TRIANGLE BRAND COPPER SULFATE CRYSTAL
US EPA AQUATIC PESTICIDE

FOR CONTROL OF WEEDS, ALGAE, AND MICROSCOPIC ORGANISMS IN IMPOUNDED WATER SOURCES (e.g., TANKS, RACEWAYS, PONDS, LAKES, AND RESERVOIRS)

NOTE: REFER TO ACCOMPANYING FDA LABEL FOR CONTROL OR PREVENTION OF MORTALITIES OR THE DISEASES ASSOCIATED WITH EXTERNAL AQUATIC PARASITES, BACTERIA, AND FUNGI (SAPROLEGNIASIS) OF CULTURED FRESH AND BRACKISH WATER FISHES

ACTIVE INGREDIENT:	
Copper sulfate pentahydrate*	99.0%
OTHER INGREDIENTS:	1.0%
TOTAL	100.0%

*Metallic copper equivalent 25.2%

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

Information for Right-to-Know States:
Copper sulfate pentahydrate: sulfuric acid, copper (2+) salt (1:1)/
CAS Reg. No. 7758-98-7; Water/CAS Reg. No. 7732-18-5

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Drink promptly a large quantity of milk, egg white, gelatin solution, or if these are not available, large quantities of water. Avoid alcohol. Do not give anything by mouth to an unconscious person.

IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.

IF ON SKIN: Remove contaminated clothes and shoes; immediately wash skin with soap and plenty of water and get medical attention.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed.

See side panel for additional precautionary statements.

EPA Reg. No. 1278-8

EPA Est. No. 1278-TX-1

Manufactured by:
Phelps Dodge Refining Corporation
El Paso, Texas 79998

ACCEPTED
JUL 9 1999
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 1278-8

Net Weight
50 Lbs./22.68 Kg.

PRECAUTIONARY STATEMENTS
DANGER
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Causes severe eye and skin irritation. Harmful if swallowed or absorbed through the skin. Avoid breathing mist or dust and contact with skin, eyes, or clothing. Causes substantial but temporary eye injury. May cause skin sensitization reactions in certain individuals.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, and protective eyewear.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent sites. Direct application of copper sulfate to water may cause a significant reduction in populations of aquatic invertebrates, plants, and fish. Do not treat more than one-half of lake or pond at one time to avoid depletion of oxygen levels due to decaying vegetation. Allow one to two weeks between treatments for oxygen levels to recover.

Trout and other species of fish may be killed at application rates recommended on this label, especially in soft or acid waters. However, fish toxicity generally decreases when the hardness of water increases. Do not contaminate water when disposing of equipment washwaters. Consult your State Fish and Game Agency before applying this product to public waters. Permits may be required before treating such waters.

STORAGE AND DISPOSAL
STORAGE

Do not contaminate water, food, or feed by storage or disposal. Store unused product in original container only in a cool, dry area out of reach of children and animals. Store copper sulfate solution in stainless steel, fiberglass, polypropylene, PVC's, or plastic equipment. Do not use mild steel, nylon, brass or copper. Keep away from galvanized pipe and nylon equipment. If container or bag is damaged, place the container or bag in a plastic bag. Shovel any spills into plastic bags and seal with tape. In the event copper sulfate solution is spilled, neutralize with limestone or baking soda before disposal. Copper sulfate solution may deteriorate concrete.

DISPOSAL

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of 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. Open dumping is prohibited.
CONTAINER DISPOSAL: Do not reuse empty container. Completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Place the pesticide into application equipment. Then dispose of container in a sanitary landfill or by incineration if allowed by State and local authorities. If burned, stay out of smoke.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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, forest, 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 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls, waterproof gloves, shoes plus socks, and protective eyewear.

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 WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Protective clothing, including goggles, should be worn.

FORMULATION OF PESTICIDES

This product is suitable for use in the manufacturing of algaecides, fungicides, mildewcides, herbicides, wood preservatives, including CCA, ACA, and ACZA compounds and tanning and preserving agents for leather and hides.

It is the responsibility of formulators using this product to register all pesticidal formulations made from it with the EPA.

CONTROL OF ALGAE AND TADPOLE SHRIMP (TRIOPS LONGICAUDATUS) IN RICE FIELDS (DOMESTIC AND WILD)

Tadpole shrimp in rice fields may be effectively controlled by the prompt and proper use of Copper Sulfate Crystal. After the rice field has been flooded to a depth of 6 to 8 inches, the Copper Sulfate Crystal should be uniformly applied at a rate of 10 to 15 pounds per acre at the first sign of infestation.

Following these directions carefully should keep the concentration of copper sulfate less than 10 ppm. The "Diamond" size crystals are especially graded for maximum solubility.

POTATOES (Except California)

To enhance vine-kill and suppress late blight, apply 10 lbs. per acre in 10 to 100 gallons of water (ground equipment) or in 5 to 10 gallons (aerial equipment) with Diquat at vine-kill to enhance vine desiccation and suppress late blight. Additional applications can be made with Diquat if needed within 7 days of harvest. Triangle Brand Copper Sulfate Crystal 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.

SEWER TREATMENT FOR ROOT AND FUNGUS CONTROL*

Copper Sulfate Crystal is effective in keeping sewer lines free of roots.

FOR PARTIAL STOPPAGE: Add 1/2 pound of Copper Sulfate Crystal to sewer or drain and flush toward blockage with 5 gallons of water. Repeat at 6 month intervals to prevent growth of new roots.
FOR COMPLETE STOPPAGE: Physically remove the root blockage and repeat as above.
FOR HOUSEHOLD SEWERS: Use 2 to 6 lbs. Copper Sulfate Small Crystal twice yearly in spring and early fall. Apply in toilet bowl near sewer line. Flush 1/2 lb. portions at a time. Or, remove the clean-out plug and pour entire quantity directly into sewer line and flush with water. **Do not use in septic tank systems.**

FOR COMMERCIAL, INSTITUTIONAL AND MUNICIPAL USE:
SEWERS: Use 2 lbs. of Copper Sulfate Small Crystal each 6 to 12 months, applied to each junction or terminal manhole.
STORM DRAINS: Use 2 lbs. of Copper Sulfate Small Crystal per drain per year. Apply during period of light flow. In dry weather, induce a flow with hose. If storm drains become almost plugged, repeat treatment 3 or 4 times at two week intervals.
SEWER PUMPS AND FORCE MAINS: Place 2 lbs. of Copper Sulfate Small Crystal in a cloth bag at the storage wall inlet. Repeat as needed.
***State laws prohibit the use of this product in sewage systems in Connecticut and in the following nine counties in California: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma.**

FOR CONTROL OF WEEDS, ALGAE, AND MICROSCOPIC ORGANISMS IN IMPOUNDED WATER SOURCES (e.g., TANKS, RACEWAYS, PONDS, LAKES, AND RESERVOIRS)

It is a violation of New York State Law for anyone to apply this product to surface waters unless he is either privately or commercially certified in category 5 (aquatic), or possesses a purchase permit for the specific application proposed.

PRECAUTION CONCERNING FISH: The treatment of algae with Copper Sulfate Crystal can result in oxygen loss in the water from decomposition of dead algae. This can cause the fish to suffocate. Care should be taken when water temperature exceeds 85°F. At this water temperature, aquatic plants treated with copper sulfate decompose rapidly causing an increase in oxygen depletion. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation. Wait 7 to 14 days between treatments. Begin treatments along the shore and proceed outwards in bands to allow fish to move into untreated water.

APPLICATION BY DRAGGING COPPER SULFATE CRYSTAL UNDER WATER: Large or small sized Copper Sulfate Crystal is placed in burlap bags or baskets and dragged through the water by means of a boat. Begin treatment along the shoreline and proceed outward until 1/3 to 1/2 of the total area has been treated. The path of the boat should insure a distribution that is even. In large lakes, the boat should move in parallel lines about 60 feet apart. Continue dragging until all of the weighed Copper Sulfate Crystal is dissolved.

APPLICATION BY SPRAYING COPPER SULFATE SOLUTION ON WATER SURFACE: A solution can be made with Copper Sulfate Powder or Fine Crystal which dissolve easily in water. This solution can then be sprayed on the pond or lake surface from a boat. When using this method, the wind direction is important as well as the operation of the boat. Do not endanger people or animals in the boat with the copper sulfate spray.

APPLICATION BY INJECTING COPPER SULFATE SOLUTION IN WATER: A solution can be made with Copper Sulfate Powder or Crystal. This solution can then be injected into the water via a piping system.

APPLICATION BY BROADCASTING DRY COPPER SULFATE CRYSTAL: Crystals may be broadcast directly on the water surface from the shore or from a properly equipped boat. Triangle Brand Crystals ranging from ±10 mesh to ±1/2 inch are preferred for this method of application. A specifically 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.

APPLICATION BY SPRAYING DRY COPPER SULFATE CRYSTAL FROM AIRPLANES AND HELICOPTERS: Professional personnel licensed by the State Agricultural Extension Service are allowed to apply Copper Sulfate Crystal in some states.

If treated water is to be used as a source of potable water, the metallic residual must not exceed 1 ppm copper. This equals 10.64 pounds per acre foot of water or 4 ppm of this product.

HOW TO FIND THE POUNDS OF COPPER SULFATE TO ADD TO WATER

To find acre-feet of water in a body of water, measure the body of water in feet. Calculate the surface area in square feet, divided by 43,560 (sq. ft./acre) times the average depth in feet.

1 acre-foot of water	=	Water measuring 208.7 ft. long by 208.7 ft. wide by 1 ft. deep.
1 acre-foot of water	=	43,560 cubic feet of water.
1 cubic foot of water	=	62.4 pounds.
1 acre-foot of water	=	(43,560)(62.4) = 2,720,000 pounds.

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acre-foot of water	=	(43,560)(62.4) = 2,720,000 pounds.

COPPER SULFATE PENTAHYDRATE IN WATER

POUNDS OF COPPER SULFATE CRYSTAL PER ACRE-FOOT OF WATER	=	PARTS (BY WT.) COPPER SULFATE CRYSTAL PER MILLION PARTS (BY WT.) OF WATER	=	PARTS (BY WT.) COPPER PER MILLION PARTS (BY WT.) OF WATER
0.67#/acre-foot	=	1/4ppm	=	0.0625 ppm
1.3#/acre-foot	=	1/2ppm	=	0.125 ppm
2.6#/acre-foot	=	1ppm	=	0.25 ppm
5.32#/acre-foot	=	2ppm	=	0.50 ppm

TREATMENT OF SOME ALGAE WITH COPPER SULFATE CRYSTAL

Dosage is in ppm of Copper Sulfate Crystal. A higher concentration is required if the water is hard. Consult with the State Fish and Game Agency before applying product in municipal waters.

0.25 to 0.50 ppm	0.50 to 1.00 ppm	1.00 to 1.50 ppm	1.50 to 2 ppm
CYANOPHYCEAE ORGANISM (BLUE GREEN)			
Anabaena	Cylindrospermum	Nostoc	Calothrix
Anacystis	Oscillatoria	Phormidium	Symploca
Aphanizomenon	Plectonema		
Gloeotrichia			
Gomphosphaeria			
Polycystis			
Rivularia			
CHLOROPHYCEAE ORGANISM (GREEN)			
Closterium	Botryococcus	Chlorella	Ankistrodemus
Hydrodictyon	Cladophora	Crucigenia	Chara*
Spirogyra	Coelastrum	Desmidium*	Nitella*
Ulothrix	Draparnaldia	Golenkinia	Scenedesmus
	Enteromorpha	Oocystis	
	Gloeocystis	Palmella	
	Microspora	Pithophora*	
	Tribonema	Staurastrum	
	Zygnema	Tetraedron	
DIATOMACEAE ORGANISM (DIATOMS)			
Asterionella	Gomphonema	Achnanthes	
Fragilaria	Nitzschia	Cymbella	
Melorias*	Stephanodiscus	Neidium	
Navicula	Synedra		
	Tabellaria		
PROTOZOA ORGANISM (FLAGELLATES)			
Dinobryon	Ceratium	Chlamydomonas	Eudorina*
Synura	Cryptomonas	Hawmatococcus*	Pandorina*
Uroglena*	Euglena	Peridinium	
	Glenodinium		
	Mallomonas		

*Not for use in California.

CONTROL OF WEEDS AND ALGAE IN FLOWING WATER

Potamogeton pondweeds, leafy and 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 per hour for each cubic foot per second of flow for 12 hours of each 24 hours. For 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.

Algae (such as filamentous green, pigmented flagellates, 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 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.)

Algae and weeds in irrigation systems by "slug" method of addition: Make a dump of Copper Sulfate Crystal into the irrigation ditch or lateral at 1/2 to 2 pounds per second of water per treatment. Repeat about every 2 weeks as needed. A dump is usually necessary every 5 to 30 miles depending on water hardness, alkalinity and algae concentration.

CONTROL OF ALGAE AND BACTERIAL ODOR IN SWIMMING POOLS

Apply 1 to 2 lbs. of Copper Sulfate Crystal per 60,000 gals. (8,000 cu. ft.) of water. This will result in a concentration of 0.5 to 1.0 ppm of dissolved copper. Dissolve the required amount of copper sulfate in a plastic container and pour the solution into the pool. Use the higher rate where visible algae are present. For maintenance dosages, use the lower rate. Repeat the lower rate to control the recurrence of algae and avoid the buildup of copper. Copper Sulfate Crystal may be used to help control pool odors and algae during the winter months. Apply the higher rate while the pool is not being used during the winter. Treated pool effluent should not be discharged where it will drain into lakes, streams, ponds, or public water.

CONTROL OF ALGAE AND BACTERIAL ODOR IN SEWAGE LAGOONS AND PITS
(Except California)

Application rates may vary depending on amounts of organic matter in effluent stream or retention ponds. Use 2 lbs. of Copper Sulfate Crystal in 60,000 gals. (8,000 cu. ft.) of effluent to yield 1 ppm of dissolved copper. Dosage levels may vary depending upon organic load.

Other Organic Sludges: Copper Sulfate Crystal solution must be thoroughly mixed with sludge. Dissolve 2 lbs. in 1-2 gals. of water and apply to each 30,000 gals. of sludge.

Useful formulas for calculating water volume and flow rates: Multiply the water volume in cu. ft. times 7.5 to obtain gallons.

Note: 1 C.F.S./Hr. = 27,000 Gals.
1 Acre Foot = 326,000 Gals.

CONTROL OF ALGAE AND BACTERIAL ODOR IN WATERSCAPES, DECORATIVE POOLS, AND FOUNTAINS

Apply in the spring or early summer when algae and bacteria first appear. The dosages are variable and depend upon algae/bacteria species, water hardness, water temperature, amount of algae and bacteria

present as well as whether water is clear, turbid, flowing or static. Preferably, the water should be clear with temperatures above 60° F. Higher dosages are required at lower water temperatures, higher algae and bacteria concentrations and for hard waters. For each 7,500 gals. of water, dissolve 1/4 lb. Copper Sulfate Crystal in one gallon of water. Pour the solution into the water to be treated. Several application points speed up dispersal. Static water requires less chemical than does flowing water. If uncertain about the dosage, begin with a lower dose and increase until control is achieved or until the maximum allowable level of copper has been reached.

NOTICE TO BUYER

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

DOT Hazard Class
RQ, Environmentally Hazardous Substances,
Solid, n.o.s., (Cupric Sulfate), 9, UN 3077, III

FDA Aquaculture Label

TRIANGLE BRAND COPPER SULFATE CRYSTAL
US FDA-CVM AQUATIC DRUG

FOR CONTROL OR PREVENTION OF MORTALITIES OR THE DISEASES ASSOCIATED WITH EXTERNAL AQUATIC PARASITES, BACTERIA, AND FUNGI (SAPROLEGNIASIS) OF CULTURED FRESH AND BRACKISH WATER FISHES

NOTE: REFER TO ACCOMPANYING EPA LABEL FOR CONTROLLING WEEDS, ALGAE, AND MICROSCOPIC ORGANISMS IN IMPOUNDED WATER SOURCES (e.g., TANKS, RACEWAYS, PONDS, LAKES, AND RESERVOIRS)

ACTIVE INGREDIENT	
Copper (cupric) sulfate pentahydrate*	99.0%
Other ingredients	1.0%
TOTAL	100.0%

*Metallic copper equivalent 25.2%.

KEEP OUT OF REACH OF CHILDREN

DANGER/PELIGRO

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(If you do not understand this label, find someone to explain it to you in detail.)

Information for Right-To-Know States:
Copper sulfate pentahydrate: sulfuric acid; copper (2+) salt (1:1)
CAS Reg. No. 7758-98-7: Water/CAS Reg. No. 7732-18-5

FOR CULTURED FRESH AND BRACKISH WATER FISHES

INDICATIONS FOR USE: For the control or prevention of mortalities or the diseases associated with the following external protozoan parasites: members of the genera *Amyloodinium, Ichthyophthirius, Ichtyobodo, Ambiphyra, Chilodonella, Trichophyra,* and the trichodinids.

For the control or prevention of mortalities or the disease associated with the bacterial pathogen, *Cytophaga columnaris.*

For the control or prevention of mortalities or the disease-associated fungal pathogens that are classified as members of the Family *Saprolegniaceae.*

NOTE: Do not apply copper sulfate to water that has less than 40 parts per million alkalinity without first doing a preliminary toxicity test on fish in the water in a separate container. Copper sulfate may be very toxic to trout and other species in soft or acid waters so preliminary testing is necessary.

Application of copper sulfate to water may cause a significant reduction in population of aquatic invertebrates, plants and algae. Dissolved oxygen may be depleted due to decaying material so careful monitoring of dissolved oxygen is recommended and supplemental aeration may be required to maintain satisfactory oxygen levels.

This product is not to be applied to public waters for fish disease prevention or control.

US FDA-CVM INAD No. 10-046

Manufactured by
Phelps Dodge Refining Corporation
El Paso, Texas 79998

ACCEPTED
JUL 9 1999
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 1278-8

Expiration Date: _____

Net Weight
50 Lbs./22.68 Kg.

DIRECTIONS FOR USE: Apply copper (cupric) sulfate to water at the rate of 1 part per million (ppm) copper sulfate per 100 ppm total alkalinity (as $CaCO_3$). One ppm is achieved by applying 2.72 pounds of copper sulfate per acre foot of water.

To find acre-feet of water in a body of water, measure the surface of the body of water in feet. Calculate the surface area in square feet, divided by 43,560 (square feet per acre), times the average depth in feet.

METHODS OF APPLICATION: To ponds: Copper sulfate can be applied directly as dry chemical to the water; being either broadcast over the surface of the water or mixed in the wake of a paddlewheel or other water circulating device. It can be applied from a boat by towing a cloth bag containing the predetermined amount of chemical in the wake of an outboard motor. It can be applied after first dissolving the chemical in water and distributing the solution evenly into the pond water.

To tanks and raceways: The tank or raceway volume and flowrate should be determined and a solution of copper sulfate prepared that will maintain the proper concentration when added continuously to the tank or raceway. Add enough copper sulfate to bring the tank or raceway volume up to the necessary concentration; then begin the continuous addition of the dissolved copper sulfate. The treatment should be maintained for 4 to 12 hours (governed by the efficacy of the treatment and the condition of the fish) after which the addition of copper sulfate should be discontinued.

DURATION OF TREATMENT: For most external protozoan parasitic and pathogenic bacterial diseases, a single episode treatment is indicated. For treatment of protracted parasitic infections, such as *Ichthyopthirius*, and pathogenic fungi, repeated treatment episodes may be indicated. Treatment intervals are dictated by water temperature, which controls the speed of change in the parasite's life cycle. Treatment intervals for *Ichthyophthirius* can be determined from the following table:

Water Temperature	Treatment Schedule
75° + F	Daily
65-74° F	1 Day Interval
55-64° F	2 Day Interval
45-54° F	3-4 Day Interval
Below 40° F	Weekly

STATEMENT OF PRACTICAL TREATMENT: If Swallowed: Drink promptly a large quantity of milk, egg white, gelatin solution, or if these are not available, large quantities of water. Avoid alcohol. Do not give anything by mouth to an unconscious person. **If in Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes and get medical attention. **If on Skin:** Remove contaminated clothes and shoes; immediately wash skin with soap and plenty of water and get medical attention. **Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed.

HAZARDS TO HUMANS AND DOMESTIC ANIMALS: Danger. Causes severe eye and skin irritation. Harmful if swallowed or absorbed through the skin. Avoid breathing mist or dust and contact with skin, eyes, or clothing. Causes substantial but temporary eye injury. May cause skin sensitization reactions in certain individuals. Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, and protective eyewear.

STORAGE: Do not contaminate water, food, or feed by storage or disposal. Store unused product in original container only in a cool, dry area out of reach of children and animals. If container or bag is damaged, place the container in a plastic bag. Shovel any spills into plastic bags and seal with tape.
PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of 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. Open dumping is prohibited.
CONTAINER DISPOSAL: Do not reuse empty container. Completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Place the pesticide into application equipment. Then dispose of container in a sanitary landfill or by incineration if allowed by State and local authorities. If burned, stay out of smoke.

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RQ, Environmentally Hazardous Substances, Solid, n.o.s., (Cupric Sulfate), 9, UN 3077, III

CONTROL/LOT NO. _____

11043

EPA Aquaculture Label

TRIANGLE BRAND COPPER SULFATE CRYSTAL
US EPA AQUATIC PESTICIDE

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ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent sites. Direct application of copper sulfate to water may cause a significant reduction in populations of aquatic invertebrates, plants, and fish. Do not treat more than one-half of lake or pond at one time to avoid depletion of oxygen levels due to decaying vegetation. Allow one to two weeks between treatments for oxygen levels to recover.

EPA Reg. No. 1278-8

EPA Est. No. 1278-TX-1

Manufactured by
Phelps Dodge Refining Corporation
P.O. Box 20001
El Paso, TX 79998

Net Weight
50 Lbs./22/68 Kg.

Trout and other species of fish may be killed at application rates recommended on this label, especially in soft or acid waters. However, fish toxicity generally decreases when hardness of water increases. Do not contaminate water when disposing of equipment wash waters. Consult your State Fish and Game Agency before applying this product to public waters. Permits may be required before treating such waters.

STORAGE AND DISPOSAL

STORAGE

Do not contaminate water, food, or feed by storage or disposal. Store unused product in original container only in a cool, dry area out of reach of children and animals. If container or bag is damaged, place the container in a plastic bag. Shovel any spills into plastic bags and seal with tape.

DISPOSAL

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of 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. Open dumping is prohibited.

CONTAINER DISPOSAL: Do not reuse empty container. Completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Place the pesticide into application equipment. Then dispose of container in a sanitary landfill or by incineration if allowed by State and local authorities. If burned, stay out of smoke.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

FOR CONTROL OF WEEDS, ALGAE, AND MICROSCOPIC ORGANISMS IN IMPOUNDED WATER SOURCES (e.g., TANKS, RACEWAYS, PONDS, LAKES, AND RESERVOIRS)

It is a violation of New York State Law for anyone to apply this product to surface waters unless he is either privately or commercially certified in category 5 (aquatic), or possesses a purchase permit for the specific application proposed.

PRECAUTION CONCERNING FISH: The treatment of algae with Copper Sulfate Crystal can result in oxygen loss in the water from decomposition of dead algae. This can cause the fish to suffocate. Care should be taken when water temperature exceeds 85°F. At this water temperature, aquatic plants treated with copper sulfate decompose rapidly causing an increase in oxygen depletion. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation. Wait 7 to 14 days between treatments. Begin treatments along the shore and proceed outwards in bands to allow fish to move into untreated water.

APPLICATION BY DRAGGING COPPER SULFATE CRYSTAL UNDER WATER: Large or small sized Copper Sulfate Crystal is placed in burlap bags or baskets and dragged through the water by means of a boat. Begin treatment along the shoreline and proceed outward until 1/3 to 1/2 of the total area has been treated. The path of the boat should insure a distribution that is even. In large lakes, the boat should move in parallel lines about 60 feet apart. Continue dragging until all of the weighed Copper Sulfate Crystal is dissolved.

APPLICATION BY SPRAYING COPPER SULFATE SOLUTION ON WATER SURFACE: A solution can be made with Copper Sulfate Powder or Fine Crystal which dissolve easily in water. This solution can then be sprayed on the pond or lake surface from a boat. When using this method, the wind direction is important as well as the operation of the boat. Do not endanger people or animals in the boat with the copper sulfate spray.

APPLICATION BY BROADCASTING DRY COPPER SULFATE CRYSTAL: Crystals may be broadcast directly on the water surface from the shore or from a properly equipped boat. Triangle Brand Crystals ranging from +10 mesh to +1/2 inch are preferred for this method of application. A specifically 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.

APPLICATION BY SPRAYING DRY COPPER SULFATE CRYSTAL FROM AIRPLANES AND HELICOPTERS: Professional personnel licensed by the State Agricultural Extension Service are allowed to apply Copper Sulfate Crystal in some states.

If treated water is to be used as a source of potable water, the metallic residual must not exceed 1 ppm copper. This equals 10.64 pounds per acre foot of water or 4 ppm of this product.

HOW TO FIND THE POUNDS OF COPPER SULFATE TO ADD TO WATER

To find acre-feet of water in a body of water, measure the body of water in feet. Calculate the surface area in square feet, divided by 43,560 (sq. ft./acre) times the average depth in feet.

1 acre-foot of water	=	Water measuring 208.7 ft. long by 208.7 ft. wide by 1 ft. deep.
1 acre-foot of water	=	43,560 cubic feet of water.
1 cubic foot of water	=	62.4 pounds.
acre-foot of water	=	(43,560)(62.4) = 2,720,000 pounds.

COPPER SULFATE PENTAHYDRATE IN WATER

POUNDS OF COPPER SULFATE CRYSTAL PER ACRE-FOOT OF WATER	=	PARTS (BY WEIGHT)COPPER SULFATE CRYSTAL PER MILLION PARTS (BY WEIGHT) OF WATER	=	PARTS (BY WEIGHT) COPPER PER MILLION PARTS (BY WEIGHT) PARTS (BY WEIGHT)
0.67#/acre-foot	=	1/4 ppm	=	0.0625 ppm
1.3#/acre-foot	=	1/2 ppm	=	0.125 ppm
2.6#/acre-foot	=	1 ppm	=	0.25 ppm
5.32#/acre-foot	=	2 ppm	=	0.50 ppm

TREATMENT OF SOME ALGAE WITH COPPER SULFATE CRYSTAL

Dosage is in ppm of Copper Sulfate Crystal. A higher concentration is required if the water is hard. Consult with the State Fish and Game Agency before applying product in municipal waters.

CYANOPHYCEAE ORGANISM (BLUE GREEN)

Anabaena	Cylindrospermum	Nostoc	Calothrix
Anacystis	Oscillatoria	Phormidium	Symploca
Aphanizomenon	Plectonema		
Gloeotrichia			
Gomphosphaeria			
Polycystis			
Rivularia			

CHLOROPHYCEAE ORGANISM (GREEN)

Closterium	Botryococcus	Chlorella	Ankistrodemus
Hydrodictyon	Cladophora	Crucigenia	Chara*
Spirogyra	Coelastrum	Desmidium*	Nitella*
Ulothrix	Draparnaldia	Golenkinia	Scenedesmus
	Enteromorpha	Oocystis	
	Gloeocystis	Palmella	
	Microspora	Pithophora*	
	Tribonema	Staurastrum	
	Zygnema	Tetraedron	

DIATOMACEAE ORGANISM (DIATOMS)

Asterionella	Gomphonema	Achnanthes
Fragilaria	Nitzschia	Cymbella
Melorias*	Stephanodiscus	Neidium
Navicula	Synedra	
	Tabellaria	

PROTOZOA ORGANISM (FLAGELLATES)

Dinobryon	Ceratium	Chlamydomonas	Eudorina*
Synura	Cryptomonas	Hawmatococcus*	Pandorina*
Uroglena*	Euglena	Peridinium	
	Glenodinium		
	Mallomonas		

*Not for use in California.

NOTICE TO BUYER

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

DOT Hazard Class
RQ, Environmentally Hazardous Substances, Solid, n.o.s., (Cupric Sulfate), 9, UN 3077, III