

PM 22 19713-72

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 14 1994

Barbara Brown
DREXEL CHEMICAL COMPANY
BOX 9306
MEMPHIS, TX 38109

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 08/13/93 In Response to PR Notice 93-7
EPA Reg. No. 19713-72
DREXEL BASIC COPPER SULFATE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable
Printed with SoyCandis Ink on paper that
contains at least 50% recycled fiber

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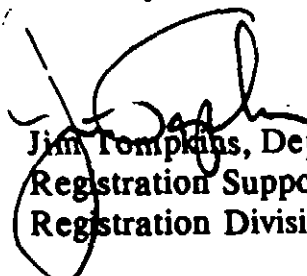
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,


Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

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DREXEL
BASIC COPPER SULFATE

ACTIVE INGREDIENT:

Basic Copper Sulfate* 98.0%
INERT INGREDIENT: 2.0%
TOTAL 100.0%

*Metallic Copper Equivalent 53.0%

KEEP OUT OF REACH OF CHILDREN
WARNING/AVISO

PRECAUCION-AL-USUARIO--Si-usted-no-lee-ingles--no-use-este
producto-hasta-que-le-etiqueta-haya-sido-explicado-ampliamente-

Si-usted-no-entiende-la-etiqueta, busque-a-alguien-para-que-se-le
explique-a-usted-en-detalle. (If you do not understand this
label, find someone to explain it to you in detail.)

See Side Panel For Additional Precautionary Statements

EPA REG. NO. 19713-72
EPA EST. NO. 19713-MS-1

NET CONTENTS: 30 lbs.

Manufactured by:
Drexel Chemical Company
P. O. Box 9306, Memphis, Tenn 38109-0306

ACCEPTED
with COMMENTS
in EPA Letter Dated

JAN 14 1994

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
19713-72

WPS DELETIONS/REVISIONS 8/9/93

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 SPLASHED IN EYES: Immediately flush eyes with plenty of
water for at least 15 minutes and get medical attention.
IF SPILLED ON SKIN: Immediately remove contaminated clothing,
INCLUDING SHOES, and wash skin with soap and plenty of water.
If irritation develops, send for a physician.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMAN AND DOMESTIC ANIMALS

WARNING: Causes substantial but temporary eye injury. Harmful if swallowed. Avoid breathing spray mist. May cause irritation of nose, throat and skin. May cause skin sensitization in certain individuals. Avoid contact with eyes, skin and clothing. Do not contaminate feed and food stuffs.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:
Long-sleeved shirt and long pants
Shoes plus socks
Protective eyewear

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
Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on 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 aquatic sites. Do not contaminate water by cleaning of equipment or disposal of wastes.

RECOMMENDATIONS: MIXING

Fill the spray tank approximately 1/2 full of water and with agitator running add the required amount of Basic Copper Sulfate. Add water to fill the spray tank 3/4 full and when a spreader sticker is recommended, add the recommended amounts according to the manufacturer's recommendation. Fill the spray tank, and keep agitator running until spraying is completed.

Basic Copper Sulfate is compatible with oils and can be included in dormant oil sprays.

FARMWORKER-SAFETY-STATEMENTS

Do not enter treated areas without protective clothing until sprays have dried.

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. 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--Oral-warnings-must-inform-workers-of areas-or-fields-that-may-not-be-entered-without-specific protective-clothing-until-sprays-have-dried--and-appropriate actions-to-take-in-case-of-accidental-exposure--as-described under-Precautionary-Statements-on-this-label--When-oral-warnings are-given--warnings-shall-be-given-in-a-language-customarily understood-by-workers--Oral-warnings-must-be-given-if-there-is reason-to-believe-that-written-warnings-cannot-be-understood-by workers--WARNING--Area-treated-with-Basic-Copper-Sulfate-on-(date of-application)--Do-not-enter-without-appropriate-protective clothing-until-sprays-have-dried--In-case-of-accidental-exposure, flush-eyes-or-skin-with-plenty-of-water--Call-physician-if irritation-persists--Remove-and-wash-contaminated-clothing-before reuse-

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 THROUGH ANY TYPE OF IRRIGATION SYSTEM.

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, forests, 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 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.

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
- Protective eyewear

FRUITS - NUTS

ALMONDS - Brown Rot and Shot Hole: Conventional dilute spray - use 4 to 5 lbs. in 100 gallons water with 1 gallon sticker and apply 350 to 400 gallons per acre. Bud sprays for control of Brown Rot and Shot Hole should be applied at pink bud through popcorn stage. Do not spray after trees are in leaf. As a dormant spray for control of Shot Hole and Brown Rot, apply December 15 to January 15. Concentrate sprayers - use 9 to 12 lbs. combined with 1 to 2 gallons sticker and apply as above in 25 to 50 gallons water per acre.

NOTE: Use 12 lbs. per acre through swelling buds and 9 lbs. per acre in popcorn stage. With aerial spray during the dormant season for control of Shot Hole and Brown Rot, apply 16 to 20 lbs. per acre in 20 gallons of water combined with a spreader sticker.

APRICOTS - Brown rot and Shot Hole: Conventional dilute spray - use 4 to 5 lbs. per 100 gallons water combined with 1/2 to 1 1/2 gallons sticker. As a dormant spray for control of Shot Hole disease, apply November 15 to January 15. Bud sprays for control of Brown Rot should be applied through swelling buds and popcorn stage. Do not spray when trees are in leaf. Concentrate spray - use 10 to 12 lbs. combined with 1 to 1 1/2 gallons sticker per acre and apply as above.

NOTE: Use 12 lbs. per acre through swelling buds and reduce to 10 lbs. in popcorn stage. When bud blight is a problem, apply the maximum rate shown above after most of the leaves have fallen in the fall, usually November and December, but ahead of fall rains.

AVOCADOS - Anthracnose, Blotch, and Scab: Use 3 lbs. per 100 gallons water. Begin treatment when blossom buds open. Repeat at 4 week intervals for a total of 5 applications. Do not apply later than 140 days after bloom.

BERRIES - (Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries) Anthracnose: Use 2 lbs. per 100 gallons of water. Begin spray when leaf buds begin to open. Repeat when flower buds show white and continue at 10 to 14 day intervals. Leaf and Cane Spot and Yellow Rust, in spring days, use 2 lbs. per 100 gallons of water and apply when leaf buds begin to open and repeat when flower buds show white. Also make a postharvest spray after pruning, but before fall rains begin to fall using 6 lbs. per 100 gallons water combined with 1 to 1 1/2 gallons sticker.

CHERRIES (Sour) - Brown Rot, Blossom Blight: Use 4 to 5 lbs. per 100 gallons water plus 1/2 to 1 gallon spreader sticker. Apply at popcorn and late bloom stages. In late bloom spray, add 5 lbs. hydrate lime per 100 gallons spray. For Leaf Spot apply 4 to 5 lbs. plus 5 lbs. hydrated lime per 100 gallons applied at petal fall. For Shot Hole, use 4 to 5 lbs. per 100 gallons water plus 1/2 to 1 gallon sticker and apply as dormant spray.

CITRUS - Brown Rot: Use 1 lb. per 100 gallons water (Florida only use 2 lbs. per 100 gallons water). A spreader sticker may be used where local conditions require. Apply at first indication of rain or first appearance of Brown Rot. Repeat at needed to protect during wet weather. For Melanose Scab, Greasy Spot and Pink Pitting of grapefruit, use 1.5 to 3 lbs. per 100 gallons water by dilute spray. With aerial or concentrate sprayers apply 10 to 26 lbs. per acre diluted to the proper concentration with water as recommended for the specific type sprayer used. Do not use less than 10 gallons of spray per acre. For Scab control make two applications. One just before trees begin to flush and repeat at 2/3 petal fall. For Melanose control, apply 1 to 3 weeks after petal fall. Repeat 4 weeks later, if necessary. For Greasy Spot and Pink Pitting, make a summer spray about July 15. Wettable sulfur may be included in sprays for Melanose and Scab.
CAUTION: Do not apply in areas where copper injury is known to occur.

GRAPES - Anthracnose, Black Rot, Downy Mildew: Dilute spray, use 2 lbs. per 100 gallons water. Make first application when new growth is 1/2 inch long and repeat every 10 to 14 days. Concentrate spray, use 4 to 5 lbs. per acre in sufficient water for good coverage and apply as stated above.

OLIVES - Leaf Spot (Peacock Spot): Use 4 lbs. per 100 gallons of water and apply in late October.

NOTE: In areas with 10 inches or less rainfall per year, use only 2 lbs. per 100 gallons. Concentrate spray - Use 12 lbs. per acre in not less than 40 gallons water. Read and follow above note on rainfall limitations.

PEACHES AND NECTARINES - Brown Rot, Peach Blight (Shot Hole) and Leaf Curl: Dilute spray, use 4 to 5 lbs. per 100 gallons plus 1 to 1 1/2 gallons sticker. Concentrate spray - Use 12 to 16 lbs. per acre plus 1 to 1 1/2 gallon sticker in 25 to 50 gallons water per acre. As a dormant spray for Leaf Curl and Peach Blight (Shot Hole) apply November 15 to December 15 before fall rains begin. Bud sprays for Brown Rot and Peach Blight (Shot Hole) should be applied before bud swell and in full pink bud stage. Do not apply after pink bud or after trees are in leaf as injury may occur.

NOTE: To control Leaf Curl application must be made before the foliage buds swell. Consult your State Agricultural Experiment Station.

California Only: For Blight and Leaf Curl control, 16 to 20 lbs. in 20 gallons water may be applied by aircraft to one acre during the dormant season. For Peach Bacterial diseases apply 3 lbs. per 100 gallons water plus sticker and apply during dormant season.

PEARS - Fire Blight: Use 1/2 lb. per 100 gallons water. Apply 400 gallons per acre to give 1 lb. metallic copper per acre. Concentrate spray - use 2 lbs. per acre in sufficient water for good coverage. Apply 10% bloom and repeat at 5 to 7 day intervals during bloom. Do not use on D'Anjon, Comice, or Seckel varieties.

PLUMS AND PRUNES - Brown Rot, Shot Hole: Use 4 to 5 lbs. plus 1 to 1 1/2 gallons sticker per 100 gallons water. For Shot Hole control apply as a dormant in November or December before heavy fall rains begin. For Brown Rot control apply at early green bud and full popcorn stages. Concentrate spray - use 12 lbs. plus 1 to 1 1/2 gallons sticker in 25 to 50 gallons water and apply to one acre.

California Only: For aircraft spray to control Shot Hole and Brown Rot Blossom Blight apply 16 to 20 lbs. plus sticker in 20 gallons of water and apply to one acre during dormant season.

WALNUTS - Blight: Use 4 to 5 lbs. per 100 gallons water. Make two treatments. The first in early prebloom (1% pistillate not catkin blooms showing) and the second when 10 to 20% pistillate not catkin blooms are showing. Repeat applications for blight control 3 to 4 times during growing season if necessary.

STRAWBERRIES - Leaf Spot: Use 2 to 3 lbs. per 100 gallons water. Apply prebloom and postbloom.
CAUTION: Overspraying may cause injury to tender foliage of peaches, almonds, apricots and some Japanese plums.

VEGETABLE - FIELD CROPS

MIXING INSTRUCTIONS: Mix recommended amount of Basic Copper Sulfate given for one acre in sufficient water for good coverage. With dilute ground sprayer, generally apply 100 to 150 gallons spray per acre. With concentrate sprayer generally apply 20 to 50 gallons spray per acre. With aerial sprayers generally apply 5 to 10 gallons per acre, but do not apply less than 5 gallons spray mixture per acre. Consult the manufacturer for recommended water volumes per acre for a given sprayer.

BEANS (Green and Dry) - Angular Leaf Spot, Anthracnose, Bacterial Blight, Downy Mildew: Use 2 to 4 lbs. per acre. Begin treatment when plants are about 5 inches tall and repeat at 5 to 7 day intervals.

BEETS - Downy Mildew, Leaf Blight, Leaf Spots: Use 2 to 3 lbs. per acre. Begin when disease first appears and repeat every 7 to 10 days.

SUGAR BEETS - Cercospora Leaf Spot: Use 4 lbs. per acre. Begin when disease first appears and repeat every 7 to 10 days.

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BROCCOLI, CABBAGE, CAULIFLOWER - Downy Mildew, Leaf Spots: Use 1 to 3 lbs. per acre. Begin when plants are above ground in plant bed or before disease normally appears. Repeat at 7 to 10 day intervals in plant bed and field.

CARROTS - Downy Mildew, Cercospora and Alternaria Leaf Blights: Use 3 to 4 lbs. per acre. Begin treatment when disease first appears and repeat at 7 to 10 day intervals.

CELERY - Bacterial Blight, Early and Late Blight: Use 3 to 4 lbs. per acre. Treat every 7 days after emergence.

CUCURBITS (Cantaloupes, Cucumbers, Melons, Pumpkins, Squash) - Angular Leaf Spot, Anthracnose, Alternaria Leaf Spot, Bacterial Wilt, Downy and Powdery Mildews, Gummy Stem Blight, Leaf Spot, Scab: Use 2 lbs. per acre. Begin treatment when plants begin to vine and repeat every 7 to 10 days. Since the disease is likely to be more serious in high plant populations (40,000 or more plants per acre) spray every 3 to 4 days to protect fruit at all stages of development.

NOTE: A ground application of Basic Copper Sulfate after planting, but before emergence may help decrease infections of Angular Leaf Spot, Anthracnose and Alternaria Leaf Spot. Then follow above schedule after emergence.

NOTE: Some Agricultural Experiment Stations recommend equal amounts of hydrated lime when used on cucurbits. Lime when applied to cucurbits may cause dwarfing of plants and reduce fruit set due to increased transpiration and defoliation under some conditions. Consult your local Experiment Station for specific recommendation.

EGGPLANT - Alternaria Blight, Anthracnose, Phomopsis: Use 3 to 4 lbs. per acre. Begin in plant bed or in field before disease appears. Repeat at 7 to 10 day intervals.

ONION - Purple Blotch (California Only) and Downy Mildew: Use 3 to 4 lbs. per acre. Begin when plants are 4 to 6 inches and repeat at 7 to 10 day intervals.

PEPPERS - Anthracnose, Bacterial Spot, Early Blight, Late Blight, Cercospora Leaf Spot (Frogeye Spot), Downy Mildew: Use 3 to 4 lbs. per acre. Start sprays in seedbed and continue in field at 7 day intervals.

NOTE: Disease control is critical during fruiting.

POTATOES - Early and Late Blights: Use 3 to 6 lbs. per acre. Begin when plants emerge and repeat at 7 to 10 day intervals.

PEANUTS - Cercospora Leaf Spot: Use 2 to 3 lbs. per acre. Repeat at 10 to 14 day intervals.

NOTE: The addition of 2 lbs. wettable or flowable sulfur in a tank mix will enhance leaf spot control. If dusting is preferred use 7 lbs. Basic Copper Sulfate with 93 lbs. dusting sulfur and apply on 3 to 5 acres depending on plant size.

SPINACH - Anthracnose, Cercospora Leaf Spot, Downy Mildew, White Rust: Use 2 to 4 lbs. per acre. Begin when disease first appears. Repeat at 7 to 10 day intervals.

TOMATOES - Anthracnose, Bacterial Spot, Bacterial Canker (Southeastern States Only), Early and Late Blight, Leaf Mold, Nailhead Rust, Septoria and Stemphylium Leaf Spot: Use 2 to 4 lbs. per acre. Begin in seedbed or field before disease appears. Repeat at 7 to 10 day intervals.

NOTE: While Basic Copper Sulfate at the labeled rate is particularly effective against Bacterial Spot, a tank mix of Basic Copper Sulfate with Dithane M45, Maneb or Manzate 200, used at the labeled rates, controls a broad range of tomato diseases. Observe all cautions and limitations on the label of the products used in mixtures.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. **STORAGE INSTRUCTIONS:** Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool dry area away from any heat or ignition source. Do not stack over 2 pallets high. Move bags carefully so as not to tear or puncture. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Do not allow material to become wet or store in a damp, humid area. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Store in original container only. If the contents are leaking or material is spilled, follow these steps:

1. Collect and place in suitable containers for disposal.
2. Wash area with water and soap to remove remaining pesticide.
3. Follow washing with clean water rinse.
4. Do not allow runoff to enter sewer or contaminate water supplies.
5. Dispose of waste as indicated below:

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

Container Disposal: Completely empty bag into application equipment. Then 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.

WARRANTY - CONDITION OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

In no case shall Drexel or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by Drexel Chemical Company and is accepted as such by the Buyer.