

NOV 30 1990

Mr. Joel L. Goldschmidt  
 Old Bridge Chemicals, Inc.  
 P.O. Box 194  
 Old Bridge, New Jersey 08857

Dear Mr. Goldschmidt:

**Subject:** Amendments - Label changes: to add General Instructions and Tabularize Directions for Use; to add "Fungicide" to front panel.  
 Basic Copper Sulfate  
 EPA Reg. No. 46923-2  
 Your Submissions Dated May 8 and 14, 1990

The labeling amendments referred to above submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, are acceptable provided that the following changes are made:

**Page 1:** Under the ingredient statement, align the % column.

**Page 2:** Under the reentry statement, delete one of the two duplicate sentences "Certain states require more restrictive reentry intervals for various crops treated with this product."

**Page 3:** After Crop injury. . . effectiveness, change of to "or" illegal.

**Page 6:** Under Cranberries, change the instructions for Leaf & Cane Spot, and Yellow Rust to:

2 lbs                    In spring, begin when leaf buds begin to open. Repeat when flower buds show white. Also post harvest spray after pruning but before fall rains, using 6 lbs per 100 gals of water.

BEST AVAILABLE

CONCURRENCES

SYMBOL	H.7505C						
SURNAME	D. W. R. 97						
DATE	11-29-90						

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Please submit five (5) copies of your final printed labeling incorporating the amendments before you release the product for shipment. A stamped copy of the draft label submitted on May 8 is enclosed for your records.

Sincerely yours,

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

Enclosure

## Micronized BASIC COPPER SULFATE

**ACTIVE INGREDIENT:**

Basic Copper Sulfate .....	99.00%
(Copper expressed as metallic . . . 53%)	
<b>INERT INGREDIENTS: .....</b>	<b>1.00%</b>
<hr/>	
<b>TOTAL .....</b>	<b>100.00%</b>

### KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

**PRECAUCION AL USUARIO:** Si Usted no lee ingle, no use este producto hasta que le etiqueta haya sido explicado ampliamente.

#### PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals

**Warning:** Causes substantial but temporary eye injury. Harmful if absorbed through the skin or inhaled. May cause skin sensitization reactions in certain individuals. Avoid contact with the 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.

#### 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:** Remove contaminated clothes and shoes and immediately wash skin with soap and plenty of water. See a physician.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water. 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.

CAS No. 1344-73-6  
EPA Reg. No. 46923-2-17545  
EPA Est. No. 46923-NJ-01

NET WT. 50 LBS.

Manufactured by

OLD BRIDGE CHEMICALS, INC.  
P. O. Box 194  
Old Bridge, NJ 08857

ACCEPTED  
with COMMENTS  
In EPA Letter Dated:

NOV 30 1980

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

46923-2

## DIRECTIONS FOR USE

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

### STORAGE AND DISPOSAL

**Store in a cool, dry place. Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container. If container is damaged, place container in a plastic bag. Shovel any spills into plastic bag and seal with tape. 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 liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum cannot be reused, dispose of in the same manner.

### RE-ENTRY STATEMENT

**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 treated areas without protective clothing until sprays have dried. Certain states require more restrictive reentry intervals for various crops treated with this product. Certain states require more restrictive reentry 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 area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Written and oral warnings must include the following information. WARNING: Area treated with Basic Copper Sulfate on (date of application). Do not enter without appropriate protective clothing until sprays have dried. Required Protective Clothing: long sleeved shirt and long legged pants.**

## CHEMIGATION

If this product is to be applied by chemigation, follow these directions: Apply this product only through a sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable about the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut down the system and make necessary adjustments should the need arise.

If the product is to be applied via a sprinkler system, the system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Keep the agitator running in the spray tank until spraying is completed. Apply Basic Copper Sulfate continuously for the duration of the water application. If this is impractical, apply this product at the end of the application cycle. Follow directions on this label that cover the crop to be treated. In no case should recommended concentrations per acre be exceeded.

## GENERAL INSTRUCTIONS

**Notice:** Follow all directions carefully. Timing and methods of application, weather, 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 or handling of this material when not in strict accordance with the directions given on this label.

**Recommended Mixing Directions:** Fill the spray tank about half full of water and with agitator running add the required amount of Basic Copper Sulfate. Add water to fill the tank to 3/4 full and when a spreader sticker is recommended, add the proper amount according to the manufacturer's recommendation. Fill the spray tank and keep agitator running until the spraying is completed.

**NOTE TO USER:** In some cases it may be desirable to omit oil from the spray mixture or use an alternative product other than dormant flowable oil. Consult the recommendation of the oil or other product for proper rate and timing.

The following specific instructions are based on general applications. The recommendations of local Agricultural Experiment Stations should be closely followed as to timing, frequency and number of sprays.

**BASIC COPPER SULFATE** is intended for use in a range of spray volumes. Recommendations on this label reflect common practice. If it is desirable to use spray volumes other than dilute in situations not specifically addressed on this label, do so only after developing direct knowledge, prior utilization or test, of effect on target crop.

**Minimum Recommended Spray Volume (Gallons) Per Acre When Applying BASIC COPPER SULFATE.**

	AERIAL	GROUND	
	Dilute	Concentrate	
Row Crops	5	20	--
Vines	5	100	50
Tree Crops	10	400	50
Citrus	10	400	100

Complete spray coverage is essential to assure full performance from **BASIC COPPER SULFATE**. When treating on a concentrate basis or by aerial application, unless you have had specific previous experience, it is advisable to test for compatibility and crop tolerance prior to full scale commercial utilization.

When selecting a use rate for **BASIC COPPER SULFATE**, never apply less per acre than the amount recommended per 100 gallons unless specifically instructed by the label.

While volume is important in obtaining fully spray coverage, often factors such as foliage density, environmental conditions and sprayer calibration have a greater impact. Always be sure sprayers are calibrated to manufacturers' specifications and environmental conditions are within those recommended by state and local regulatory authorities.

Per acre use rates of **BASIC COPPER SULFATE** for citrus, tree crops and vines are calculated on a dilute spray basis. Actual pounds of **BASIC COPPER SULFATE/A** should be determined by multiplying the rate/100 gallons times the minimum recommended dilute spray volume. Example: For Citrus Brown Rot -- 1.0 pound/100 gallons x 4 to 8 (dilute spray volume 400 to 800 gallons) = 4.0 to 8.0 pounds of **BASIC COPPER SULFATE** per A. The per acre use rate of **BASIC COPPER SULFATE** is applicable for both dilute and concentrate spraying. Use sufficient water for thorough coverage. Spreader/stickers may be used as dictated by local practices and conditions.

## SPECIFIC INSTRUCTIONS

## FRUITS AND NUTS

CROP	DISEASE	RATE PER 100 GAL. WATER	USE INSTRUCTIONS
Almonds	Brown Rot Blossom Blight, Shot Hole	4 - 5 lbs.	May be applied as a dormant or bud spray. Bud sprays should be applied at pink bud through popcorn stage. Do not apply after 50% bloom or when trees are in leaf. Use high rate when disease pressure is heavy or expected to be so.
Apples	Anthracnose	3 - 4 lbs.	For red varieties apply to foliage before or after harvest. For yellow varieties apply to foliage after harvest once every 2 to 3 years as necessary.
	Brooks Spot	1 lb.	Use 2 lbs. hydrated lime/100 gallons. Apply in late cover sprays.
	Bitter Rot, Black rot, Blotch, Powdery Mildew	1/2 - 1 1/2 lbs.	Plus 3-5 lbs. hydrated lime/100 gallons. Begin at petal fall and repeat through fourth cover spray.
	Bulls-eye Rot	4 lbs.	Plus suitable oil/100 gallons of water. Apply after harvest.
	Fire Blight	1/3 - 1/2 lb.	Begin at 10% bloom. Repeat at 5-day intervals until late bloom is over.
	Scab	1 - 1 1/4 lb.	Plus 2 - 2 1/2 lbs. hydrated lime/100 gallons. Apply at delayed dormant stage.
	Sooty Blotch	1 1/4 lbs.	Plus 2 1/2 lbs. hydrated lime/100 gallons. Apply in late cover sprays. Under conditions where copper injury is likely to occur, add additional lime.
Apricots	Brown Rot Blossom Blight, Shot Hole	4 - 5 lbs.	Apply as a dormant or bud spray. Bud sprays should be applied from bud swell to popcorn stage. Do not spray when trees are in leaf. When bud blight is a problem, apply the maximum rate after most leaves have fallen in the fall, usually November and December, but prior to fall rains.
Avocados	Anthracnose, Blotch (Cercospora), Scab	3 lbs.	Spray first when blossom buds open. Make 5 applications at four-week intervals. LD <sub>50</sub> 11.5 lb to 40 pounds per acre. Do not apply more than 140 days after bloom.

Caneberries (Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries, etc.)	Anthracnose	2 lbs.	Begin when leaf buds begin to open. Repeat when flower buds show white. Continue at 10 to 14 day intervals.
	Leaf & Cane Spot	2 lbs.	In spring, begin when leaf buds begin to open. Repeat when flower buds show white.
	Yellow Rust	6 lbs.	Also post harvest spray after pruning but before fall rains. <i>Using 6 lbs. per 100 gallons of water</i>
Cherries	Brown Rot Blossom Blight	4 - 5 lbs.	Apply at popcorn and late bloom stages. In late bloom spray, add 5 lbs. hydrated lime/100 gallons spray.
	Leaf Spot	4 - 5 lbs.	Plus 4-5 lbs. hydrated lime/100 gallons. Apply at petal fall.
	Shot Hole	4 - 5 lbs.	Apply as a dormant spray.
Citrus*	Brown Rot	1 lb. (Florida only, use 2 lbs.)	Apply at first indications of rain or first appearance of Brown Rot. Repeat as needed to protect during wet weather.
	Melanose, Scab, Greasy Spot, Pink Pitting	1 1/2 - 3 lbs.	<p>NOTE: For aerial or concentrate sprays, apply 10-26 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.</p> <p>For Melanose, apply 1 to 3 weeks after petal fall. Repeat 4 weeks later if necessary. Wettable sulfur may be included in sprays.</p>
			<p>For Scab, make two applications -- one just before trees begin to flush and repeat at two-thirds petal fall. Wettable sulfur may be included in sprays.</p> <p>For Greasy Spot and Pink Pitting, make a similar spray.</p>
*NOTE to User: Do not use in areas where copper injury is known to have occurred.			
Currants, Gooseberries	Anthracnose, Leaf Spot	1 1/4 lbs.	Spray at leaf opening and repeat at 10-14 day intervals. Or,
		6 lbs.	Apply at full bloom, two weeks later, and after harvest.
Filberts*	Bacterial Blight, Eastern Filbert Blight	6 lbs.	Apply in late summer prior to heavy rains. If heavy fall rains occur, repeat spray after three-quarters of the leaves have dropped.
(*Not for use in California)			

Grapes	Anthracnose, Black Rot, Downy Mildew	3 lbs.	Make first application when new growth is 1/2 inch long and repeat every 10-14 days. Concentrate spray; use 4 to 5 pounds per acre in sufficient water for good coverage and apply as stated above.
Mangos	Anthracnose	3 lbs.	Begin sprays when panicles are about 2 inches long. Spray weekly until fruit sets, then spray monthly for a total of 12 applications. One gallon of spreader per 100 gallons of spray may increase efficiency.
Olives	Leaf Spot (Peacock Spot)	4 lbs.	Apply in late October. NOTE: In areas with 10 inches or less of rainfall per year, use only 2 lbs. per 100 gallons of water.
Peaches, Nectarines	Brown Rot	4 - 5 lbs.	Apply before bud swell and in full pink bud stages. Do not apply after pink bud stage or after trees are in leaf as injury may occur.
	Leaf Curl, Peach Blight (Shot Hole)	4 - 5 lbs.	As a dormant spray, apply prior to fall rains. Bud sprays should be applied before bud swell and in full pink bud stages. Do not apply after pink bud stage, after foliage buds swell or after trees are in leaf as injury may occur. Consult your State Agricultural Experiment Station.
			California only: Apply 16-20 lbs. in 20 gallons of water/acre by aircraft during the dormant season.
	Bacterial Diseases of Peaches	3 lbs.	Apply during the dormant season.
Pears	Fire Blight	1/2 lb.	Use at least 400 gallons of spray per acre. Apply at 10% bloom and repeat at 5 to 7 day intervals during bloom. Do not use on D'Anjou, Comice or Seckel varieties.
Plums, Prunes	Shot Hole	4 - 5 lbs.	Apply as a dormant spray before the advent of heavy rains.
	Brown Rot Blossom Blight	4 - 5 lbs.	Apply at early green bud and full popcorn stages. Do not apply after trees are in leaf as injury may occur.
			California only: For aircraft sprays to control 'Shot Hole', Brown Rot Blossom Blight, apply 16-20 lbs. in 20 gallons of water/acre during the dormant season.
Strawberries	Leaf Spot	2 - 3 lbs.	Apply at pre-bloom and post-bloom.
Walnuts	Blight	4 - 5 lbs.	Treat twice, once in early pre-bloom and again when 10 to 20 percent pistillate blooms are showing. Repeat applications for Blight control 3 or 4 times during growing season if necessary.

## VEGETABLES

CROP	DISEASE	RATE PER ACRE	USE INSTRUCTIONS
Beans (Green & Dry)	Angular Leaf Spot, Anthracnose, Bacterial Blight, Downy Mildew	2 - 4 lbs.	Begin treatment when plants are about 6 inches tall and repeat at 6 to 7 day intervals.
Beets	Downy Mildew, Leaf Blight, Leaf Spots	2 - 3 lbs.	Begin when disease first appears and repeat every 7 to 10 days.
Broccoli, Brussels Sprouts, Cabbage, Cauliflower	Downy Mildew, Leaf Spots	2 - 3 lbs.	For plant bed sprays, apply after plants have emerged but before diseases appear. Repeat in 7 to 10 days as needed.  NOTE: For in-field use, use 3 lbs./100 gallons water at 7 to 10 day intervals as needed.
Carrots	Alternaria & Cercospora Leaf Bights, Downy Mildew	3 - 4 lbs.	Begin treatment when disease first appears and repeat at 7 to 10 day intervals.
Celery	Early Blight, Late Blight, Bacteria Blight	3 - 4 lbs.	Treat every 7 days after emergence.
Cucurbits (Cantaloupes, Cucumbers, Melons, Pumpkins, Squash)	Angular Leaf Spot, Anthracnose, Alternaria Leaf Spot, Bacterial Wilt, Downy Mildew, Powdery Mildew, Gummy Stem Blight, Leaf Spot, Scab	2 lbs.	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 plus 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 to decrease infections of Angular Leaf Spot, Anthracnose and Alternaria Leaf Spot. Then follow above schedule after emergence. Note: Some Agricultural Experiment Stations may 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 defloration under some conditions. Consult your local Experiment Station for specific recommendations.
Eggplant	Anthracnose, Downy Mildew, Phomopsis Blight, Leaf Spots, Early Blight (Alternaria)	--	Apply 1 3/4 - 3 lbs./100 gallons water to either plant beds or field before diseases appear. Repeat at 7 to 10 day intervals.
Lettuce	Anthracnose, Downy Mildew, Leaf Spot (Cercospora)	--	Spray 1 3/4 to 3 pounds/100 gallons before diseases appear. Repeat at 7 to 10 day intervals.
Onions	Downy Mildew, Purple Blotch	3 - 4 lbs.	Begin when plants are 6 to 8 inches. Repeat at 7 to 10 day intervals.

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Peas	Downy Mildew, Leaf Spots	--	Use 1 3/4 to 3 pounds/100 gallons. Begin spraying before diseases appear. Repeat at 7 to 10 day intervals.
Peppers	Anthracnose, Bacterial Spot, Early Blight, Downy Mildew, Cercospora Leaf Spot	3 - 4 lbs.	Start sprays in seedbed and continue in field at 7 day intervals. NOTE: Disease control is critical during fruiting.
Potatoes	Early Blight, Late Blight	3 - 6 lbs.	Begin when plants emerge. Repeat at 7 to 10 day intervals.
Peanuts	Cercospora Leaf Spot	2 - 3 lbs.	Repeat at 10 to 14 day intervals. NOTE: The addition of 3 pounds wettable or flowable sulfur in a tank mix will enhance Leaf Spot control. If dusting is preferred, use 7 pounds BASIC COPPER SULFATE with 93 pounds dusting sulfur per 3 to 5 acres, depending on plant size.
Spinach	Anthracnose, Downy Mildew, White Rust, Cercospora Leaf Spot	3 - 4 lbs.	Begin when disease first appears. Repeat at 7 to 10 day intervals.
Sugarbeets	Cercospora Leaf Spot	4 lbs.	Begin when disease first occurs. Repeat every 7 to 10 days.
Tomatoes	Anthracnose, Bacterial Spot, Bacterial Canker, Early Blight, Late Blight, Leaf Mold, Nailhead Rust, Septoria Leaf Spot, Stamphylium Leaf Spot	2 - 4 lbs.	Begin in seedbed or field before disease appears. Repeat at 7 to 10 day intervals.

**CONDITIONS OF SALE  
LIMITED WARRANTY AND LIMITATIONS  
OF LIABILITY AND REMEDIES**

The directions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with the 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 Old Bridge Chemicals, Inc. or the seller. All such risks shall be assumed by the purchaser and user.

Old Bridge Chemicals, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the directions for use subject to the inherent risks referred to above. Old Bridge Chemicals, Inc. makes no other warranty or representation of any kind, express or implied, concerning the product, including **NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE** and no such warranties shall be implied by the law.

The exclusive remedy against Old Bridge Chemicals, Inc. for any cause of action relating to the handling or use of this product is a claim for damage and in no event shall damages or any other recovery of any kind against Old Bridge Chemicals, Inc. exceed the price of the product which causes the alleged loss, damage, injury, or other claim. Old Bridge Chemicals, Inc. shall not be liable and any and all claims against Old Bridge Chemicals, Inc. are waived for special, indirect, incidental, or consequential damages or expenses, of any nature including but not limited to loss of profits or income, and crop or property loss or damage, whether or not based on Old Bridge Chemicals Inc.'s negligence, breach of warranty, strict liability in tort or any other cause of action.

Old Bridge Chemicals, Inc. and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitations of warranty, liability, and remedies which may only be varied by agreement in writing signed by a duly authorized representative of Old Bridge Chemicals, Inc.

## **ADVANTAGES OF OLD BRIDGE BRAND BASIC COPPER SULFATE**

- Instantly wettable
- Mixes easily and homogeneously
- Low density
- Excellent suspension characteristics
- Re-suspends quickly and easily
- Compatible with most insecticides and miticides
- Compatible with most spray oils
- Small particle size for greater surface coverage

**Consult your local extension service for exact  
mixing and use recommendations in your area.**

**Old Bridge Chemicals, Inc.**

**P.O. Box 194  
Old Bridge, NJ 08857  
(201) 727-2225**