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EPA Reg. No. 1109-25
Form No. 9-25

EPA Est. No.: 1109-TN-1

COPPER FUNGICIDE 4E

**EMULSIFIABLE LIQUID COPPER
FUNGICIDE**

ACCEPTED
with COMMENTS
in EPA Letter

JUN 28 1991

Under the
Federal Insect
Fungicide Act
Registered Under FIFRA No.

Active Ingredient:

Copper salts of fatty and rosin acids 48%
(Metallic copper equivalent 4.0%)

1109-25

Inert Ingredients 52%

Keep out of reach of children

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

CAUTION:

Harmful if swallowed. Contains a petroleum solvent.

STATEMENT OF PRACTICAL TREATMENT:

If swallowed do not induce vomiting. Call a physician immediately. If in eyes, wash eyes with water and see a physician. If on skin, wash with soap and water. Get medical attention if irritation persists. If on clothing, remove and wash clothing before product dries and reuse.

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.

ENVIRONMENTAL HAZARDS:

This product is toxic to fish. Do not contaminate any body of water by direct application, cleaning of equipment or disposal of wastes or containers.

PHYSICAL OR CHEMICAL HAZARDS:

Do not spray into or near fire or open flames.

USE OF THIS PRODUCT NEAR HEAT OR OPEN FLAMES

TENNESSEE CHEMICAL COMPANY
Copperhill, Tennessee 37317

Net Contents _____ Gallons

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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.

Do not enter treated area 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. The oral warnings should be that workers shall not be in field during spraying and not return until sprays have dried on plants. If worker must be in field during this time, workers must wear goggles for eye protection and protective clothing including a hat or similar head covering, long sleeve shirt, long legged trousers, or a coverall type garment, all of closely woven fabric covering the body, arms, and legs, shoes and socks. If accidentally exposed, if in eyes flush eyes with plenty of water for at least 15 minutes. If on body remove by washing and wash clothes before reuse. 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. Written warnings must include the following information: Warning. Area treated with Copper Fungicide 4E on (date of application). Do not enter without appropriate protective clothing until spray in treated area has dried on plants.

Change to written

STORAGE AND DISPOSAL

Storage:

Store in a secure place, away from fire or open flame. Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Keep container closed and reseal after use. Product is not damaged by freezing, but preferably store at temperatures above 32° F. If spilled, use absorbent materials and dispose in approved landfill.

Pesticide Disposal:

Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

injection card

Don

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CONTAINER DISPOSAL:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities, or plastic containers by incineration, or if allowed by state and local authorities, by burning. If burned stay out of smoke.

Read and follow all applicable directions and precautions on this label or label of other products before mixing with Copper Fungicide 4E.

Copper Fungicide 4E can be applied up to day of harvest. When tank-mixed with other products, do not apply that product closer to harvest than is permitted or stated on their label.

Pour Copper Fungicide 4E into spray tank at least 1/2 filled with water with adequate agitation. When mixed with other products proven or known to be compatible, wettable powders should be added first, followed in order by flowables, and then emulsifiable concentrates including Copper Fungicide 4E.

Do not apply this product through any type of irrigation system.

Consult State Agricultural Experiment Stations or State Agricultural Extension Service for additional information as the timing needs may vary with local conditions.

Copper Fungicide 4E is compatible with many organic insecticides and fungicides in tank mixes. Do not mix Copper Fungicide 4E with oil when applied to citrus. Do not mix Copper Fungicide 4E with chelated or liquid fertilizers. Use product with other fungicides and insecticides with caution. Observe all cautions and limitations on all products used in mixtures.

Crop Use Directions

tsp = teaspoon

2 tsp/gal = 1 qt/100 gals

FRUITS AND NUTS

AVOCADOS: - Anthrachnose, Blotch (Cercospora leafspot) - Apply 4 tsp/gal when bloom buds begin to swell. Repeat monthly until September

BERRIES (Black-, Boysen-, Logan-, and Raspberries) - Anthrachnose, Leaf and Cane spots, and Yellow rust - Apply (4 to 6 tsp/gal) when leaf buds begin to open. Repeat when flower buds show white and continue at 10 to 14 days until

DO NOT APPLY

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harvest. Also make a post-harvest spray after pruning but before fall rains using 8 tablespoons/gallon.

CHERRIES: (Sour) - Bacterial canker (*Pseudomonas syringae*) and leaf spot - Apply 3 tsp/gal in spring as buds begin to swell. Repeat at bud burst and weekly thereafter as needed for up to 6 sprays. In fall apply a spray at both 10 and 80% leaf fall. Caution: Sprays after leaf emergence may cause some leaf defoliation. For Brown rot blossom blight - apply 3 tablespoons/gallon at popcorn bud, full bloom and at petal fall. During wet weather additional bloom sprays may be necessary.

CITRUS: - Melanose, Red algae - Apply 4 tsp/gal (2 quarts/100 gals). Apply 1 to 3 weeks after petal fall and repeat four weeks later. Do not apply with any oil on any citrus as some defoliation may occur. Citrus includes grapefruit, oranges, lemons, tangerines, and similar members of the citrus group.

GRAPES: Downy and Powdery mildew - Apply 2 tsp/gal (1 qt/100 gals) begin spray when new growth is 1/2 inch long and repeat every 7 to 10 days throughout growing season. Also suppresses and aids in control of black rot. Note: Do not mix with lime. Certain varieties and hybrids may be slightly sensitive to copper sprays resulting in marginal leaf burn.

MANGOES - Anthracnose - Apply 6 tsp/gal weekly beginning when panicles are two inches long until fruit are set, then continue monthly through September.

PEACHES, NECTARINES - Leaf curl, Shot hole, Blossom brown rot - Apply 7 to 10 tsp/gal (3-1/2 to 5 qts/100 gals) at leaf fall and repeat in late dormant up to bud swell and at pink bud. Do not apply after pink bud.

STRAWBERRIES - Leaf spot, Scorch - Apply 3 to 4 tsp/gal beginning when new growth starts and repeat at 7 to 10 days until harvest.

WALNUTS - Bacterial blight - Apply 4 tsp/gal beginning when leaflets start to unfold and before 1% pistillate blooms. Repeat weekly as needed especially during wet rainy periods.

VEGETABLES

BEANS (Green snap, and dry colored and navy beans) - Bacterial blights - Apply 4 tsp/gal beginning at trifoliolate and continue at 7 to 10 day intervals to harvest. During wet weather use 7 day intervals.

BROCCOLI, BRUSSEL SPROUTS, CAULIFLOWER, CABBAGE - Downy mildew and Alternaria blight - Use 1 tsp/gal. Begin application when disease is expected and repeat at 7 day intervals as needed. Caution: A slight reddening of the

older leaves may occur occasionally especially in late fall. Do not add additional spreader-sticker to spray. Do not spray when plants are under environmental stress conditions.

POTATOES - Late blight - Apply 7 tsp/gal beginning treatment when weather conditions favor late blight and repeat every 7 days up to day of harvest.

ADDITIONAL VEGETABLE USES

For the following crops apply 4 to 6 tsp/gal beginning when disease is expected or first symptoms appear. Repeat at 7 to 10 day intervals as needed or up to day of harvest. Use shorter intervals and higher rates in wet weather periods.

| <u>Crop</u> - | <u>Disease</u> |
|---|---|
| <u>BEETS</u> (Red table) | - <u>Cercospora leaf spot</u> |
| <u>CARROTS</u> | - <u>Early and late blights, Leafspots</u> |
| <u>CELERY</u> | - <u>Bacterial blight, Early blight</u> |
| <u>CUCURBITS</u> (Cucumbers, Cantaloupe, Muskmelon, Squash, Pumpkins and Watermelons) | - <u>Downy mildew, Powdery mildew, and Alternaria blight, Scab</u> |
| <u>*CUCUMBERS</u> | - <u>Angular leaf spot</u> |
| <u>ONIONS</u> | - <u>Downy mildew, Gray mold neck rot, Bacterial soft rot</u> ✓ |
| <u>*PEPPERS</u> | - <u>Bacterial spot, Cercospora leaf spot</u> |
| <u>PEANUTS</u> | - <u>Leafspots (early and late) and Web blotch</u> ✓ |
| <u>PEAS</u> | - <u>Powdery mildew, Bacterial blight</u> |
| <u>POTATOES</u> | - <u>Early blight</u> |
| <u>*TOMATOES</u> | - <u>Bacterial spot and speck, Early blight, Septoria leafspots, Anthracnose.</u> Where early blight or Anthracnose is expected to be heavy make a tank mix with approved organic fungicides used at labeled rates. |

* For control of diseases on these crops in greenhouses, fields, gardens and plant beds.

ORNAMENTALS

For control of diseases on ornamentals in greenhouses, gardens, fields, nurseries, or plant beds.

For the following crops apply 4 to 6 tsp/gal (2 qts/100 gal) beginning when disease is expected or first symptoms appear. Repeat every 7 to 10 days as needed to control disease. Use higher rates and shorter intervals during periods of frequent rain or when several disease conditions are present.

CROP/DISEASE CONTROLLED

* AZALEAS - Cercospora leafspot, Botrytis blight, Leaf gall, Phytophthora dieback, and Powdery mildew.

dieback

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BEGONIA - Xanthomonas leaf spot, Anthracnose, Powdery mildew,
CAMELLIA - Phytophthora dieback

* CHRYSANTHEMUMS, GARDENIA, and FOLIAGE PLANTS including
PHILODENDRON - Bacterial blight

COTONEASTER - Botrytis blight

HYDRANGEAS - Leafspots, Powdery mildew *

IXORA, MAGNOLIAS, and PALM TREES - Leafspots *

* IRIS - Scab

IVY - Bacterial leafspot, Xanthomonas leafspot

PACHYSONDRA - Volutella blight

* ROSES - Powdery mildew, suppresses and aids in control of
black spot

PYRANCANTHA - Fire blight and Scab. Begin spray during bloom
period and repeat at 3 to 4 day intervals. After bloom
period continue on 7 to 10 day schedule.

* Discoloration of blooms may occur on certain varieties or
colors of these plants. To avoid problem, do not spray just
before or during flower period.

PINE (Austrian, Ponderosa, Mugo, Scot) - Dothistroma needle
blight and Diplodia tip blight - Mix 4 teaspoons per gallon
water (2 qts/100 gals) and apply to point of spray - run-off
thoroughly wetting needles. For Dothistroma make first
application as new needles begin to emerge from needle
sheaths (about mid May in Eastern Nebraska) and repeat 3 to 4
weeks later. For Christmas trees, or in continued wet
seasons, repeat monthly through September. For Diplodia tip
blight make first application when shoot buds open (about
third week in April in Eastern Nebraska) and repeat at weekly
intervals until needles break through needle sheaths.

JUNIPERS - Cercospora needle blight - Mix 4 tsp/gal water (2
qts/100 gals). Make first spray as new growth begins and
repeat monthly making at least 2 or 3 sprays or through
September if frequent rains occur.

MAPLES, OAKS, and SYCAMORE - Anthracnose, Leafspots - Mix
4 tsp/gal and make first application just before buds begin
to swell and repeat at 7 day intervals as needed. Make at
least 3 sprays.

CEDAR - Cedar apple rust - Apply 4 tsp/gal (2 qts/100 gals)
weekly in July and August

NOTICE TO BUYER: Seller warrants that this product conforms
to the chemical description on this label and is reasonably
fit for purposes stated on this label only when used in
accordance with directions under normal use conditions. This
warranty does not extend to use of this product contrary to
label directions, or under abnormal use conditions, or under
conditions not reasonably foreseeable to seller; buyer
assumes all risk of any such use. Seller makes no other
warranties, either expressed or implied.