



COPPER SULFATE CRYSTALS

Intended for residential/homeowner use only

NOTE in the State of New York:

This product is a restricted use aquatic pesticide (RUP) in waters of the New York State. Pesticide applicator certification or a special use permit is required for sale, possession or use.

ACTIVE INGREDIENT	BY WEIGHT
COPPER SULFATE PENTAHYDRATE*	99.0%
OTHER INGREDIENTS	1.0%
TOTAL	100.0%

CAS #7758-99-8 *COPPER AS METALLIC, 25.1%

See back panel for specific pesticide use directions and state restrictions.

KEEP OUT OF REACH OF CHILDREN DANGER - PELIGRO

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:	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 to rinse eye. Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice. 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 to an unconscious person.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.

Notes: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For non-emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 Monday through Friday, 8:00am to 12:00pm Pacific time (NPIC web site: www.npic.orst.edu). For emergencies, call the poison control center 1-800-222-1222, 24 hours a day, 7 days a week.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Product causes eye irritation.

NSF

Certified to
ANSI-NSF 60

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER - PELIGRO

CORROSIVE: Causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin. Do not breathe dust or spray mist. Wear goggles or face shield, long-sleeved shirt and long pants, socks, shoes and chemical resistant gloves made of any waterproof material.

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, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. For terrestrial uses do not apply directly to water. Do not contaminate water when disposing of equipment washwaters or rinsate.

NOTICE

Lonza warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Lonza. To the extent consistent with applicable law, Lonza shall not be liable for consequential, special or indirect damages resulting from the use or handling of this product. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer. To the extent consistent with applicable law exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling or application of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid for this product or at Lonza's election, the replacement of this product. Lonza MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

NET CONTENTS: 15 LB. (6.81 KG.)

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not allow adults, children or pets to enter the treated area until sprays have dried or dusts have settled. Do not apply this product in a way that will contact adults, children, or pets, either directly or through drift.

INSTRUCTIONS FOR USE

Water hardness, temperature of the water, the type and amount of vegetation to be controlled, and the amount of water flow are to be considered in using Copper Sulfate Crystals to control algae. Begin treatment soon after plant growth has started. If treatment is delayed until a large amount of algae is present, larger quantities of Copper Sulfate Crystals will be required. Algal growth is difficult to control with Copper Sulfate Crystals when water temperatures are low (less than 60°F) or when the water alkalinity is above 50 ppm. Larger quantities of Copper Sulfate Crystals will be required to kill and control algae in water which is flowing than in a body of stagnant water. If possible, curtail the flow of water before treatment and hold dormant for approximately three days after treatment or until the algae have begun to die. When preparing a Copper Sulfate Crystals solution in water, the mixing container should be made of plastic, glass, or a painted, enameled, or copper-lined metal container. It is best to treat algae on a sunny day when the heavy mats of filamentous algae are most likely to be floating on the surface where they can be sprayed directly. If there is some doubt about the concentration to apply, it is best to start with the lower concentration given in the Specific Instructions below. 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 no more than one-half of the water area in a single operation and wait at least 14 days between treatments. Begin treatments along the shore and proceed outward in bands to allow fish to move into untreated water. NOTE: If treated water is to be used as a source of potable water, the metallic copper residual must not exceed 1 ppm (4 ppm Copper Sulfate Crystals).

CALCULATIONS FOR THE AMOUNT OF WATER IMPOUNDED AND FOR THE AMOUNT OF COPPER SULFATE CRYSTALS TO BE USED: Calculate water volume as follows: (1) Obtain surface area by measuring of regular shaped ponds or mapping of irregular ponds or by reference to previously recorded engineering data or maps. (2) Calculate average depth by sounding in a regular pattern and taking the mean of these readings or by reference to previously obtained data. (3) Multiply surface area in feet by average depth in feet to obtain cubic feet of water volume. (4) Multiply surface area in acres by average depth in feet to obtain total acre-feet of water volume.

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

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

SPECIFIC INSTRUCTIONS

SEWER TREATMENT - ROOT DESTROYER *

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

RESIDENTIAL OR HOUSEHOLD SEWER SYSTEMS: When a reduced water flow is first noticed, and root growth is thought to be the cause, treat with Copper Sulfate Crystals. It is important not to wait until a stoppage occurs because some water flow is necessary to move the Copper Sulfate Crystals to the area of root growth. Usually, within 3 to 4 weeks, after roots have accumulated sufficient copper sulfate, the roots will die and begin to decay and water flow should increase. As the roots re-grow, follow-up treatments with copper sulfate will be required. Applications may be made each year in the spring after plant growth begins, or during late summer or early fall, or any time a reduced water flow, thought to be caused by root growth, occurs. Apply 2 pounds Copper Sulfate Crystals to household sewers. Add Copper Sulfate Crystals to sewer line by pouring 1/2 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 the toilet several times. Repeat in 6 or 12 month intervals, if necessary.

ROOT CONTROL IN SEPTIC TANKS, LEACH LINES AND LEACH LINE PIPES: The majority of the copper sulfate will settle in the septic tank itself and little will pass into the leach lines. To treat leach line pipes, add 2 pounds of Copper Sulfate Crystals to the distribution box located between the septic tank and the leach lines. To achieve effective root control in the leach lines it is necessary to transfer Copper Sulfate Crystals from the septic tank to the leach lines. A cleanout plug opening may need to be installed if the distribution box does not have an opening leading to the leach lines. Repeat in 6 or 12 month intervals, if necessary.

*NOTE: Do not apply Copper Sulfate Crystals through sink or tub drains as it will corrode the metal drains. *NOTE: Copper Sulfate Crystals added to an active 300 gallon septic tank at 2 pounds per treatment will temporarily reduce bacterial action, but it will return to normal approximately 15 days after treatment. Trees and shrubbery growing near a treated line normally are not affected due to only a small portion of their roots being in contact with the Copper Sulfate Crystals. The crystals kills only those roots inside the leach line. *NOTE: Do not use as a sewer additive where prohibited by State law. State law prohibits the use of this product in sewage systems in the State of Connecticut. Not for sale or use in the 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 States of Florida, Massachusetts, and State of Washington. *NOTE: For all sewer line treatment applications do not use more than 2 lbs Copper Sulfate Crystals (0.5 lbs. metallic copper) per application. Minimum retreatment interval is 6 months. Make no more than two applications per calendar year. Per EPA guidelines, do not exceed 8 lbs Copper Sulfate Crystals (2 lbs metallic copper) per year.

APPLICATION METHODS TO CONTROL ALGAE IN IMPOUNDED WATERS, LAKES, PONDS AND RESERVOIRS: There are several methods by which to apply Copper Sulfate Crystals to impounded water. Probably the most satisfactory and simplest method is to dissolve the Copper Sulfate Crystals in water and to spray this water over the body of water from a boat. A small pump mounted in the boat can easily be used for this purpose. Fine crystals may be broadcast directly on the water surface from a properly equipped boat. Where the situation permits, Copper Sulfate Crystals may be applied under the water by dragging burlap bags containing Copper Sulfate Crystals. The crystals are placed in burlap bags and dragged through the water by means of a boat. Begin treatment along the shoreline and proceed outward until one-third to one-half of the total area has been treated. Care should be taken that the course of the boat is such as to cause even distribution of the chemical. Continue dragging the burlap bag over the treated area until the minimum dosage is achieved and all crystals have been dissolved. Large or medium size crystals that dissolve slowly should be used with this method. Note: EPA sets the maximum application rate at 4 ppm Copper Sulfate Crystals (1 ppm metallic copper); however, 1 to 2 ppm Copper Sulfate Crystals can be used to treat most genera of algae. Minimum retreatment interval is 14 days.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. **PESTICIDE STORAGE:** Store in original container and place in a locked storage area. **PESTICIDE DISPOSAL & CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. If empty: Place in trash or offer for recycling, if available. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

SKU No. 390835A

Part No. 5910647

Manufactured for:
Applied Biochemists
1400 Bluegrass Lakes Pkwy
Alpharetta, GA 30004
1-800-558-5106

EPA REG. NO. 56576-1-8959
EPA EST. NO. 42291-GA-1[AD]

The AB logo is a trademark of Lonza or its affiliates.

