

66330-26

9/17/2004

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Doina Bujor
Project Manager, R&RA
Arvesta Corporation
100 First Street
Suite 1700
San Francisco, CA 94105

SEP 17 2004

Subject: Captan 50 WP
EPA Reg. No. 66330-26
Your amendment dated August 24, 2004

Dear Ms Bujor:

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 change is made:

1. On page 14 under the heading "PLUMS, FRESH PRUNES (Eastern U.S.)", restore the following sentences that were on the previously accepted label dated March 19, 2004:

"The maximum application rate is 6 lbs of CAPTAN 50 WP per acre (3 lb ai/acre), with a maximum seasonal application rate of 54 lbs per acre per crop cycle (27 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours."

One copy of the label stamped "Accepted with comments" is enclosed for your records. Please submit one copy of the final printed label that incorporates the required changes 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,

A handwritten signature in black ink, appearing to read "C. Giles-Parker".

Cynthia Giles-Parker
Product Manager (22)
Fungicide Branch
Registration Division (7505C)

Enclosure

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CAPTAN 50 WP

GROUP M FUNGICIDE

A Fungicide for Plant Disease Control

ACTIVE INGREDIENTS:	By Wt
*CAPTAN.....	48.9%
Related Derivatives.....	1.1%
INERT INGREDIENTS:	50.0%
TOTAL	100.0%

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

Captan 50 WP is a microfine wettable powder for use in water as a spray for the control of certain fungal diseases of fruit, and ornamental crops, and as a soil treatment for the control of certain seed rots and damping-off diseases.

EPA Reg. No.: 66330-26
EPA Est. No.:

Net Contents:

ACCEPTED
with COMMENTS KEEP OUT OF REACH OF CHILDREN
In EPA Letter Dated:

SEP 17 2004

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

DANGER

PELIGRO

66330-26

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

CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE

If a known exposure occurs or is suspected, immediately start the procedures given below and contact a POISON CONTROL CENTER, PHYSICIAN, OR THE NEAREST HOSPITAL. Describe the type and extent of exposure, the victim's symptoms and follow the advice given.

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FIRST AID	
IF IN EYES	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none">• 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.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

Have a product container or label with you when calling poison control center or doctor or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL:
(800) 228-5635 ext 174
FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call
CHEMTREC 1-800-424-9300

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

Made in the U.S.A.
ARVESTA CORPORATION 100 FIRST STREET, SUITE 1700
SAN FRANCISCO, CA 94105

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive: Causes irreversible eye damage. Harmful if absorbed through skin. Do not get in eyes. Avoid contact with skin. Wear long-sleeved shirt and long pants; socks and shoes, protective eyewear (goggles, face shield or safety glasses), and chemical resistant gloves (such as or made out of any waterproof material, selection category A). Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are polyethylene and poly vinyl chloride. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

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

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical-resistant gloves (except applicators driving motorized equipment),
- Chemical-resistant apron when participating in dip treatments
- Protective eyewear

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, 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.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

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 chemical 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 contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

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 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), notification to workers, 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 enter or allow worker entry into treated areas during the restricted entry interval (REI) of:

-12 hours for planter box-type or hopper-box seed treatment uses. Exception: Once the seeds are planted in soil or other planting media, the Worker Protection Standard allows workers to enter the treated area without restriction if there will be no contact with the soil/media subsurface.

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

-48 hours for soil treatments and root dips: For soil and greenhouse bench treatments and root dips, once the treatment and any seeding 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, raspberries, and grapes.

-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

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with anything that has been treated, such as plants, soil or water, without time limit, if they wear the early-entry PPE listed below.

Early Entry PPE

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,
- Protective eyewear,
- Chemical-resistant gloves made of any water-proof material,
- Shoes plus socks

Eye-Protection

To mitigate eye irritation concerns from post-application exposures, for at least seven days following the application of captan; the following is required:

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
 - on how to operate the eyeflush container.

Double Notification

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

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 50 WP onto sensitive crops (e.g., D'Anjou Pears) can cause severe phytotoxicity and crop loss.

Avoiding spray drift from foliar or aerial 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

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applications. To protect water resources, 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.

1. The distance of the outer most nozzles on the boom must not exceed $\frac{3}{4}$ length of the wingspan or rotor.
2. 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 the minimum number of nozzles that provide uniform coverage.

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

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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 $\frac{3}{4}$ 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.

TEMPERATURE AND HUMIDITY

When making application 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 area, 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).

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.

COMPATIBILITY AND PLANT SAFETY

Captan 50 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 50 WP. Do not apply Captan 50 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 50 WP. The time factor governing the safe interval between Captan 50 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 50 WP and sulfur should not be used on crops sensitive to sulfur. Used at high rates or in drenching sprays, Captan 50 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 50 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 operation. 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.)

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For aerial or concentrate spray applications, apply the same amount of Captan 50 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.

RESISTANCE MANAGEMENT

Captan 50 WP contains a Group M¹ fungicide. Fungal isolates with acquired resistance to Group M¹ may eventually dominate the fungal population if Group M¹ fungicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Captan 50 WP or other Group M¹.

To delay fungicide resistance consider:

- Avoiding the consecutive use of Captan 50 WP or other target site of action Group M¹ fungicides that have a similar target site of action, on the same pathogens.
- Using tank-mixtures or premixes with fungicide from different target site of action Groups as long as the involved products are all registered for the same use and are both effective at the tank mix or prepack rate on the pathogen(s) of concern.
- Basing fungicide use on a comprehensive IPM program.
- Monitoring treated fungal/bacterial populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors, and/or manufacturer for fungicide resistance management and/or IPM recommendations for specific crops and resistant pathogens.
- For further information or to report suspected resistance, you may contact ARVESTA CORPORATION at toll free number 887-448-6636.

¹The Multi-site activity grouping, designated by symbol "M", comprises a collection of various chemicals that act as general toxophores with several sites of action. These sites may differ between group members.

GENERAL USE PRECAUTIONS

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 favor disease(s). Apply the low rate and/or spray at larger intervals when climatic conditions least favor 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.

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.

FRUIT AND NUT CROPS

ALMONDS

Brown rot, twig and blossom blight, shothole, scab, leaf blight, anthracnose (for control of anthracnose, use in a disease and resistance management program of rotational sprays with other approved materials). – Apply 4 to 9 pounds Captan 50 WP per acre in 20 to 300 gallons of water using ground equipment or in 5 to 20 gallons of water by air. Use 6 to 9 pounds per acre when Captan 50 WP is used alone. To reduce the potential for disease resistance development to other fungicides having a similar spectrum, Captan 50 WP may be used in a tankmix at a rate of 4 to 6 pounds per acre. Apply at popcorn, bloom and petal fall stages in cover sprays and preharvest sprays. The maximum application rate is 9 lbs of Captan 50 WP per acre (4.5 lb ai/acre), with a maximum seasonal application rate of 40 lbs of Captan 50 WP per acre per crop cycle (20 lb ai/acre per crop cycle). Preharvest interval (PHI) = 30 days. Note the Restricted Entry Interval is 24 hours. Almond hulls may be fed to livestock.

APPLES (Eastern U.S.)

Primary scab, black rot (frog-eye), botrytis blossom-end-rot – Apply 8 pounds Captan 50 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 4 to 8 pounds Captan 50 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. The maximum application rate is 8 lbs of Captan 50 WP per acre (4 lb ai/acre), with a maximum seasonal application rate of 64 lbs of Captan 50 WP per acre per crop cycle (32 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours.

Powdery mildew – If powdery mildew is a problem, add 6 to 12 pounds sulfur per acre to all postbloom sprays until foliage matures. Do not use Captan 50 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 4 to 8 pounds Captan 50 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 6 pounds Captan 50 WP per acre in 20 to 400 gallons of water using ground equipment or in 5 to 20 gallons of water by air. Make 1 or 2 applications with late cover sprays and 1 final spray prior to harvest. Secondary scab – In mid-summer cover sprays, the dosage may be reduced to 4 pounds per acre. The maximum application rate is 8 lbs of Captan 50 WP per acre (4 lb ai/acre), with a maximum seasonal application rate of 64 lbs of Captan 50 WP per acre per crop cycle (32 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours.

APRICOTS

Brown rot (twig blight), jacket rot – Apply 3 to 5 pounds Captan 50 WP per acre in 20 to 250 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 similar spectrum, use the lower rate in tank mixtures. The maximum application rate is 5 lbs of Captan 50 WP per acre (2.5 lb ai/acre), with a maximum seasonal application rate of 25 lbs of Captan 50 WP per acre per crop cycle (12.5 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours. Note in California: Do not apply after 75% petal fall.

BLUEBERRIES (Eastern U.S.)

Botrytis gray mold or berry rot, mummy berry – Apply 5 pound Captan 50 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 or when buds have loose scales. Repeat at 7-day intervals through blossom period. Repeat at 7 to 10 day intervals from late bloom. The maximum application rate is 5 lbs of Captan 50 WP per acre (2.5 lb ai/acre), with a maximum seasonal application rate of 70 lbs per acre per crop cycle (35 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 72 hours.

BLUEBERRIES (Western U.S.)

Botrytis gray mold or berry rot, mummy berry – Apply 2 to 5 pounds of Captan 50 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. The maximum application rate is 5 lbs of Captan 50 WP per acre (2.5 lb ai/acre), with a maximum seasonal application rate of 70 lbs per acre per crop cycle (35 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 72 hours.

CHERRIES (Eastern U.S.)

Brown rot, leaf spot, Botrytis rot – Apply 4 pounds Captan 50 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 prebloom, 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 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 or early cover sprays. If sulfur is added, Captan 50 WP may be reduced to 2 pounds per acre in these sprays. Postharvest sprays: leaf spot – Apply 4 pounds Captan 50 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. The maximum application rate is 4 lbs of Captan 50 WP per acre (2 lb ai/acre), with a maximum seasonal application rate of 28 lbs per acre per crop cycle (14 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours.

CHERRIES (Western U.S)

Brown rot blossom blight, brown rot (fruit), leaf spot – Apply 3 to 4 pounds of Captan 50 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 prebloom, bloom, petal fall, shuck, cover and preharvest sprays. The maximum application rate is 4 lbs of Captan 50 WP per acre (2 lb ai/acre), with a maximum seasonal application rate of 28 lbs per acre per crop cycle (14 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours.

GRAPES (U.S., except CA)

Phomopsis cane and leaf spot, downy mildew, suppression of black rot – Apply 2 to 4 pounds Captan 50 WP per acre in 20 to 200 gallons water using ground equipment or in 7 to 20 gallons water by air; when shoots are ½ to 1½ inches long, when shoots are 3-5 inches long, and when shoots are 9-12 inches long. Repeat just before bloom immediately after bloom, and continue at 10 to 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.

Bunch rot (Botrytis) – Apply 4 pounds CAPTAN 50WP per acre in 20 to 200 gallons of water using ground equipment or in 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 bunches close. The maximum application rate is 4 lbs of Captan 50 WP per acre (2 lb ai/acre), with a maximum seasonal application rate of 24 lb per acre per crop cycle (12 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 72 hours.

GRAPES (California)

Bunch rot (Botrytis) – Apply 4 pounds Captan 50 WP per acre in 20 to 200 gallons of water using ground equipment of in 7 to 20 gallons of water by air.

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Make 2 applications before bloom and 1 immediately after bloom. Repeat periodically, making 3 cover application before the bunches close.

Phomopsis cane and leaf spot (current season infection) – Apply 3 to 4 pounds Captan 50 WP per acre in 20 to 200 gallons of water using ground equipment or apply 4 pounds Captan 50 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. The maximum application rate is 4 lbs of Captan 50 WP per acre (2 lb ai/acre), with a maximum seasonal application rate of 24 lbs per acre per crop cycle (12 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 72 hours.

NECTARINES (U.S.)

Brown rot, scab – Apply 4 to 10 pounds Captan 50 WP per acre in 20 to 250 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Use the lower rate of Captan 50 WP in tankmixes to reduce the potential for disease resistance development to other fungicides having a similar spectrum. 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 pounds sulfur per acre to the petal fall, shuck and early cover spray. If sulfur is added, Captan 50 WP may be reduced to 2.5 pounds per acre in these sprays.

Shothole (Peach blight, Coryneum blight) – Apply 4 to 10 pounds Captan 50 WP per acre in 20 to 250 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Apply to pink bud, full bloom, petal fall and cover sprays as necessary and as a postharvest spray (but before leaves drop).

The maximum application rate is 8 lbs of Captan 50 WP per acre (4 lb ai/acre), with a maximum seasonal application rate of 48 lbs per acre per crop cycle (24 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours.

PEACHES (U.S.)

Brown rot – Apply 4 to 8 pounds Captan 50 WP per acre in 20 to 400 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Use the lower rates of Captan 50 WP in tankmixes to reduce the potential for disease resistance development to other fungicides having a similar spectrum. Apply in full pink, bloom, petal fall, shuck stages and in cover and preharvest sprays. When conditions are favorable, make 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 pounds sulfur per acre

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to petal fall, shuck and early cover spray. If sulfur is added, Captan 50 WP may be reduced to 4 pounds per acre in these sprays.

Shothole (Peach blight, Coryneum blight) – Apply 8 pounds Captan 50 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 postharvest spray (but before leaves drop).

The maximum application rate is 8 lbs of Captan 50 WP per acre (4 lb ai/acre), with a maximum seasonal application rate of 64 lbs per acre per crop cycle (32 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours.

PLUMS, FRESH PRUNES (Eastern U.S.)

Brown rot – Apply 6 pounds Captan 50 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 may improve coverage.

PLUMS, FRESH PRUNES (Western U.S.)

Brown rot – Apply 4 to 6 pounds Captan 50 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 tank mixes 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 4 to 6 pounds Captan 50 WP per acre in 20 to 300 gallons of water using ground equipment. Apply at full bloom. The maximum application rate is 6 lbs of Captan 50 WP per acre (3 lb ai/acre), with a maximum seasonal application rate of 54 lbs per acre per crop cycle (27 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours.

RASPBERRIES

For the control of Anthracnose, Botrytis, and Spur Blight – Apply 4 pounds of CAPTAN 50 WP per acre when blossoms are in bud (young canes are 8-10" long). Make second application two weeks later. Apply a fall spray after old canes are removed.

For the control of Fruit rot – Apply 4 pounds of CAPTAN 50 WP 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 (PHI = 3 days).

Apply CAPTAN 50 WP as indicated above in 45-100 gallons of water per acre using ground equipment or in 10 to 20 gallons of water by air. Use the higher volume as foliage increases.

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Do not apply more than 20 pounds of CAPTAN 50 WP per acre per crop cycle (10 lbs ai/acre per crop cycle). Note the Restricted Entry Interval is 72 hours.

STRAWBERRIES

Botrytis (gray mold), leaf spot – Apply by broadcast spray at 3 to 6 pounds Captan 50 WP per acre in sufficient water for thorough coverage by ground equipment 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 the harvest period, treating immediately after each picking.

Anthrachnose Fruit Rot (*Colletotrichum spp.*) – Apply 6 pounds CAPTAN 50 WP per acre (3.0 lbs ai/acre) in sufficient water for thorough coverage by ground equipment. Begin applications at flower bud emergence. Apply at 7 day intervals through harvest. The maximum application rate is 6 lbs of Captan 50 WP per acre (3 lb ai/acre), with a maximum seasonal application rate of 48 lbs per acre per crop cycle (24 lb ai/acre per crop cycle). Preharvest interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours.

If applying as a directed/banded spray: use band rate of Captan 50 WP according to the following formula:

$$\frac{\text{Plant Bed Width (inches)}}{\text{Row Spacing (inches)}} \times \text{Broadcast rate per acre} = \text{Banded rate of Captan 50 WP per acre}$$

SPECIAL USES

PEACH PREPLANT ROOT DIP (California)

Preventative preplant dip treatment for crown gall. Use 4 pounds Captan 50 WP plus 3.2 pints diluted sodium hypochlorite (5.25% household bleach) per 100 gallons of 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 a postharvest dip or spray wash on the following fruits: Apples, Cherries, Pears – Use 2.5 pounds of Captan 50 WP per 100 gallons of water. Apply as a spray or in a dip tank. When used as a dip, recharge wash solution periodically when tank volume is reduced by 25%. Bring water back to volume and add 2.5 pounds Captan 50 WP for each 100 gallons added. At the 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. For use in mechanical fruit-dip operations only. Hand dipping of fruit

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is prohibited. Do not contact or allow others to contact the treated fruit until sprays have dried.

DISPOSAL OF LEFTOVER POSTHARVEST TREATMENT MIXTURE

Leftover dip or spray mixtures containing Captan 50 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 ornamental sites; observing 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 50 WP remaining in the mixture, assume that the tank still contains 2.5 pounds of Captan 50 WP per 100 gallons of water. If the dip or spray mixture contains other pesticides in addition to Captan 50 WP, refer to the product label(s) for information regarding disposal.

Captan 50 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

USE PRECAUTIONS

Do not apply spray or 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.

Post-Application/Entry Restrictions:

--For applications to ornamentals at non-commercial sites and golf course turfgrass, do not enter or allow others to enter until sprays have dried.

AZALEAS

Damping-off cuttings – Use 4 pounds Captan 50 WP per 100 gallons of water. Dip cuttings before bedding. Petal blight – Use 2 pounds Captan 50 WP per 100 gallons of water. Apply to soil area around plants and spray flowers just before bloom. Repeat at 7 to 14 day intervals through bloom.

BEGONIAS (Tuberous)

Damping-off, tuber rot – Use 4 pounds Captan 50 WP per 100 gallons of water. Dip tubers 30 minutes, drain and plant.

CAMELLIAS

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Petal blight – Use 1 pound Captan 50 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 leaf spot, rust – Use 2 pounds Captan 50 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 cuttings – Use 4 pounds Captan 50 WP per 100 gallons of water. Dip cuttings before bedding.

CHRYSANTHEMUM

Botrytis flower blight, Septoria leaf spot – Use 2 pounds Captan 50 WP per 100 gallons of water. Apply at first sign of disease. Repeat at 7 to 10 day intervals. Damping-off cuttings – Use 4 pounds Captan 50 WP per 100 gallons of water. Dip cuttings before bedding.

GLADIOLUS (Corms)

Corm rot and decay, damping-off – Use 0.5 to 1.5 pounds Captan 50 WP per 100 gallons of water, dip corms 20 to 30 minutes. Drain and plant.

TURF (golf course)

Leaf spot, damping-off, brown patch, melting out, seedling blights, and brown spot on St. Augustine grass – Use 2 pounds Captan 50 WP per 100 gallons of water. Apply 10 gallons spray per 1,000 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. The maximum application rate for turf (golf course) is 8.6 lbs of Captan 50 WP/acre (4.3 lb ai/acre), with a maximum seasonal application rate of 17.2 lbs of Captan 50 WP/acre (8.6 lb ai/acre). Do not apply to home lawns, parks, schools, and other recreational areas.

TURF (sod farms)

Damping-off and other soil borne diseases – Use 0.125 pounds Captan 50 WP per 1,000 square feet or 2 pounds Captan 50 WP per 100 gallons of water, using 10 gallons spray per 1,000 square feet. Cultivate into upper 3 to 4 inches before planting. The maximum application rate for turf (sod farms) is 8.6 lbs of Captan 50 WP/acre (4.3 lb. ai/acre), with a maximum seasonal application rate of 17.2 lbs of Captan 50 WP/acre/season (8.6 lb ai/acre per season). Note the Restricted Entry Interval is 48 hours. Harvesting Prohibition Interval = 48 hours.

ROSES

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Black spot, Botrytis blossom blight – Use 2 pounds Captan 50 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 seedlings or transplants of roses (and other shrubs, trees, flowers) and lawn seedbeds – Use 2 pounds of Captan 50 WP per 100 gallons of water at a rate of 15 gallons of spray per 1,000 square feet. Cultivate into upper 3 to 4 inches of soil before planting.

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 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.

NOTICE TO BUYER AND USER:

CONDITIONS OF SALE:

1. ARVESTA CORPORATION warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the directions under normal conditions of use.
2. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Arvesta. **ARVESTA DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE. ARVESTA DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.**

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3. Critical and unforeseeable factors beyond Arvesta's control prevent it from eliminating all risks in connection with the use of this product. Such risks include, but are not limited to, damage to plants and crops to which the product is applied, lack of complete control, and damage caused by drift to other plants and crops. Such risks occur even though label directions are followed. Except as stated in 1 above, Buyer and User acknowledge and assume all risks and liability resulting from handling, storage, and use of this product.

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