



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

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

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Micro Flo Company LLC  
P.O. Box 772099  
Memphis, TN 38117-2099

JUN 3 2003

Subject: Captan 80-WP  
EPA Reg. No. 51036-168  
Amendment dated May 28, 2003

Dear Ms Bruce:

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

**DIRECTIONS FOR WATER SOLUBLE BAGS:** Add a third bullet item: "Do not add fertilizers or products containing boron until after the bags have completely dissolved".

**SPECIAL USES:** Move the sentence "For use in mechanical fruit-dip...." to immediately after the subheader "POSTHARVEST FRUIT APPLICATION".

**ORNAMENTALS:** Since the water soluble bags should not be opened before being added to water, all mixing directions should be in terms of gallons per water soluble bag. The following dilution directions are appropriate for 2½ pound water soluble bags. The dilution directions on the label for 5 pound water soluble bags should specify twice as much water.

Azaleas: Use 1 water soluble bag (2½ pounds) Captan 80-WP per 117 gallons of water.

Petal blight - Use 1 water soluble bag (2½ pounds) Captan 80-WP per 200 gallons of water.

Begonias: Use 1 water soluble bag (2½ pounds) ....

Camelias: Use 1 water soluble bag (2½ pounds) Captan 80-WP per 400 gallons of water.

Carnations: Use 1 water soluble bag (2½ pounds) Captan 80-WP per 200 gallons of water. Damping-off cuttings: Use 1 water soluble bag (2½ pounds) Captan 80-WP per 117 gallons of water.

Chrysanthemum: Use 1 water soluble bag (2½ pounds) Captan 80-WP per 167 gallons of water. Damping-off cuttings: Use 1 water soluble bag (2½ pounds) Captan 80-WP

Captan 80-WP  
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per 117 gallons of water.

Dichondra: Use 1 water soluble bag (2½ pounds) Captan 80-WP per 200 gallons of water.

Gladiolus: Use 1 water soluble bag (2½ pounds) Captan 80-WP per 1066 gallons of water.

Grasses (ornamentals): Use 1 water soluble bag (2½ pounds) Captan 80-WP per 200 gallons of water.

Grasses (lawn seed beds): Use 1 water soluble bag (2½ pounds) Captan 80-WP per 8,000 to 12,500 square feet or 1 water soluble bag (2½ pounds) Captan 80-WP per 200 gallons of water, using 15 gallons....

Roses: Use 1 water soluble bag (2½ pounds) Captan 80-WP per 200 gallons of water.

Soil and greenhouse bench treatment: Use 1 water soluble bag (2½ pounds) Captan 80-WP per 200 gallons of water.

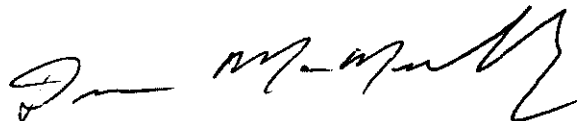
Note: Additional label changes may be required in product specific reregistration, e.g., use on turf may be restricted as discussed in the Captan RED.

A copy of the label stamped "Approved with comments" is enclosed for your records.

Please submit one copy of the final printed label before the product is released for shipment.

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,



Dennis McNeilly  
Acting Product Manager (22)  
Fungicide Branch  
Registration Division (7505C)

Enclosure

CAPTAN 80-WP  
A Fungicide For Plant Disease Control

Captan 80 Wettable Powder is a microfine wettable powder for use in water as a spray for the control of certain fungus diseases of fruit and ornamental crops, and as a soil treatment for the control of certain seed roots and damping-off diseases.

ACTIVE INGREDIENTS:	
*Captan .....	78.3%
Related Derivatives .....	1.8%
INERT INGREDIENTS: .....	19.9%
TOTAL .....	100.0%

\*N-Trichloromethylthio-4-cyclohexene-1,2-dicarboximide

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

CAUSES IRREVERSIBLE EYE DAMAGE

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

FIRST AID

If a known exposure occurs or is suspected, immediately start the procedures given below and contact a POISON CENTER, PHYSICIAN, OR THE NEAREST HOSPITAL. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Describe the type and extend of exposure, the victim's symptoms and follow the advice given.

IF IN EYES: Hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have a 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 by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

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.

ACCEPTED  
with COMMENTS  
In EPA Letter Dated:

JUN 3 2003

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

51036-168

<p>EMERGENCY TELEPHONE NUMBERS: You may also contact:</p> <ul style="list-style-type: none"> <li>• (800) 424-9300 CHEMTREC (transportation and spills)</li> <li>• (800) 900-4044 Poison Control Center (human health)</li> <li>• (800) 345-4735 ASPCA (animal health)</li> </ul>
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EPA REG. NO. 51036-168

EPA EST. NO. 51036-GA-1

Manufactured By:  
MICRO FLO COMPANY  
P.O. BOX 772099  
MEMPHIS, TN 38117

PRECAUTIONARY STATEMENTS  
Hazards To Humans And Domestic Animals

DANGER

Causes irreversible eye damage. Harmful if swallowed or inhaled. May cause allergic skin reactions. Do not get in eyes. Avoid contact with skin and clothing. Avoid inhalation of dust or spray mist.

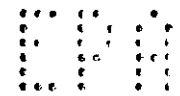
PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category F on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators, flaggers, and other handlers (including handlers participating transplanting as part of root dip treatments or greenhouse-soil treatments and persons handling/cutting/sorting treated potato seed pieces) must wear:

1. Long-sleeved shirt and long pants,
2. Shoes plus socks,
3. Chemical resistant gloves made of any waterproof material(except for flaggers, pilots, and applicators driving motorized equipment),
4. Chemical resistant apron when participating in dip treatments,
5. In addition, a NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH approved respirator with any N<sup>2</sup>, R, P or HE filter must be worn by all handlers except (1) applicators driving motorized equipment and (2) mixers/loader/applicators participating in backpack, low-pressure handwand/handgun, and dip treatments, and (3) mixers/loaders participating in aerial applications. Mixers/loaders participating in aerial applications must wear an air-purifying NIOSH-approved respirator with any N100, R100, or P100 filter.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot



water. Keep and wash PPE separately from other laundry. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

ENGINEERING CONTROLS

IMPORTANT: Water-soluble packets when used correctly qualify as a closed loading system under the WPS. Mixers and loaders using water-soluble packets (1) must wear the PPE specified above for mixers and loaders and (2) must be provided a NIOSH-approved dust/mist respirator (type specified below), and (3) must have the respirator immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown. The respirator must be either a dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N<sup>2</sup>, R, P, or HE filter.

USER SAFETY RECOMMENDATIONS

Users should:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. 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. 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 aquatic organisms in neighboring areas. Do not clean equipment or dispose of equipment washwaters in a manner that will contaminate water resources.

STORE IN COOL, DRY PLACE - PROTECT FROM EXCESSIVE HEAT

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 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. 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 17C. 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), notification to workers, and restricted-entry intervals.

The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of:

24 hours for strawberries, almonds, apples, apricots, cherries, nectarines, plums/ fresh prunes, peaches.

48 hours for soil treatments and root dips: for soil and Greenhouse bench treatments and root dips, once the treatment and any seedling or transplanting tasks done as part of the treatment are complete, the 48 hour REI begins. Exception: Once the seeds or transplants are planted in the soil, the Worker Protection Standard allows workers to enter the treated area without restriction if there will be no contact with the soil subsurface.

48 hours for sod farms.

72 hours for blueberries, grapes, raspberries, blackberries and dewberries.

96 hours for ornamentals. Exception: For the last 48 hours of the REI, workers may enter the treated area to perform hand labor or other tasks involving contact with anything that has been treated, such as plant, soil and water, without time limit, if they wear the early-entry PPE listed below

Eye Protection: To mitigate eye irritation concerns from post-application exposures, the Agency is requiring that, for at least seven days following the application of captan:

1. at least one container designed specifically for flushing eyes is available in operating condition at the WPS-required decontamination site for workers entering the area treated with captan, and
2. workers are informed orally, in a manner they can understand:
  - that residues in the treated area may be highly irritating to their eyes,
  - that they should take precautions, such as refraining from

rubbing their eyes, to keep the residues out of their eyes,  
-that if they do get residues in their eyes, they should  
immediately flush their eyes with the eyeflush container  
that is located at the decontamination site, and  
-how to operate the eyeflush container.

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:

1. Coveralls
2. Chemical resistant gloves made of any waterproof material
3. Shoes plus socks
4. Protective eyewear

Notification: Notify workers of the application by warning them orally or by posting warning signs at entrances to treated areas.

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.

Read all precautions and directions for use before using. Use only for claims listed and only as specified on this label.

In order that pesticide residues on food and forage crops will not exceed federal tolerances, use only at recommended rates and intervals, and do not apply closer to harvest than specified. Do not apply or allow to drift to adjoining food, fiber or pasture crops. Drift of Captan 80 WP onto sensitive crops (e.g. D'Anjou pears) can cause severe phytotoxicity and crop loss. Consult State Agricultural Experiment stations or State Agricultural Extension service for additional information, as the time of applications needed will vary with the local conditions.

CAPTAN AERIAL DRIFT LANGUAGE

Do not allow this product to drift.

FOLIAR SPRAY DRIFT MANAGEMENT

Avoiding spray drift from foliar applications is the responsibility of the applicator. Similar to aerial spray drift, the interaction of many equipment-and-weather-related factors determine the potential for spray drift from foliar applications. To protect water resources, the applicator and the grower are responsible for considering all these factors when making decisions.

### AERIAL SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to applications using dry formulations.

The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

### AERIAL DRIFT REDUCTION ADVISORY

This section is advisory in nature and does not supersede the mandatory label requirements.

#### INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

#### CONTROLLING DROPLET SIZE

Volume-Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure-Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.



Number of nozzles-Use minimum number of nozzles that provide uniform coverage.

Nozzle Orientation-Orienting nozzles so that the 'spray' is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

Nozzle Type-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

EPH

### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

### COMPATIBILITY AND PLANT SAFETY

Captan 80 WP can be combined safely and effectively at recommended dosage rates with most commonly used fungicides and insecticides, with the exception of oil and strongly alkaline materials.

Alkaline materials such as spray lime, lime-sulfur and bordeaux mixture will reduce the fungicidal activity of Captan 80 WP. Do not apply Captan 80 WP in combination with or immediately before or closely following oil sprays. Do not allow oil sprays on adjacent crops to drift onto crops which have been or will shortly be treated with Captan 80 WP. The time factor governing the safe interval between Captan 80 WP and oil sprays varies due to general climatic conditions, therefore, consult local agricultural spray programs and authorities to determine the proper timing. The use of spreaders which cause excessive wetting is not advised.

Combinations with solvent formulations of organic phosphates should not be used. Combinations of Captan 80 WP and sulfur should not be used on crops sensitive to sulfur. Used at high rates or in drenching sprays, Captan 80 WP may cause a necrotic spotting of tender, immature leaves of certain varieties of apples, peaches, plums and cherries. This type of injury is most likely to occur in the early cover sprays during long periods of warm, cloudy, humid weather. To avoid the hazard of leaf spotting under such conditions, use Captan 80 WP and other spray materials at lowest recommended rates and avoid drenching trees.

Applications can be made by aircraft or ground power equipment (including concentrate and semi-concentrate equipment). Pour recommended amount of this material into nearly filled spray tank. Add balance of water. Maintain agitation during filling and spraying operations. Do not allow mixture to stand. Do not combine with emulsifiable liquids or wettable powders unless previous experience has proven them to be physically compatible and safe to plants. (Read compatibility and plant safety information). For aerial or concentrate spray applications, apply the same amount of Captan 80 WP per acre as would normally be applied for dilute spray applications. Apply aerial or concentrate sprays in sufficient water for coverage. Do not apply this product through any type of irrigation system.

#### STORAGE AND DISPOSAL

**PROHIBITIONS:** Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. Open dumping is prohibited. Do not reuse empty container.

**PESTICIDE STORAGE:** Keep pesticide in original container. Keep container tightly closed when not in use. Protect from excessive heat. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. 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.

**CONTAINER DISPOSAL:** Do not reuse container. Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

#### INSTRUCTIONS FOR USE

**IMPORTANT:** Read label carefully. Although most of the directions on this label may be followed nationwide, a few are limited to either the eastern or western U.S. Follow those directions for your growing area where specified.

## GENERAL USE PRECAUTIONS

Do not apply this product to seeds or seed pieces.

Except as specified begin applications before or at first sign of disease and repeat as needed to maintain control but observe use limitations. Unless otherwise specified, application can be made on the day of harvest. Maximum application is for a crop cycle. Crop cycle is defined as prebloom through postharvest. Apply the high rate and/or spray at shorter intervals when climatic conditions most favors disease(s). Apply the low rate and/or spray at longer intervals when climatic conditions least favors disease(s). If you are unaware of the climatic conditions favorable for disease(s) claimed for the specific use sites, you must consult with your State Agricultural Extension Service to learn of these conditions.

## Directions for Water-Soluble Bags

CAPTAN 80W consists of a protective outer resealable package containing water soluble bags. First fill the spray tank with approximately half the required volume of water. Begin agitation. Remove the required number of unopened water soluble bags from the outer package and add to the tank. Reseal outer bag to protect any unused bags. Avoid adding bags near recirculation outlets as they might block them before being fully dissolved.

- Do not allow bags to become wet prior to adding to the tank.
- Do not handle water soluble bags with wet hands or wet gloves.

Depending on the degree of agitation and water temperature, the water soluble bags should be completely dissolved and ready to spray within 5 minutes. If other materials are to be added to the tank, wait until the CAPTAN 80W is fully dissolved before adding them. Once all materials have been added, fill the tank with the remaining volume of water. Maintain continuous agitation at all times, and use the spray suspension as soon as possible.

## CONVERSION TABLES

ACRES TREATED PER 2.5 LB WATER SOLUBLE BAG	
LABEL USE RATE LBS/A CAPTAN 80W	ACRES TREATED WITH ONE WATER SOLUBLE BAG
1.0 LB	2.5
2.5 LB	1.0
5.0 LB	0.5

ACRES TREATED PER 5 LB WATER SOLUBLE BAG	
LABEL USE RATE LBS/A CAPTAN 80W WSB	ACRES TREATED WITH ONE WATER SOLUBLE BAG
1.0 LB	5.0
2.5 LB	2.0
5.0 LB	1.0

## FRUIT AND NUT CROPS

## ALMONDS:

Brown rot twig and blossom blight, shothole, scab, leaf blight - Apply 2 1/2 to 5 2/3 lbs. Captan 80 WP per acre in 20 to 300 gallons of water using ground equipment or in 5 to 20 gallons of water by air. Use 3 3/4 to 5 2/3 lbs. per acre when Captan 80 WP is used alone. Use 2 1/2 to 3 3/4 lbs. per acre in tank mixtures with fungicides having a similar spectrum. Apply at popcorn, bloom, petal fall, post petal fall, and full cover sprays. Do not apply within 30 days of harvest. Hulls may be fed to livestock. Do not apply more than 25 lbs. per acre per crop cycle. (See General Use Precautions section for definition of crop cycle).

## APPLES (Eastern U.S.):

Primary scab, black rot (frog-eye), botrytis blossom-end rot - Apply 5 lbs. Captan 80 WP per acre in 20 to 400 gallons of water using ground equipment or in 5 to 20 gallons of water by air. Apply at 5 to 7 day intervals as needed to maintain control in prebloom, bloom, petal fall and first cover sprays.

Secondary scab, Brooks fruit spot, sooty blotch, fly speck, black rot, black pox, botryosphaeria rot, bitter rot - Apply 2 1/2 to 5 lbs. Captan 80 WP per acre in 20 to 400 gallons of water using ground equipment or in 5 to 20 gallons of water by air. Apply at 10 to 14 day intervals in second and later cover sprays. Do not apply more than 40 lbs. of Captan 80 WP per acre per crop cycle. May be applied up to day of harvest.

Powdery mildew - If powdery mildew is a problem add 6 to 12 lbs. sulfur per acre to all post-bloom sprays until foliage matures.

CAUTION - Do not use Captan 80 WP in combination with or closely following or in alternation with wettable sulfur products on sulfur sensitive varieties of apples such as Red Delicious, Staymen, Baldwin, King, etc. as severe injury and defoliation may occur.

#### APPLES (Western U.S.):

Primary scab - Apply 2 1/2 to 5 lbs. Captan 80 WP per acre in 20 to 400 gallons of water per acre using ground equipment or in 5 to 20 gallons of water by air. To reduce the potential for disease resistance development to other fungicides having a similar spectrum, the lower rate maybe used in tank mixtures.

(Pacific northwest) - Bull's eye rot, Botrytis rot - Apply 3 3/4 lbs. Captan 80 WP per acre in 20 to 400 gallons of water using ground equipment or 5 to 20 gallons of water by air. Make 1 or 2 applications with late cover sprays and 1 final spray prior to harvest. Do not apply more than 40 lbs. of Captan 80 WP per acre per crop cycle. May be applied up to day of harvest.

Secondary scab - in mid-summer cover sprays, the dosage may be reduced to 2 1/2 pounds per acre.

#### APRICOTS:

Brown rot (twig blight), jacket rot - Apply 1 7/8 to 3 1/8 lbs. Captan 80 WP per acre in 20 to 250 gallons of water using ground equipment or 10 to 20 gallons of water by air. Apply in red bud, bloom, 75% petal fall, and cover sprays. To reduce the potential for disease resistance development to other fungicides having a similar spectrum, use the lower rate in tank mixtures. Do not apply more than 15 5/8 lbs. per acre per crop cycle. Do not make applications after 75% petal fall.

#### BLACKBERRIES and RASPBERRIES

Anthracnose, Botrytis, and Spur Blight - apply 2 1/2 pounds of Captan 80W per acre when blossoms are in bud (young canes are 8-10" long). Make a second application two weeks later. Apply a fall spray after old canes are removed. Fruit Rot- Apply 4 pounds of Captan 80W per acre at early bloom (5 to 10% bloom) and again at full bloom. Additional applications can be made at 10-14 day intervals as needed. Do not apply within 3 days of harvest. Apply Captan 80W as indicated above in 45-100 gallons of water per acre. Use the higher volume as foliage increases. Do not apply more than 12 1/2 pounds of Captan 80W per acre per season.

BLUEBERRIES (Eastern U.S.):

Botrytis gray mold or berry rot, mummy berry - Apply 3 1/8 lbs. Captan 80 WP per acre in sufficient water for thorough coverage or a minimum of 5 gallons of water by air. Start spray program when buds swell and earliest buds have loose scales. Repeat at 7 day intervals through blossom period. Repeat at 7 to 10 day intervals from late bloom. Do not apply more than 43 3/4 lbs. per acre per crop cycle. May be applied up to day of harvest.

BLUEBERRIES (Western U.S.):

Botrytis gray mold or berry rot, mummy berry - Apply 1 1/4 to 3 1/8 lbs. Captan 80 WP per acre in 20 to 200 gallons of water by ground or in 5 to 20 gallons of water by air. Begin at mid-bloom, repeat at 7 to 10 day intervals until maturity. Do not apply more than 43 3/4 lbs. per acre per crop cycle. May be applied up to day of harvest.

CHERRIES (Eastern U.S.):

Brown rot, leaf spot, Botrytis rot - Apply 2 1/2 lbs. Captan 80 WP per acre in 20 to 200 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Apply in pre-bloom, bloom, petal fall, shuck, cover, and pre-harvest sprays. Applications at 3 to 4 day intervals may be necessary during bloom to control blossom blight. Repeat applications at 7 to 20 day intervals as needed to maintain control up to start of harvest. If powdery mildew is a problem add 6 lbs. sulfur per acre to the petal fall, shuck and early cover sprays. If sulfur is added, Captan 80 WP may be reduced to 1 1/4 lbs. per acre in these sprays. Do not apply more than 17 1/2 lbs. per acre per crop cycle. May be applied up to day of harvest.

Post harvest sprays: leaf spot - Apply 2 1/2 lbs. Captan 80 WP per acre in 20 to 200 gallons of water using ground equipment. Apply immediately after harvest and repeat application in 10 to 14 days.

CHERRIES (Western U.S.):

Brown rot blossom blight, brown rot (fruit), leaf spot - Apply 1 7/8 to 2 1/2 lbs. Captan 80 WP per acre in 20 to 200 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Apply in pre-bloom, bloom, petal fall, shuck, cover and preharvest sprays. Do not apply more than 17 1/2 lbs. per acre per crop cycle. May be applied up to day of harvest.

GRAPES (U.S., except CA):

Phomopsis cane and leaf spot, downy mildew, suppression of black rot - Apply 1 1/4 to 2 1/2 lbs. Captan 80 WP per acre in 20 to 200 gallons water using ground equipment or in 7 to 20 gallons water by air, when shoots are 1/2 to 1 1/2 inches long, when shoots are 3 - 5 inches long, and when shoots are 9 - 12 inches long.

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 . . .  
 . . .

Repeat just before bloom, immediately after bloom, and continue at 10-14 day intervals as long as disease conditions persist. Use the lower rate when spraying less susceptible grape varieties or when conditions are less favorable for disease development. Use the higher rate on susceptible grape varieties and during periods of weather highly favorable for disease development. Do not apply more than 15 lbs. of Captan 80 WP per acre per crop cycle. May be applied up to day of harvest.

#### GRAPES (California):

Bunch rot (Botrytis) - Apply 2 1/2 lbs. Captan 80 WP per acre in 20 to 200 gallons of water using ground equipment or 7 to 20 gallons of water by air. Make 2 applications before bloom and 1 immediately after bloom. Repeat periodically making 3 cover applications before the bunches close.

Phomopsis cane and leaf spot (current season infection) - Apply 2 to 2 1/2 lbs. Captan 80 WP per acre in 20 to 200 gallons of water using ground equipment or apply 2 1/2 lbs. Captan 80 WP per acre in 7 to 20 gallons of water by air. Apply first spray when green tissue begins to show but before shoots are 1 inch long and repeat application when shoots are 6 to 8 inches long. Do not apply more than 15 lbs. of Captan 80 WP per acre per crop cycle. May be applied up to day of harvest.

#### NECTARINES (U.S.):

Brown rot, scab - Apply 2 1/2 to 5 lbs. Captan 80 WP per acre in 20 to 250 gallons of water using ground equipment or in 10 to 20 gallons of water by air. To reduce the potential for disease resistance development to other fungicides having a similar spectrum, use the lower rate may be used in tankmixes. Apply in full pink, bloom, petal fall, shuck, cover and preharvest sprays. Applications at 3 to 4 day intervals may be necessary during bloom to control blossom blight. Repeat application at 7 to 14 day intervals as needed to maintain control. Continue applications throughout harvest if conditions favor brown rot. If powdery mildew is a problem, add 7.5 lbs. sulfur per acre to the petal fall, shuck and early cover spray. If sulfur is added, Captan 80 WP may be reduced to 1 3/5 lbs. per acre in these sprays.

Coryneum blight (peach blight, shothole) - Apply 2 1/2 to 5 lbs. Captan 80 WP per acre in 20 to 250 gallons of water using ground equipment or in 10 - 20 gallons of water by air. Apply in pink bud, full bloom, petal fall and cover sprays as necessary and as a post harvest spray (but before leaves drop).

Do not apply more than 30 lbs. per acre per crop cycle (including postharvest). Preharvest sprays may be applied up to day of harvest.



## PEACHES (U.S.):

Brown rot, scab - Apply 2 1/2 to 5 lbs. Captan 80 WP per acre in 20 to 400 gallons of water using ground equipment or in 10 to 20 gallons of water by air. To reduce the potential for disease resistance development to other fungicides having a similar spectrum, use the lower rate may be used in tank mixtures. Apply in full pink, bloom, petal fall, shuck stages and in cover and preharvest sprays. When conditions are favorable, make applications at 3 to 4 day intervals during bloom to control blossom blight. Then repeat application at 7 to 14 day intervals as needed to maintain control. Continue applications through harvest if conditions favor brown rot. If powdery mildew is a problem, add 12 lbs. sulfur per acre to the petal fall, shuck and early cover spray. If sulfur is added, Captan 80 WP may be reduced to 2 1/2 lbs. per acre in these sprays.

Coryneum blight (peach blight, shothole) - Apply 5 lbs. Captan 80 WP per acre in 20 to 400 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Apply in pink bud, full bloom, petal fall stages and cover sprays as necessary and as a post harvest spray (but before leaves drop). Do not apply more than 40 lbs. per acre per crop cycle (including postharvest sprays). Pre-harvest sprays may be applied up to day of harvest.

## PLUMS, FRESH PRUNES (USED FOR DRIED PLUMS) (Eastern U.S.):

Brown rot - Apply 3 3/4 lbs. Captan 80 WP per acre in 20 to 300 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Apply in full pink, bloom and petal fall sprays. Repeat applications at 7 to 14 day intervals as needed to maintain control. Continue applications through harvest if conditions favor brown rot. The addition of a neutral spreader has improved coverage. Do not apply more than 33 3/4 lbs. per acre per crop cycle. May be applied up to day of harvest.

## PLUMS, FRESH PRUNES (USED FOR DRIED PLUMS) (Western U.S.):

Brown rot - Apply 2 1/2 to 3 3/4 lbs. Captan 80 WP per acre in 20 to 300 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Use lower rates when tankmixes with fungicides of similar spectrum of activity are used. Apply at green bud, popcorn, bloom and petal fall stages. Repeat in cover sprays as conditions warrant.

Prune russet scab (lacy scab) - Apply 2 1/2 to 3 3/4 pounds Captan 80 WP per acre in 20 to 300 gallons of water using ground equipment. Apply at full bloom. Do not apply more than 33 3/4 lbs. per acre per crop cycle. May be applied up to day of harvest.

## STRAWBERRIES (U.S.):

Botrytis (gray mold), leaf spot - Apply by broadcast spray at 1 7/8 to 3 3/4 pounds Captan 80 WP per acre in sufficient water for thorough coverage or in 10 to 20 gallons of water by air. Begin applications when new growth starts in the spring and before fruit starts to form. Repeat at 7 to 14 day intervals. Under conditions favorable to fruit rot continue applications through harvest period treating immediately after each picking. Do not apply more than 30 lbs. per year. May be applied up to day of harvest.

NOTE: Restricted-entry interval for all uses listed above is 24 hours. After expiration of the 24 hour period, no personal protective equipment is required. Exception: the restricted-entry interval for grapes, raspberries, blackberries, dewberries and blueberries is 72 hours.

If applying as a directed/banded spray; use band rate of Captan 80 WP according to the following formula:

$$\frac{\text{Plant Bed Width (inches)}}{\text{Row Spacing (inches)}} \times \text{Broadcast rate per acre} = \text{Banded rate of Captan 80WP per acre.}$$

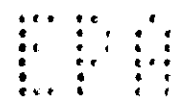
## SPECIAL USES

For use in mechanical fruit-dip operations only. Hand dipping of fruit is prohibited.

PEACH PREPLANT ROOT DIP (California): Preventative preplant dip treatment for crown gall. Use 2 1/2 pounds Captan 80 WP plus 3.2 pints diluted sodium hypochlorite (5.25% household bleach) per 100 gallons water. Wash nursery trees to remove soil from roots. Cut off all dormant buds and suckers in crown area and prune root system if necessary. Submerge the entire dormant tree for 5 minutes. Recharge dip during operation at a rate of 3.2 pints diluted sodium hypochlorite per 100 gallons of water.

POSTHARVEST FRUIT APPLICATION: For control of various molds and storage rots (Botrytis, Gleosporium, Rhizopus). Use as a postharvest dip on the following fruits: Apples, Cherries, Pears - Use 1 3/5 pounds Captan 80 WP per 100 gallons of water. Apply in a dip tank. Recharge wash solution periodically when tank volume is reduced by 25%. Bring water back to volume and add 1 3/5 pounds Captan 80 WP for each 100 gallons added. At end of every 8 hour shift, empty tank, flush and charge with fresh dilution. Do not allow dip tank solution to stand overnight. Maintain continuous agitation during dipping operation.

Do not allow workers or others to contact the treated fruit until the surface has dried.



DISPOSAL OF LEFTOVER POSTHARVEST TREATMENT MIXTURE: Leftover dip or spray mixtures containing Captan 80 WP may be used as a foliar spray for the same crop in case of apples and cherries (but not pears) as treated by the dip or spray mixture, or to registered turf and ornaments sites. Observe all restrictions such as maximum pounds applied per application and season.

When calculating application rates, if analytical services are not available to determine the exact quantity of Captan 80 WP remaining in the mixture, assume that the tank still contains 1 3/5 pounds of Captan 80WP per 100 gallons of water. If the dip or spray mixture contains other pesticides in addition to Captan 80 WP, refer to the product label(s) for information regarding disposal.

Captan 80 WP wastes are acutely hazardous to the eyes. Improper disposal of spray or dip tank mixtures is a violation of Federal Law. If the leftover dip or spray mixture cannot be disposed of in the manner prescribed above, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance concerning the disposal of spent or excess dip tank mixtures.

ORNAMENTALS

The Restricted Entry Interval for these uses is 96 hours, except 48 hours for soil treatments, root dips, and grass.

USE PRECAUTIONS

Do not apply spray to ornamental plants listed below beyond the point of drip from the leaf surface. When applying as a drench, apply only sufficient mixture to wet the surface of the soil except when the dose is specified in terms of volume of mixture per square foot of area.

AZALEAS

Damping off of cuttings - Mix 2 1/3 pounds Captan 80 WP per 100 gallons of water. Dip cuttings before bedding.  
Petal Blight - Use 1 1/4 pounds Captan 80 WP per 100 gallons of water. Apply the soil around the plants and spray flowers just before bloom. Repeat at 7 to 14 day intervals through bloom.

BEGONIAS (Tuberous)

Damping-off, tuber rot - Use 2 1/2 pounds Captan 80 WP per 100 gallons of water. Dip tubers for 30 minutes, drain and plant.

CAMELLIAS

Petal Blight - Use 5/8 pound Captan 80 WP per 100 gallons of water. Apply to drench soil around plants beginning when flowers start to open. Repeat at 7 to 10 day intervals through bloom.

CARNATIONS

Alternaria Leafspot, Rust - Use 1 1/4 pounds Captan 80 WP per 100 gallons of water. Begin application at first sign of disease. Repeat at 7 to 10 day intervals. Shorten intervals during frequent rains and heavy dews.

Damping-off of cuttings - Use 2 1/3 pounds Captan 80 WP per 100 gallons of water. Dip cuttings before bedding.

CHRYSANTHEMUM

Botrytis Flower Blight, Septoria Leafspot - Use 1 1/2 pounds Captan 80 WP per 100 gallons of water. Apply at first sign of disease. Repeat at 7 to 10 day intervals.

Damping-off of cuttings - Use 2 1/3 pounds Captan 80 WP per 100 gallons of water. Dip cuttings before bedding.

DICHONDRA (California only)

White Mold (Sclerotium rolfsii) - Use 1 1/4 pounds Captan 80 WP per 100 gallons of water. Apply 1 gallon of spray per 10 square feet. Make 2 to 3 applications at 7 day intervals.

GLADIOLUS (Corms)

Corm Rot and Decay, Damping-off - Use 3 3/4 oz Captan 80 WP per 10 gallons of water, dip corms for 20 to 30 minutes (1 pound Captan 80WP in 42 3/4 gallons water). Drain and plant.

GRASSES

(Ornamentals in Non-Pastured Areas Only)

Leafspot, Damping-off, Brown Patch, Melting Out, Seedling Blights, Brown Spot on St. Augustine Grass - Use 1 1/4 pounds Captan 80 WP per 100 gallons of water. Apply 10 gallons spray per 1000 square feet. Begin when growth starts in spring. Repeat at 7 to 14 day intervals throughout season. Do not graze treated areas or feed clippings to livestock.

GRASSES

(Lawn Seedbeds)

Damping-off and other soil borne diseases - Use 1/5 to 1/4 pound of Captan 80 WP per 1,000 square feet or 1 1/4 pounds Captan 80 WP per 100 gallons of water, using 15 gallons spray for per 1000 square feet. Cultivate into upper 3 to 4 inches of soil before planting.

ROSES

Black Spot, Botrytis Blossom Blight - Use 1 1/4 pounds Captan 80 WP per 100 gallons of water. Begin at first growth or first sign of disease. Repeat at 7 to 14 day intervals, and more frequently during frequent rains and heavy dews.

SOIL AND GREENHOUSE BENCH TREATMENT

Preplant treatment for damping-off, root rot diseases on seedling or transplants of roses (and other shrubs, trees, flowers) & lawn seedbeds - Use 1 1/4 pounds Captan 80 WP per 100 gallons of water at a rate of 15 gallons spray per 1,000 square feet. Cultivate into upper 3 to 4 inches of soil before planting. The REI for soil and greenhouse bench treatments is 48 hours. Once the treatment, and immediately following seeding and transplanting activities are complete, the surface of the soil cannot be disturbed for 48 hours.

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