

US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (TS-767) WASHINGTON, DC 20460 NOTICE OF PESTICIDE: <input checked="" type="checkbox"/> REGISTRATION <input type="checkbox"/> REREGISTRATION (Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended)	EPA REGISTRAT NO.	DATE OF ISSUANCE
	9779-275	MAY 5 1986
	TERM OF ISSUANCE	
NAME OF PESTICIDE PRODUCT		
Riverside Cupric Hydroxide 4.5L		

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Riverside/Terra Corporation A Subsidiary of Terra International, Inc. P.O. Box 171376 Memphis, TN 38187	$\begin{array}{r} 160 \\ 18 \\ \hline 163985 \\ 1 \end{array}$
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NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

- This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:
1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
 2. Add the phrase "EPA Registration No. 9779-275" to your label before you release the product for shipment.
 3. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 Enclosure for a further description of final printed labeling.
- If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.
- A stamped copy of the label is enclosed for your records.

Henry M. Jacoby
 Product Manager (21)
 Fungicide-Herbicide Branch
 Registration Division (TS-767C)

Enclosures

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL	DATE
<i>Henry M. Jacoby</i>	5/5/86

ACCEPTED
with COMMENTS
in EPA Letter Dated

MAY 5 1986

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

9779-275

Riverside Trademark®

CUPRIC HYDROXIDE 4.5L

Flowable Agricultural Fungicide

ACTIVE INGREDIENT

Cupric Hydroxide..... 37.5%

INERT INGREDIENTS..... 62.5%

Total 100.0%

Contains 4.5 lbs. cupric hydroxide per gallon.

STOP-READ LABEL BEFORE USING!

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF IN EYES: Flush with copious volumes of water. Get medical attention if irritation persists.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

SEE LEFT PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

EPA REG. NO. 9779-

EPA EST. NO. 9779-

Riverside
Trademark®

MANUFACTURED BY
RIVERSIDE/TEKRA CORPORATION
A SUBSIDIARY OF TERRA INTERNATIONAL, INC.
TERRA CENTRE, 600 FOURTH STREET, SIOUX CITY, IOWA 51101
RIVERSIDE SERVES AGRICULTURE. AGRICULTURE SERVES EVERYONE.

NET CONTENTS ___ GALLONS

(Left Panel)

PRECAUTIONARY STATEMENTS

CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed, absorbed through skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter area without protective clothing until spray has dried.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

GENERAL INFORMATION

Use CUPRIC HYDROXIDE 4.5L as noted below. CUPRIC HYDROXIDE 4.5L is adaptable to spraying from all types of spray equipment. Depending on the equipment used and the specific crop, the volume applied per acre will differ. For dilute, high volume sprays: use from 25 to 100 gallons of water per acre (GPA) for most vegetable crops, 400 to 800 GPA for fruit orchards and up to 1500 GPA as may be required for large citrus groves. For concentrate ground sprays, apply from 5 to 20 GPA for most vegetable crops and 25 to 100 GPA for fruit and nut crops. For aerial spraying, 3 to 15 GPA are commonly used. No additional surfactants are needed. Add CUPRIC HYDROXIDE 4.5L slowly to a spray tank partially filled with water. Spreader-stickers, insecticides, nutrients, etc. should be added last. Observe all cautions and limitations on label of products used in mixtures.

The following specific instructions are based on general applications. The recommendations of the State Agricultural Extension Services should be closely followed as to timing, frequency and number of sprays per season.

DIRECTIONS FOR USE

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

RE-ENTRY STATEMENT

Do not enter treated areas without protective clothing until sprays have dried. Protective clothing means, at least, a hat or other suitable head covering, a long-sleeved shirt and long-legged trousers or a coverall type garment (all of closely woven fabric covering the body, including the arms and legs), shoes and socks. Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

NOTICE TO CROP OWNERS

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. In case of accidental exposure, follow the information given under "STATEMENT OF PRACTICAL TREATMENT" and have exposed person(s) see a physician. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is a reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information:

CAUTION

Area treated with copper hydroxide on (date). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, refer to the Statement of Practical Treatment on the label.

STORAGE AND DISPOSAL

DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL.

STORAGE

Store in a dry location away from children, animals, foods, feeds, seeds, or other agricultural chemicals. Handle in accordance with information given under "Precautionary Statements." In the event of spillage or leakage, soak up material with absorbent clay, sand, sawdust, or other absorbent material. Scrape up and dispose of in accordance with information given under "DISPOSAL." Repackage and relabel useable product in a sound container. In case of fire or other emergency, report at once by toll-free telephone to 800-424-9300.

DISPOSAL

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved disposal facility.

CONTAINER DISPOSAL: Plastic containers-Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

ALFALFA, Cercospora and Leptosphaerulina Leaf Spots. Apply at 2-2/3 pints per acre 10-14 days before each harvest or earlier if disease threatens. Apply with ground or aerial equipment. Spray injury may occur with sensitive varieties such as Lahontan.

ALMONDS, Coryneum Blight (Shot Hole) and Blossom Brown Rot. Use 2-2/3 pints to 4 pints CUPRIC HYDROXIDE 4.5L per 100 gallons of water (300 to 400 GPA) in late dormant before foliage buds swell if frequent rainfall occurs. A second application should be made during the early bloom stage (popcorn). To avoid plant injury, do not use above rate after full bloom. Bacterial Blast (*Pseudomonas*). Use 4 to 5-1/3 pints CUPRIC HYDROXIDE 4.5L per 100 gallons at dormant to early pink bud. For blast control in sprinkler irrigated orchards or where disease is severe, apply 2-4 CUPRIC HYDROXIDE 4.5L sprays at 1/3 pint per 100 gallons at 2 week post-bloom intervals or just before sprinkling. Slight leaf injury may occur from post-bloom spray.

APPLE (except California), Anthracnose, European Canker, Pseudomonas syringae. Apply before fall rains at 4 to 5-1/3 pints per 100 gallons (300-400 GPA). Use on yellow varieties may cause discoloration. To avoid, pick before spraying. Fireblight. Apply at 2-2/3 to 5-1/3 pints/100 gallons of water as a full cover spray. Make application between silver-tip and green-tip. CAUTION: Phytotoxicity may occur from late application. Discontinue use when green-tip is 1/2-inch. Crown or Collar Rot (*Phytophthora cactorum*). Mix 5-1/3 pints in 100 gallons of water. Apply 4 gallons of suspension as a drench on the lower trunk area of each tree. Apply either in early spring or in fall after harvest each year. Do not use if soil pH is below 5.5 or copper toxicity may result.

APRICOTS, *Coryned*. Blight (Shot Hole) and Blossom brown Rot. Apply at popcorn to full bloom using 2-2/3 to 4 pints per 100 gallons (300-400 GPA). To avoid spray injury, do not apply after bloom.

AVOCADOS, Scab. Apply when bloom buds begin to swell at 2-2/3 pints CUPRIC HYDROXIDE 4.5L per 100 gallons or 10-2/3 to 13-1/3 pints per acre depending on equipment. Continue application at monthly intervals for 5 to 6 applications. Follow recommendations of State Agricultural Experiment Stations.

BANANAS, Sigatoka. Apply by air at 2-2/3 pints per acre in 3 gallons of water containing 0.5 gallon agricultural oil. Apply on a 14 day schedule throughout the wet season. Apply at 21 day intervals during dry periods. Black Pitting. Apply at 5-1/3 pints per 100 gallons directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after emergence.

BEANS, Bacterial Blight (Halo and Common). For protective sprays, apply first application when plants are six inches high. Apply on 7-14 day schedule depending on local conditions. Use 1-1/3 to 4 pints per acre depending on disease severity.

BLACKBERRIES (Santiams, Logans, Boysens, Marions, Auroras, Cascades, Chehalems and Thornless Evergreens), Leaf and Cane Spot. Apply delayed dormant spray after training in spring at 5-1/3 pints plus 1 quart superior-type oil per 100 gallons. Apply again in late spring at 2-2/3 pints plus 1 quart superior-type oil per 100 gallons. Make fall spray application after harvest using 5-1/3 pints plus 1 quart superior-type oil per 100 gallons.

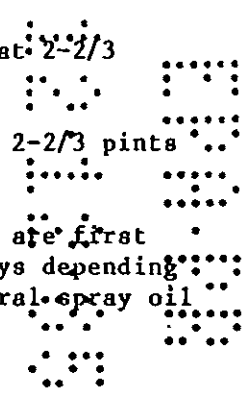
BROCCOLI, BRUSSELS SPROUTS, CABBAGE AND CAULIFLOWER, Downy Mildew. Apply 2/3 to 1-1/3 pints in a minimum of 25 GPA at 7 day intervals. (CABBAGE ONLY), Black Rot (*Xanthomonas*) and Black Leaf Spot (*Alternaria*). Apply at 2-2/3 pints per acre in a minimum of 25 GPA at 7 to 10 day intervals. (Caution: A slight reddening of older leaves may occur on broccoli, and a slight flecking of wrapper leaves may occur on cabbage at the 2-2/3 pints rate.) For control of diseases of these crops, begin applications after transplants are set in the field, or shortly after emergence of field-seeded crops or when conditions favor disease development.

CACAO, Black Pod. Begin applications at the start of the rainy season and continue while infection conditions persist. Sprays should be made as often as 14 to 21 days in high rainfall areas at varying rates from 2-2/3 to 6 pints per acre depending on disease severity. For drier areas, where 2 to 4 applications are recommended during critical infection periods and at long intervals, use 8-2/3 to 11-1/3 pints per acre, according to disease incidence and planting density.

CANTALOUPEs, HONEYDEWS AND MUSKMELONS, Downy Mildew. Apply weekly at 2-2/3 pints per acre before disease appears.

CARROTS, Carrot Blight (*Cercospora*). When disease threatens, apply 2-2/3 pints per acre at 7 to 14 day intervals depending on disease severity.

CELERY, Early, Late and Bacterial Blights. Apply as soon as plants are first established in the field at 2-2/3 pints per acre, then every 5-7 days depending on severity and weather. One to two quarts of a suitable agricultural spray oil per acre may be used as spreader-sticker.



CHERRY, Dead Bud (*Pseudomonas syringae*) and Coryneum Blight (Shot Hole). Apply 8 pints plus 1 pint superior-type oil per 100 gallons in October (before heavy fall rains) and again in January. In orchards where disease is severe, a spray should also be applied in August. Brown Rot Blossom Blight. For adequate control apply 2-2/3 to 4 pints per 100 gallons as a full cover spray at popcorn and full bloom.

CITRUS, Melanose, Scab, Greasy Spot and Pink Pitting. Apply as pre-bloom and post bloom sprays. Use 1 to 2 pints CUPRIC HYDROXIDE 4.5L per 100 gallons, depending on disease severity. May be used in concentrate sprays at equivalent rates. For aerial application use 8 pints CUPRIC HYDROXIDE 4.5L per 10 gallons per acre. Brown Rot. Use 2/3 to 1-1/3 pints per 100 gallons as dilute spray or at equivalent rate as concentrate spray depending on severity of disease. Begin application in fall before or just after first heavy rains. Apply to skirts of trees to a height of at least 4 feet. Apply also to bare ground one foot beyond skirt. (California only. In areas subject to copper injury, add 1/3 to 1 pound of high quality lime per 1-1/3 pints of CUPRIC HYDROXIDE 4.5L.)

COFFEE, Iron Spot (*Cercospora coffeicola*) and Pink Disease (*Corticium salmonicolor*). Apply at 2-2/3 pints per acre as a concentrate or dilute spray. Begin treatment at start of wet season and continue at monthly intervals for three applications. Leaf Rust. (Brazil.) Apply at 4-2/3 to 7-1/3 pints per acre for average density plantations. High density plantations may require 9-1/3 to 10-2/3 pints per acre. Make application from September to March depending on altitude and local recommendations. Apply at 3-4 week intervals depending on disease severity and rainfall conditions.

CRANBERRY, Fruit Rot. Apply at 10-2/3 pints per acre beginning in late bloom. One or two additional applications made at 10 to 14 day intervals may be required, depending on disease pressure. Follow the advice of the State Agricultural Extension Service.

CUCUMBERS, Angular Leaf Spot and Downy Mildew. Apply weekly once the plants begin to vine. Use 2 to 2-2/3 pints per acre.

CURRANTS AND GOOSEBERRY, Leaf Spot. Make three applications of CUPRIC HYDROXIDE 4.5L at 13-1/3 pints per acre, starting after harvest, before bloom and after petal fall.

EGGPLANT (except California), Alternaria Blight, Anthracnose, Phomopsis. Use 2-2/3 pints CUPRIC HYDROXIDE 4.5L per acre before disease appears. Repeat at 7 to 10 day intervals.

FILBERTS, Bacterial Blight. Apply 5-1/3 to 8 pints plus 1 pint superior-type oil per 100 gallons in late August or early September. In seasons of heavy rainfall, apply another spray when three-fourths of the leaves have dropped.

GRAPES, Black Rot, Powdery Mildew and Downy Mildew. Apply 2-2/3 pints CUPRIC HYDROXIDE 4.5L plus 2-6 pounds hydrated lime per acre as a dilute or concentrate spray. Use CUPRIC HYDROXIDE 4.5L for the last one or two late summer applications following early season application of another fungicide. Follow State schedule for exact timing. (Caution: Slight to severe foliage injury may occur on copper-sensitive varieties such as Concord, Delaware, Niagra, and Rosette.)

HOPS, Downy Mildew. Apply 2-2/3 pints as a fungicide crown treatment (after pruning, but before training) as needed. After training, additional fungicide treatments are needed at about 10 day intervals. Discontinue use 2 weeks before harvest.

LETTUCE, Downy Mildew. Apply 1-1/3 to 2-2/3 pints CUPRIC HYDROXIDE 4.5L per acre. Begin treatment when disease first appears and repeat every 7-10 days as needed to suppress disease.

LIVE OAK, Ball Moss. (Texas only). Apply at 8 pints per 100 gallons of water, in spring after heavy rain, using 1.5 gallons of spray per foot of tree height. Make sure to wet tufts thoroughly. A second application may be required after 12 months.

MANGO (Florida), Anthracnose. Apply monthly after fruit set until harvest at 2-2/3 pints CUPRIC HYDROXIDE 4.5L per 100 gallons or 10-2/3 to 13-1/3 pints per acre depending on equipment. Consult Extension Service for state recommendations.

OLIVES (California), Peacock Spot. Make first application at 2-2/3 to 4 pints per 100 gallons or at 10-2/3 to 16 pints per acre depending on equipment before winter rains fall. A second application in early spring should be made if disease is severe.

ONION, Purple Blotch and Downy Mildew. Apply 2-2/3 pints CUPRIC HYDROXIDE 4.5L per acre when plants are 4 to 6 inches high and repeat at 7 to 10 day intervals.

PEACHES AND NECTARINES, Leaf Curl and Coryneum Blight (Shot Hole). Dormant application, apply at leaf fall. Dilute: Apply 2-2/3 to 5-1/3 pints per 100 gallons (minimum of 10-2/3 pints/acre.) Use 21-1/3 pints per acre when rainfall is very heavy and disease pressure is high. Concentrate: Apply at equivalent rates in approximately 100 gallons of water. May be used with agricultural spray oil. Brown Rot Blossom Blight. Apply at 2-2/3 to 4 pints per 100 gallons as a full cover spray at pink bud. (Application at this time also affords some control of leaf curl and Coryneum Blight.) Bacterial spot. Dormant application, apply at 2-2/3 pints per 100 gallons. Postbloom, apply 1/3 pint per 100 gallons at first and second cover sprays. Do not spray later than three weeks prior to harvest. Do not use rates above those recommended. (Caution: Slight defoliation and spotting of leaves may occur from use in cover sprays.)

PEANUTS, Cercospora Leaf Spot. Begin spraying 40-45 days after planting or when disease symptoms appear. Make ground or aerial application at 2 to 4 pints per acre. For aerial application, use 3-10 gallons of water. Continue applications at 10-14 day intervals. Use sufficient water to get adequate coverage. CUPRIC HYDROXIDE 4.5L may be tank-mixed with flowable sulfur products.

PEARS, Fire Blight. Apply at 1/3 pint per 100 gallons or 1-1/3 pints per acre at 5 day intervals throughout bloom period. Pseudomonas Blight. Apply CUPRIC HYDROXIDE 4.5L before fall rains at a rate of 4 to 5-1/3 pints per 100 gallons (300-400 GPA) and again at dormant before spring growth starts. Excessive dosages may cause fruit russet.

PEAS, Powdery Mildew. Begin spray treatment when disease symptoms first appear. Use at 2-4 pints per acre according to disease severity. Repeat applications at weekly intervals.

PEPPERS, Bacterial Spot. When disease threatens, apply 2-2/3 to 4 pints per acre in sufficient water for adequate coverage at 7 to 14 day intervals depending on disease severity.

PHILODENDRON, Bacterial Leaf Spot. Apply weekly before disease appears at 2 pints CUPRIC HYDROXIDE 4.5L plus manufacturer's recommended amount of mancozeb per 100 gallons of water.

POTATOES, Early and Late Blight. Apply at 7-10 day intervals starting when plants are six inches high until two weeks before harvest. Use 1-1/3 to 2 pints per acre in those locations where disease is light and up to 4 to 5-1/3 pints per acre where disease is more severe.

PUMPKIN AND SQUASH, Powdery Mildew. Begin applications when plants are 3 weeks old or when first disease symptoms appear. Use at weekly intervals at 2-4 pints per acre depending on disease severity.

STRAWBERRIES, Leaf Spot and Leaf Blight. Apply at 2-2/3 to 4 pints in 100 gallons per acre. Begin application when plants are established and continue on a weekly schedule throughout season. Discontinue applications if signs of phytotoxicity appear.

SUGAR BEETS, Cercospora Leaf Spot. Start spray when disease threatens and continue for 4 to 5 applications. Spray at 10-14 day intervals depending on weather conditions at 2-2/3 to 6-2/3 pints per acre depending on disease severity. Addition of suitable agricultural spray oil is recommended at 2 quarts per acre.

SYCAMORE, Anthracnose. Make two applications using 2-2/3 to 4 pints per 100 gallons as a full cover spray. Make first application at bud crack and second application 7-14 days later at 10% leaf expansion.

TOMATOES, Early Blight. When disease threatens, apply 2-2/3 to 4 pints per acre at 7-10 day intervals. Bacterial Speck. Apply at 2-2/3 pints per acre at 10-30 day intervals beginning when the disease threatens. Use more frequent applications when disease pressure is high. Bacterial Spot. When disease threatens, apply 2-2/3 to 5-1/3 pints per acre at 7-10 day intervals, more frequently when disease is severe. May be combined with maneb or mancozeb. Do not apply within five days of harvest.

WALNUT, Walnut Blight. Apply first spray at early pre-bloom when catkins are partially expanded. Make three additional applications during bloom and early nutlet stages at 7-10 day intervals. Additional applications may be necessary when frequent rainfall occurs. Dilute: Apply 2-2/3 pints per 100 gallons water (minimum of 10-2/3 pints/acre). Concentrate: Apply at equivalent rates in 50-100 gallons water per acre. One pint of summer oil emulsion may be added per 100 gallons of spray. Do not apply more than 16-2/3 pints per acre per application.

WATERMELON, Anthracnose and Downy Mildew. Apply as soon as plants become established and at weekly intervals thereafter. Anthracnose. Use at 2-2/3 pints per acre. Downy Mildew. Use at 2-4 pints per acre, according to disease severity.

WHEAT AND BARLEY, Septoria Leaf Blotch and Helminthosporum Spot Blotch. Apply 2 to 2-2/3 pints per acre. Make first application at early boot stage and follow with second application at early head stage.

HOMEOWNER

1 level teaspoon of CUPRIC HYDROXIDE 4.5L per gallon of water is equivalent to 1 pint per 100 gallons. Make application according to specific instructions given below for those crops where rates are given in pints/hundred gallons. (For example: 2 pints CUPRIC HYDROXIDE 4.5L per 100 gallons are equivalent to 2 level teaspoons CUPRIC HYDROXIDE 4.5L per gallon.)

NOTICE: RIVERSIDE/TERRA CORPORATION warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to RIVERSIDE/TERRA CORPORATION and buyer assumes the risk of any such use. RIVERSIDE/TERRA CORPORATION shall not be responsible for incidental or consequential damages, if any, resulting from a breach of warranty.

