

829-210

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

11-8-1989

1/3

NOV 8 1989

Mr. Ronald L. Costa Rica  
Southern Agricultural Insecticides, Inc.  
P.O. Box 718  
Palmetto, FL 34220

Dear Mr. Costa Rica:

Subject: Label Revisions - Reregistration Standard  
for Copper Sulfate Dated March 21, 1989  
SA-50 Brand Copper Sulfate Granular Crystals  
EPA Registration No. 829-210  
Your Submission Dated October 11, 1989

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records. Please submit three (3) final copies for the above mentioned label.

Sincerely yours,

*Joanne I. Miller*

Joanne I. Miller  
Acting Product Manager (23)  
Fungicide-Herbicide Branch  
Registration Division (H7505C)

Enclosure

55489: I: Sangeeta: MF-9A: KENCO: 11/3/89: 12/18/89: CT: VO: SW: EK: CT

CONCURRENCES

SYMBOL	H.7505C						
SURNAME	S. Vonta						
DATE	11/09/89						

# COPPER SULFATE GRANULAR CRYSTALS

**ACTIVE INGREDIENT:**

Copper Sulfate (Pentahydrate)\* ..... 99%  
 INERT INGREDIENTS ..... 1%  
 TOTAL ..... 100%

\*METALLIC COPPER EQUIVALENT 25.2%

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## KEEP OUT OF REACH OF CHILDREN DANGER

**STATEMENT OF PRACTICAL TREATMENT**

IF IN EYES, flush with plenty of water. Call a physician. IF ON SKIN, wash with plenty of soap and water. Get medical attention. IF SWALLOWED, call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching the back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

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

**PRECAUTIONARY STATEMENTS****HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER**—Causes severe eye and skin irritation. Harmful if absorbed through skin or inhaled. May cause skin sensitization reactions in certain individuals. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Protective clothing, including goggles, should be worn. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**ENVIRONMENTAL HAZARD STATEMENTS**

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water except as directed under the specific instructions section. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic 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 a lake or pond at one time in order to avoid a depletion of oxygen from decaying vegetation. Allow 1 to 2 weeks between treatment 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 the water increases. Do not contaminate water by cleaning of equipment or disposal of wastes. Consult your State Fish and Game Agency before applying this product to public waters. Permits may be required before treating such waters.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless the product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

EPA EST. NO. 829-FL-1 (3), 829-NC-1 (4), 829-NC-2 (5) Number following Est. No. corresponds to first digit in Lot No. on bottom of container.

**Southern Agricultural Insecticides, Inc.**

Palmetto, FL 34220  
EPA Reg. No. 829-210

Hendersonville, NC 28793  
J2

Boone, NC 28607  
Net Weight: 5 lbs.

AC  
TBD  
MENTS  
Dated:

NOV 8 1989

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, this pesticide  
registered under EPA Reg. No.

829-210

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### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Copper sulfate effectively controls many species of both filamentous (mat forming green) and planktonic (single cell blue-green) algae. The dose of copper sulfate and control are affected by algae species, water hardness, water temperature, and concentration as well as whether water is clear, turbid, flowing, or static. Preferably water should be clear and above 60°F with treatment made in late morning on a sunny day. Static water usually requires less copper sulfate than flowing water. The harder the water or the greater the algae concentration, the higher the required dose of copper sulfate. If floating mats of green algae are present, it is advisable to especially treat the surface of these mats for best control. Algae will absorb the copper sulfate within hours after treatment, and death should be evident within 3 to 5 days. If there is some doubt about the concentration to apply, it is generally preferable to begin with a lower dose and increase the dose until the algae are killed. (A few algae species are resistant to copper sulfate and may not be killed.) Repeat treatments within a season may be needed to keep algae under control to the desired level.

**NOTE:** Note the fish toxicity precautionary statement under Environmental Hazards. Treatment of algae can also result in oxygen loss from the water caused by the decay of dead algae. This loss can cause fish suffocation. To minimize this hazard, treat 1/2 of the water area in a single operation and wait 10 to 14 days between treatments. Begin treatments along the shore and proceed outward in bands to allow fish to move into untreated water.

When a water solution of copper sulfate is prepared, preferably mix in a plastic or glass container. When using a metal container, use one that is painted, enameled, or copper lined. Copper sulfate solutions will slowly react or corrode galvanized containers and brass parts.

#### TO CONTROL ALGAE IN IMPOUNDED WATERS, LAKES AND PONDS:

**When to Apply:** Early treatment is essential for most satisfactory algae control at the lowest dosage levels. Early growth is usually confined to shallower shore areas. Begin treatment when not over 5 to 10% of the water surface area is covered with algae growths which is usually nearest the shoreline. Delaying treatment until heavy algae growths are present usually requires a higher dose and may result in fish distress or death since rapid decomposition of heavy growths greatly reduces the oxygen content of the water. Several repeat treatments are usually necessary to control algae each season.

**Dosage Rates to Control Algae:** Accurately determine the surface acres of water to be treated at one time and multiply this by the average depth in feet of water area to determine the acre feet of water to be treated. One acre foot = one surface acre (43,560 sq. ft.) x one foot of depth. Each acre foot of water contains 326,000 gallons, or 2,720,000 pounds of water. (A dose of 1 PPM equals 2.7 pounds of this product per acre foot of water.) For filamentous or planktonic algae apply 0.8 to 1.75 pounds (.3 to .65 PPM) of this product per acre foot of water. For the control of bottom-attached algae Chara and Nitella, apply 1.75 to 2.3 pounds (.65 to .85 PPM) of this product per acre foot of water. If control is not achieved or in very adverse waters, a higher rate may be needed, but consider the fish caution. Dose should not exceed 4 PPM of this product (1 PPM copper or metallic) when water is used for drinking.

**HOW TO APPLY:** Copper sulfate granular crystals may be dissolved and applied as a spray to the water surface or the crystals may be placed in a cloth bag and pulled in the water behind a boat until dissolved. Good dispersal is essential no matter what method is used.

**ROOT CONTROL IN SEWER CONNECTIONS:** Copper sulfate granular crystals used according to directions will kill roots that clog sewers with no damage to well established trees or shrubs.

Apply 1/2 pound into toilet at night after final use for the day and flush it down the drain. Repeat until a total of 2 pounds has been applied. If sewer line is completely clogged, some flow must be established mechanically before use of this product. Repeat treatment every 6 months. Never add through sinks or wash basins where thin metal drains might corrode. Do not use in sewer systems with septic tanks, cesspools or lagoons.

#### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal. **STORAGE:** Store pesticide in the original container in a locked storage area. **PESTICIDE DISPOSAL:** To dispose of excess pesticide, securely wrap original container in several layers of newspaper and discard in trash. **CONTAINER DISPOSAL:** Do not reuse container. Rinse thoroughly before discarding in trash.

Buyer assumes all risks of use, storage or handling of this material in strict accordance with directions given herewith.  
EPA REG. NO. 829-210 J2

ACCEPTED  
with COMMENTS

NOV 8 1989

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

829-210