

CALCULATIONS FOR AMOUNT OF WATER AND COPPER SULFATE PENTAHYDRATE TO BE USED

A. Calculate water volume as follows:

1. Obtain surface area by measuring regular shaped ponds or mapping irregular ponds or by use of a previously recorded data or maps.
2. Calculate average depth by measuring depth in a regular pattern and taking the mean of these readings or by use of previously recorded data.
3. Multiply surface area in square feet by average depth in feet to obtain cubic feet of water volume, or
4. Multiply surface area in acres by average depth in feet to obtain total acre feet of water volume. *For a body of water that contains fish, only ½ of the area may be treated at one time. After calculating the area of the body of water as instructed above, divide this number by 2. Use that number to calculate weight of water and amount of Copper Sulfate Pentahydrate required to treat half of the body of water.

B. 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 total pounds of water.

C. Calculate amount of Copper Sulfate Pentahydrate to add:

To calculate the weight of Copper Sulfate Pentahydrate needed to achieve the desired concentration, multiply the weight of water in pounds by the recommended concentration. Since the recommended concentrations are given in parts per million (ppm), first convert the value to a decimal equivalent. A value of 1 ppm is equivalent 0.000001 as a decimal value. Thus, the amount of Copper Sulfate Pentahydrate required to treat 1 acre-foot (2,720,000 pounds) of water with 1 ppm of Copper Sulfate Pentahydrate would be $0.000001 \times 2,720,000 = 2.72$ lbs. Copper Sulfate Pentahydrate.

FOR SMALL PONDS: Follow the directions in “A” above. Calculate the weight of the water to be treated by multiplying the volume in cubic feet (ft³) by 62.44 to obtain total pounds of water. For 1 ppm of Copper Sulfate Pentahydrate multiply

the pounds by 0.000001. The result is pounds of Copper Sulfate Pentahydrate. The amount of Copper Sulfate Pentahydrate to treat a pond 100 ft. by 100 ft. by 2 ft. deep: $100 \times 100 \times 2 = 20,000 \text{ ft}^3$
 $20,000 \text{ ft}^3 \times 62.44 \text{ lbs.} = 1,248,800 \text{ lbs. of water} \times 0.000001 = 1.25 \text{ pounds of Copper Sulfate Pentahydrate.}$

Treatment of algae can result in oxygen loss from decomposition of dead algae. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat $\frac{1}{3}$ to $\frac{1}{2}$ of the water area in a single operation and wait 14 days between treatments. Begin treatments along the shore and proceed outwards 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 ppm Copper Sulfate Pentahydrate).

SPECIFIC INSTRUCTIONS

AQUATIC USES (EXCLUDING SWIMMING POOLS, SPAS, HOT TUBS, FOUNTAINS AND AQUATIC AGRICULTURE): 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 $\frac{1}{2}$ 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 algicides to high density bloom 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 (≤ 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 $> 3.0 \text{ mg/L}$, 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.

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.

TO CONTROL ALGAE IN IMPOUNDED WATER, LAKES AND PONDS: There are several methods by which to apply Copper Sulfate to impounded water. Probably the simplest and the most satisfactory method is to dissolve the Copper Sulfate crystals in water and spray the solution over the body of water. A small pump mounted in the boat can easily be used for this purpose. Copper Sulfate may be broadcast directly on the water surface from a boat. Where the situation permits, Copper Sulfate may be applied under the water by dragging burlap bags filled with Copper Sulfate through the water by means of a boat. Care should be taken that the course of the boat is such as to cause even distribution of the chemical. In large lakes, it is customary for the boat to travel in parallel lines about 20 to 100 feet apart. Continue dragging the burlap bags over the treated area until the minimum dosage is achieved and all the crystals have been dissolved. For all application methods described, begin treatment along the shoreline and proceed outward until $\frac{1}{3}$ to $\frac{1}{2}$ of the total area has been treated. No more than half of the water body may be treated at a time. The minimum treatment interval is 14 days. If the treated water is to be used as a source of potable water, the metallic copper concentration must not exceed one ppm (4 ppm Copper Sulfate).

COPPER SULFATE REQUIRED FOR TREATMENT OF DIFFERENT GENERA OF ALGAE:

The genera of algae listed below are commonly found in impounded water, lakes, ponds, and reservoirs in the United States. Use the lower recommended rate of Copper Sulfate in soft waters (less than 50 ppm methyl orange alkalinity) and higher concentration in hard water (above 50 ppm alkalinity).

Always consult State Fish and Game Agency before applying this product to municipal waters.

PRODUCT CONCENTRATION:	¼ to ½ ppm	½ to 1 ppm	1 to 1½ ppm	1½ to 2 ppm
POUNDS PRODUCT/ ACRE FOOT:	0.67 to 1.3	1.3 to 2.6	2.6 to 3.9	3.9 to 5.3
POUNDS METALLIC COPPER/ACRE FOOT:	0.168 to 0.325	0.325 to 0.65	0.65 to 0.975	0.975 to 1.325
Cyanophyceae (Blue-Green)	Anabaena Anacystis Aphanizomenon Gloeotrichia Gomphosphaeria Polycystis Rivularia	Cylindrospermum Oscillatoris Pleustonema	Nostoc Phormidium	Calothrix Symploca
Chlorophyceae (Green)	Closterium Hydrodictyon Spirogyra Ulothrix	Botryococcus Cladophora Coelastrum Drapamaldia Enteromorpha Gloeocystis Microspora Tribonema Zygnema	Chlorella Crucigenia Desmidium Golenkinia Oocystis Palmelia Pithiphora Staurostrum Tetraedron	Ankistrodesmus Chara Nitella Scenedemus
Diatomaceae (Diatoms)	Asterionella Fragilaria Melorisa Navicula	Gomphonema Nitzschia Stephanodiscus Synedra Tabellaria	Achnanthes Cymbella Neidium	---
Protozoa (Flagellates)	Dinobryon Synura Uroglena Volvox	Ceratium Cryptomonas Euglena Glenodinium Mallomonas	Chlamydomonas Haematococcus Peridinium	Eudorina Pandorina

CONTROL OF ALGAE AND BACTERIAL ODORS IN SWIMMING POOLS: To treat and prevent algae and odors, apply 1 tablespoon of Old bridge copper sulfate for every thousand gallons of pool water. This will result in a concentration of 1.0 ppm of dissolved copper. Prior to application, the pH of the pool should be 7.2-7.6. Dissolve the Old bridge copper sulfate in water in a plastic container and pour the solution into the pool around the edge of the pool. Never add Old bridge copper sulfate while swimming. As soon as the solution disperses in the pool water, you may reenter the pool.

Using a copper test kit (this may be purchased at any pool supply store) check copper levels every 2 weeks. As needed, apply a maintenance dosage of ½ tablespoon per thousand gallons of pool water to maintain a 0.7 to 1.0 ppm concentration. Do not exceed a 1.0 ppm copper concentration. Prior to application, the pH of the pool should be 7.2-7.6. Dissolve the required amount of Old bridge copper sulfate in a plastic container and pour the solution into the pool around the edge of the pool.

Most pool shock products may be used with this product. During heavy usage, shock pool once a week and use a filter clarifier. Old bridge copper sulfate is a very simple and easy way to maintain your pool water looking crystal clear year-round with very little maintenance. When used as directed Old bridge copper sulfate may be used for all pools (consult your pool professional on plaster or finished concrete pools before adding).

Discharge Directions: Before draining a treated pool, spa, hot tub, or fountain, contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool or spa water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities.

[Optional Claims: This Pool Maintenance formula: Is simple to use; Has no chlorine smells; May be used with any type of filter system; Controls algae and bacterial odors; Has very little effect on pH; Unlike other products Old bridge copper sulfate will not evaporate out of your water; Compatible with most pool chemicals.]

FRESHWATER SNAIL CONTROL

To kill parasites causing "swimmers itch" it is necessary to kill the various species of host snails with a maximum 1.5 ppm Old bridge copper sulfate (0.375 ppm metallic copper). In a body of water containing fish, only half of the area may be treated at once. Use the section CALCULATIONS FOR AMOUNT OF WATER AND COPPER SULFATE PENTAHYDRATE TO BE USED to calculate the amount of Copper Sulfate Pentahydrate crystals you will need to apply to the area to be treated. Apply Copper Sulfate crystals to the surface of the water or dissolve in water and make a surface spray. Keep swimmers and livestock out of the pond for 5 days following treatment; doubling this period in very soft waters. Do not make more than two applications per year. In the case where only half of the pond is being treated, it counts as half an application. In the state of New York, copper sulfate is considered a restricted use pesticide for snail control.

SEWER TREATMENT-ROOT DESTROYER

NOTE: Do not use a sewer additive where prohibited by State Law. State Law prohibits the use of this product in sewer systems in the State of Connecticut. Not for sale or use in California counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma for root control in sewers. Not for sale or use in septic systems in the State of Florida

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. This product is an effective means to control roots in residential and commercial sewers. Do not apply more than maximum annual application rate of 1 lb. metallic copper (4 lbs. product) per linear foot per year.

RESIDENTIAL OR HOUSEHOLD SEWER SYSTEMS: When a reduced water flow is first noticed, and root growth is thought to be the cause, treat with this product. It is important not to wait until a stoppage occurs because some water flow is necessary to move this product to the area of root growth. Usually, within 3 to 4 weeks, after roots have accumulated sufficient Copper Sulfate Pentahydrate, the roots will die and begin to decay and water flow should increase. As the roots re-grow, follow-up treatments with this product may be required every 6 months. Applications may be made each year in the spring after plant growth begins, during late summer or early fall, or anytime a reduced water flow, thought to be caused by root growth, occurs. Apply 1 pound of this product (0.25 pounds metallic copper) every six months to household sewers. Add this product to sewer lines by pouring about ½ pound increments into the toilet bowl nearest the sewer line and flush. Repeat this process until recommended dose has been added. Or remove cleanout plug and pour entire recommended quantity directly into the sewer line. Replace the plug and flush toilet several times. Do not apply Copper Sulfate through sink or tub as it will corrode metal drains. If system is equipped with septic tank, Copper Sulfate will precipitate in the septic tank and little will pass into the absorption drain field. To treat drain field pipes, add 2 pounds of Copper Sulfate (0.5 pounds metallic copper) once a year to the distribution box located between the septic tank and the drain field. If the distribution box does not have an opening, it would be advisable to install a clean out plug opening into the outlet pipe from the septic tank leading to the drain field for effective root control in the drain field pipes.

STORAGE AND DISPOSAL

Do not contaminate food or feed by storage or disposal.

Pesticide Storage: Store in original container and place in a locked storage area.

Pesticide Disposal: Call your local solid waste agency for disposal instructions. Never pour unused product down the drain or on the ground.

Container Handling: Non-refillable container. Do not reuse or refill this container.

If empty: Offer for recycling if available or discard in a sanitary landfill. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

CONDITION OF SALE

LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

Read and follow all package directions carefully. Purchaser and user assume all risks associated with improper use, or application or other factors beyond Old Bridge's control. Old Bridge warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the risks referred above. **OLD BRIDGE MAKES NO AND THE LAW SHALL NOT FIND ANY EXPRESSED OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.** To the extent consistent with applicable law, purchaser's use and sole remedy against Old Bridge for any cause of action related to the handling or use of this product shall be for damages, for the amount of which shall not exceed the price paid for the product that causes the alleged loss, damages, injury, or other claim to the extent consistent with applicable law. In no event shall Old Bridge be liable for special, indirect, incidental or consequential damages or expenses. By purchasing or using this product, purchaser or user accept the foregoing conditions of sale and limitation of warranty, liability, and remedies.

ENVIRONMENTALLY HAZARDOUS SUBSTANCE
SOLID, N.O.S. (CUPRIC SULFATE),
9, UN3077, PGIII, RQ CAS NO. 7758-99-8

For Technical Information and MSDS Call Old Bridge Chemicals at (732) 727-2225
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