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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

MAY 7 2004

Subject: Captan 4 Flowable
EPA Reg. No. 66330-24
Your amendment dated August 27, 2003

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 changes are made:

1. Signal words: increase the size of the signal words "DANGER - PELIGRO" to 18 pt. type.

2. Add the following before the paragraph that starts "The following drift management requirements must be followed to avoid off-target drift movement...."

   "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 determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions."

3. **POST HARVEST DIP** (page 15):

   - Add the following text to the top of the paragraph: "For use in mechanical fruit-dip operations only. Hand dipping of fruit is prohibited."

   - In the sentence "When tank volume is reduced 25%...", change "25 gallons" to "10 gallons."

2 8 22

4. **ORNAMENTALS** (page 16)

- Azaleas - in the first line, change "100 gallons" to "107 gallons"
- Chrysanthemum - in the third line, change "100 gallons" to "107 gallons"
- Gladiolus (Corms) on page 17 - change "0.25 - 0.75 qts" to "3 oz (3/16 qt)"

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.

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,

/s/

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

Enclosure

CAPTAN 4 FLOWABLE

Agricultural Fungicide
Aqueous Suspension

GROUP M FUNGICIDE

ACTIVE INGREDIENTS:

Captan*	37.66%
Related Derivatives	0.86%
INERT INGREDIENTS:	61.48%
Total:	100.00%

*N-Trichloromethythio-4-cyclohexene-1,2-dicarboximide

(Contains 4 Pounds of Active Ingredient Per Gallon)

EPA Reg. No. 66330-24
EPA Est. No.

Net Contents:

KEEP OUT OF REACH OF CHILDREN

DANGER – PELIGRO

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

Made in U.S.A.

ARVESTA CORPORATION
100 First Street, Suite 1700
San Francisco, CA 94105

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

ACCEPTED
with COMMENTS
In EPA Letter Dated:
MAY 7 2004
Under the Federal Insecticide, Fungicide and Rodenticide Act, as amended for the pesticide registration No. 66330-24

FIRST AID	
IF IN EYES	• 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	• 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.
IF SWALLOWED	• Call poison control center or doctor immediately for treatment advice. • Have 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 by mouth-to-mouth if possible. • Call a poison control center or doctor for further 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 ASISTANCE
CALL 1-800-228-5635 ext. 174 OR 1-612-221-3999 ext. 1741-651-632-8946.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident
call CHEMTREC 1-800-424-9300.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENT.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER
CORROSIVE. Causes irreversible eye damage. Harmful if swallowed or inhaled. Harmful if absorbed through skin.Avoid contact with eyes, skin and clothing. Avoid breathing vapor. May cause allergic skin reactions.

PERSONAL PROTECTIVE EQUIPMENT

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

All mixers, loaders, applicators, flaggers and other handlers (including handlers participating in transplanting as part of root-dip treatments must wear:

- long-sleeved shirt and long pants,
- shoes plus socks,
- chemical resistant gloves (except for flaggers, pilots, and 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 product 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 run off from treated areas may be hazardous to aquatic organisms in neighboring area. Do not contaminate water when 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.

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

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 REI, workers may enter the treated area to perform hand labor or other tasks involving contact 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 and by posting warning signs at entrances to treated areas.

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 drift of Captan 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. 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 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 when using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed ¾ the 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.

BOOM LENGTH
For some use patterns, reducing the effective boom length to ¾ 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 areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when the wind is blowing away from the sensitive areas).

COMPATIBILITY AND PLANT SAFETY

CAPTAN 4 Flowable 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 4 Flowable. Do not apply CAPTAN 4 Flowable 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. The time factor governing the safe interval between Captan 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 formulation of organic phosphates should not be used. Combinations of Captan and sulfur should not be used on crops sensitive to sulfur. Used at high rates or in drenching sprays, Captan 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 and other spray materials at lowest recommended rates and avoid drenching trees.

Applications can be made by aircraft or ground 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 4 Flowable 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 4 Flowable contains a Group M[1] fungicide. Fungal isolates with acquired resistance to Group M[1] may eventually dominate the fungal population if Group M[1] 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 4 Flowable or other Group M[1].

To delay fungicide resistance consider:

- Avoiding the consecutive use of CAPTAN 4 Flowable or other target site of action Group M[1] 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.

[1]The 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). 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 4.5 qts CAPTAN 4 Flowable per acre in 20 to 300 gallons of water using ground equipment or in 5 to 20 gallons of water by air. Apply at popcorn, bloom and petal fall stages and up to 5 weeks after petal fall.

The maximum application rate is 4.5 qts of CAPTAN 4 Flowable per acre (4.5 lb ai/acre), with a maximum seasonal application rate of 20 qts of CAPTAN 4 Flowable 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, Botrytis blossom end rot – Apply 4 qts of CAPTAN 4 Flowable per acre in 20 to 400 gallons of water using ground equipment or in 5 to 20 gallons of water by air. Apply in pre-bloom, bloom, petal fall and cover spray at an interval of 5 to 7 days as needed.

Secondary scab, black rot, black pox, bitter rot, Botryosphaeria rot, Brooks fruit spot, Fly speck, Sooty blotch – Apply 4 qts of CAPTAN 4 Flowable per acre in 20 to 400 gallons of water using ground equipment or in 5 to 20 gallons of water by air. Apply in second and late cover sprays at an interval of 10 – 14 days as needed.

Powdery mildew – If powdery mildew is a problem, add 3 to 6 pounds of sulfur per acre to all post bloom sprays until foliage matures. Do not use CAPTAN 4 Flowable 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.

The maximum application rate is 4 qts of CAPTAN 4 Flowable per acre (4 lb ai/acre, with a maximum seasonal application rate of 32 qts of CAPTAN 4 Flowable per acre per crop cycle (32 lb ai/acre per crop cycle). Preharvest Interval (PHI) = 0 days. Note the Restricted Entry Intervals is 24 hours.

APPLES (Western U.S.)
Primary scab – Apply 4 qts CAPTAN 4 Flowable per acre in a high volume application for preblossom sprays. In mid-summer, the dosage may be reduced to 2 qts per acre in high volume application. Dilute in 20 to 400 gallons of water per acre using ground equipment or in 5 to 20 gallons of water by air.

(Pacific Northwest)
Bull's eye rot, Botrytis rot – Apply 4 qts CAPTAN 4 Flowable 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.

The maximum application rate is 4 qts of CAPTAN 4 Flowable per acre (4 lb ai/acre, with a maximum seasonal application rate of 32 qts of CAPTAN 4 Flowable per acre per crop cycle (32 lb ai/acre per crop cycle). Preharvest Interval (PHI) = 0 days. Note the Restricted Entry Intervals is 24 hours.

APRICOTS
Brown rot (twig blight), jacket rot – Apply 2.5 qts CAPTAN 4 Flowable per acre in 20 to 250 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Apply in red bud bloom, 75% petal fall and cover sprays.

The maximum application rate of CAPTAN 4 Flowable is 2.5 qts of CAPTAN 4 Flowable per acre (2.5 lb ai/acre), with a maximum seasonal application rate of 12.5 qts of CAPTAN 4 Flowable 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.

BLUEBERRIES (Western U.S.)
Botrytis gray mold or berry rot, mummyberry – Apply 1 to 2.5 qts CAPTAN 4 Flowable 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 2.5 qts of CAPTAN 4 Flowable per acre (2.5 lb ai/acre), with a maximum seasonal application rate of 35 qts of CAPTAN 4 Flowable 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 (Eastern U.S.)
Botrytis gray mold or berry rot, mummyberry – Apply 2.5 qts CAPTAN 4 Flowable per acre in sufficient water for thorough coverage or in 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.

The maximum application rate is 2.5 qts of CAPTAN 4 Flowable per acre (2.5 lb ai/acre), with a maximum seasonal application rate of 35 qts of CAPTAN 4 Flowable 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 2 quarts CAPTAN 4 Flowable 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 10 day intervals as needed to maintain control up to start of harvest. If powdery mildew is a problem, add 3 to 6 lbs sulfur per acre to the petal fall, shuck or early cover sprays. If sulfur is added, CAPTAN 4 Flowable may be reduced to 1 quart per acre in these sprays.

Post-harvest sprays: Leaf spot – Apply 2 quarts CAPTAN 4 Flowable per acre in 20 to 200 gallons of water using ground equipment. Apply immediately after harvest and repeat application in 10 – 14 days.

The maximum application rate is 2 qts of CAPTAN 4 Flowable per acre (2 lb ai/acre), with a maximum seasonal application rate of 14 qts of CAPTAN 4 Flowable 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 2 qts CAPTAN 4 Flowable 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 2 qts of CAPTAN 4 Flowable per acre (2 lb ai/acre), with a maximum seasonal application rate of 14 qts of CAPTAN 4 Flowable 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 California)
Phomopsis cane and leaf spot, downy mildew, suppression of black rot – Apply 1 to 2 quarts CAPTAN 4 Flowable per acre in 20 to 200 gallons of water using ground equipment or in 7 to 20 gallons of water by air; when shoots are ½ to 1 ½ 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 2 quart CAPTAN 4 Flowable 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 2 qts of CAPTAN 4 Flowable per acre (2 lb ai/acre), with a maximum seasonal application rate of 12 qts of CAPTAN 4 Flowable 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 2 qts CAPTAN 4 Flowable per acre in 20 to 200 gallons of water using ground equipment. Make 2 applications before bloom and immediately after bloom. Repeat periodically making 3 cover applications before the bunches close.

Phomopsis cane and leaf spot (current season infection) – Apply 1.5 to 2 qts CAPTAN 4 Flowable per acres in 20 to 200 gallons of water using ground equipment. Apply 2 qts CAPTAN 4 Flowable per acre in 7 to 20 gallons of water by aircraft. 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 2 qts of CAPTAN 4 Flowable per acre (2 lb ai/acre), with a maximum seasonal application rate of 12 qts of CAPTAN 4 Flowable 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

Brown rot, scab – Apply 2.5 qts CAPTAN 4 Flowable per acre in 20 to 250 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Apply in full pink, bloom, petal fall, shuck, cover and preharvest sprays. Applications at 3 to 4 day interval may be necessary during bloom to control blossom blight. Repeat application at 7 to 14 day intervals as needed to maintain control. Continue application through 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 sprays. If sulfur is added, CAPTAN 4 Flowable may be reduce to 1.5 qts per acre in these sprays.

Shothole (peach blight, Coryneum blight) – Apply 4 qts CAPTAN 4 Flowable per acre in 20 to 250 gallons of water using ground equipment. 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 by aerial application to nectarines.

The maximum application rate is 4 qts of CAPTAN 4 Flowable per acre (4 lb ai/acre), with a maximum seasonal application rate of 24 qts of CAPTAN 4 Flowable per crop cycle (24 lb ai/acre per crop cycle). Preharvest Interval (PHI) = 0 days. Note the Restricted Entry Interval is 24 hours.

PEACHES

Brown rot, scab – Apply 4 qts CAPTAN 4 Flowable per acre in 20 to 400 gallons of water using ground equipment. Apply in full pink, bloom, petal fall, shuck stages and in 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 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 4 Flowable may be reduced to 2 qts per acre in these sprays.

Shothole (peach blight, Coryneum blight) – Apply 4 qts CAPTAN 4 Flowable per acre in 20 to 400 gallons of water using ground equipment. Apply in pink bud, full bloom, petal fall stages and cover sprays as necessary and as a post harvest spray (but before leaves drop).

The maximum application rate is 4 qts of CAPTAN 4 Flowable per acre (4 lb ai/acre), with a maximum seasonal application rate of 32 qts of CAPTAN 4 Flowable 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.

PEACHES (NURSERY STOCK) (California)
Preventative preplant dip treatment for crown gall. Use 2 qts CAPTAN 4 Flowable 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 as necessary to maintain a proper concentration of 200 ppm chlorine. Check the concentration frequently using a chlorine test kit.

PLUMS, FRESH PRUNES (Eastern U.S.)
Brown rot – Apply 3 quarts of CAPTAN 4 Flowable 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.

The maximum application rate is 3 qts of CAPTAN 4 Flowable per acre (3 lb ai/acre), with a maximum seasonal application rate of 27 qts of CAPTAN 4 Flowable 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.

PLUMS, FRESH PRUNES (Western U.S.)
Brown rot – Apply 3 qts CAPTAN 4 Flowable per acre in 20 to 300 gallons of water using ground equipment or in 10 to 20 gallons of water by air. Apply at green bud, popcorn, bloom and petal fall stages. Repeat in cover sprays as conditions warrant.

Prune russet scab (Lacey scab) – Apply 3 qts CAPTAN 4 Flowable per acre in 20 to 300 gallons of water using ground equipment. Apply at full bloom.

The maximum application rate is 3 qts of CAPTAN 4 Flowable per acre (3 lb ai/acre), with a maximum seasonal application rate of 27 qts of CAPTAN 4 Flowable 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 2 qts of CAPTAN 4 Flowable 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 2 qts of CAPTAN 4 Flowable 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 4 Flowable 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. Do not apply more than 10 qts of CAPTAN 4 Flowable 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 3 qts CAPTAN 4 Flowable per acre in sufficient water for thorough coverage by ground equipment or in 10 to 20 gallons of water by air. Begin application when new growth starts in the spring and before fruit starts to form. Repeat at 7 - 14 day intervals. Under conditions favorable to fruit rot, continue applications through harvest period treating immediately after each picking.

Anthracnose Fruit rot (*Colletotrichum acetatum*) – Apply 3 qts CAPTAN 4 Flowable 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 rate is 3 qts of CAPTAN 4 Flowable per acre (3 lb ai/acre), with a maximum seasonal application rate of 24 qts of CAPTAN 4 Flowable 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.

When applying as directed/banded spray, use band rate of CAPTAN 4 Flowable according to the following formula:

$$\frac{\text{Plant Bed Width (inches)}}{\text{Row Spacing (inches}} \times \text{Broadcast Rate per acre} = \text{Banded Rate of CAPTAN 4 Flowable per acre}$$

POST HARVEST DIP

Captan can be used as a post harvest dip or wash on the following crops for prevention of various rots and molds (Rhizopus, Botrytis, Gloeosporium) during storage: Apples, Cherries, Pears. Dilution rate: Use 1.25 qt per 100 gallons of water. Apply as a spray or in dip tank. When used as a dip, recharge wash solution periodically as volume in tank is deleted. When tank volume is reduced 25%, bring water back to volume adding 0.125 qt CAPTAN 4 Flowable for every 25 gallons of water 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 operations.

Captan wastes are acutely hazardous. Improper disposal of spray or dip tank mixtures is a violation of Federal Law. 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 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.

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 of cuttings – Use 2 qts CAPTAN 4 Flowable per 100 gallons of water. Dip cuttings before bedding. Petal blight – Use 1.0 qt CAPTAN 4 Flowable 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 2 qts CAPTAN 4 Flowable per 100 gallons of water. Dip tubers 30 minutes, drain and plant.

CAMELLIAS

Petal blight – Use 0.5 qts CAPTAN 4 Flowable 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 1 qt CAPTAN 4 Flowable 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 1 qt CAPTAN 4 Flowable per 100 gallons of water. Dip cuttings before bedding.

CHRYSANTHEMUM

Botrytis flower blight, Septoria leaf spot – Use 1 qt CAPTAN 4 Flowable per 100 gallons of water. Apply at first sign of disease. Repeat at 7 to 10 day intervals. Damping-off of cuttings – Use 2 qts CAPTAN 4 Flowable per 100 gallons of water. Dip cuttings before bedding.

GLADIOLUS (Corms)
Corm rot and decay, Damping-off – Use 0.25-0.75 qts CAPTAN 4 Flowable per 10 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 1 qt CAPTAN 4 Flowable 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 4.3 qts CAPTAN 4 Flowable (4.3 lb ai/acre) with a maximum seasonal application rate of 8.6 qts of CAPTAN 4 Flowable per 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 0.1 qt CAPTAN 4 Flowable per 1000 square feet or 1 qt CAPTAN 4 Flowable 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 4.3 qts CAPTAN 4 Flowable per acre (4.3 lb ai/acre), with a maximum seasonal application rate of 8.6 qts CAPTAN 4 Flowable per acre per season (8.6 lb ai/acre per season). Note the Restricted Entry Interval is 48 hours. Harvesting Prohibition Interval = 48 hours.

ROSES
Black spot, Botrytis blossom blight – Use 1 qt CAPTAN 4 Flowable 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
Pre-plant treatment for damping-off, root rot disease on seedlings or transplants of roses (and other shrubs, trees, flowers) and lawn seedbeds – Use 1 qt CAPTAN 4 Flowable 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.

Only the applicator is permitted to be in the greenhouse during application of Captan. Open vents to greenhouse during application and for at least 1 hour after application.

Workers planting in Captan-treated soil must wear chemical-resistant gloves.

SEED TREATMENT

USE PRECAUTIONS

Treated seed must not be used for human consumption nor for animal feed.

The Federal Government and most States have seed laws or regulations requiring that an appropriate caution statement be affixed to bags containing treated seed, such as: "Treated Seed – Do not Use for Feed, Food or Oil Purposes."

CAPTAN 4 Flowable is an aqueous suspension suitable for the treatment of seed prior to storage and planting, to protect seed from molds and other fungi causing storage loss and to protect seed from seed-borne and soil-borne fungi which cause seed decay, damping-off and seedling blights.

Read all directions before using and use only as specified on the label.

Before using – stir thoroughly to mix contents.

Thoroughly mix the recommended amount of CAPTAN 4 Flowable into the required amount of water for the slurry treater equipment and dilution rate to be used. Clean equipment thoroughly between treating operations.

Seed treated by the slurry method should not be bagged until such time as the seed has had an opportunity to dry. Store in well ventilated areas. If seed is bagged when wet, heat is developed and impairs seed germination.

The following table gives recommended amounts of CAPTAN 4 Flowable to use on various seeds. Use higher rates in the range in areas where high stress conditions are anticipated.

SEED TREATMENT DOSAGE RATES	
SEED	**DOSAGE (fl. oz./100 lb.)**
Alfalfa, Clover, Lespedeza, Trefoil	5 – 8¼
Beans (Snap, dry, cowpeas)*	2 – 3
Beets (Garden)	8 – 12
Cereal Grains (For seed and seedling rots – will not control bunt smut	
Barley, Rye	2 – 3
Oats	2 – 4
Wheat	1½ - 4
Cole Crops (Broccoli, Brussels sprouts, Cabbage, Cauliflower)	1 - 2
Corn – Field	1¼ - 2⅜
Sweet	2 – 4
Cotton – Acid Delinted	2½ - 5
- Reginned	3½ - 7

- Fuzzy	3½ - 7
Cucumber, Cantaloupe	2½ - 3
Crucifers (Mustard, Radish, Rape, Turnips)	1 – 2
Flax	2 - 3¾
Grasses	5 - 8¼
Sorghum Seed (Milo)	4 – 6
Onions (Pelleting)	1½ pint/lb
Peanuts	6
Peas, Lentils	2½
Peppers (California Wonder)	2 – 3
Sorghum (Hulled) – For Kernel Smut	1¾ - 4½
Soybeans	1½ - 2½
Spinach	4 – 6
Squash, Pumpkin, Watermelon, Muskmelon	1½ - 2
Sugar Beets - West	6
Sugar Beets - East	12
Sunflowers	2 – 4
Swiss Charts	10 - 12

*Do not use on lima beans.

Gladiola Bulbs – Prevention of bulb rot – Use 2¼ fl. oz. in 1 gal. water (1½ pts to 100 gals). Soak bulbs in mixture 20 to 30 minutes.

Further specific information of the subject of seed treatment may be obtained from State Agricultural Experimental Stations of the State Agricultural Extension Service.

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.

STORAGE: Keep pesticide in original container. Store in cool dry place (below 110ºF). Protect from freezing temperatures (32ºF or lower).

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If theses 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: Triple rinse (or equivalent). Then offer for recycling, reconditioning, or puncture and dispose in a sanitary landfill, or 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.
3. Critical and unforeseeable factors beyond Arvesta's control prevent it from eliminating all risks in conjunction 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 or crops. Such risks occur even though the product is reasonably fit for the uses stated on the label and 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.

This product is sold only for uses stated on its label. No express or implied license is granted to use or sell this product under any patent in any country except as specified: Country: United States of America