

# Captan Gold™ 4L

GROUP M4 FUNGICIDE

## Fungicide for Plant Disease Control

ACTIVE INGREDIENTS:	% BY WEIGHT
Captan: N-Trichloromethylthio-4-cyclohexene-1,2-dicarboximide	38.75%
Related Derivatives	0.85%
<b>OTHER INGREDIENTS:</b>	<u>60.40%</u>
<b>TOTAL</b>	100.00%

Captan GOLD 4L is a suspension concentrate (SC) containing 4 lbs of active ingredient per gallon.

EPA Reg. No. 66222-257 EPA Est. No. 37429-GA-001<sup>BT</sup>  
37429-GA-002<sup>BO</sup>

Letter(s) in lot number correspond(s)  
to superscript in EPA Est. No.

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

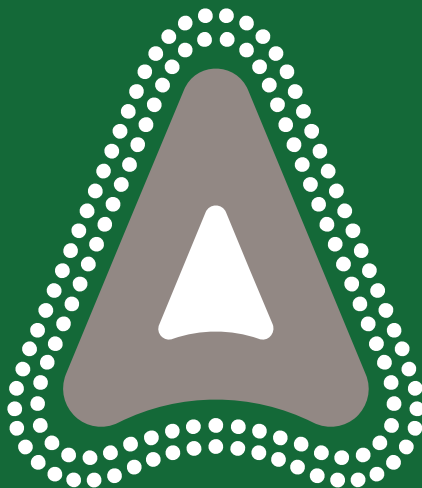
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

For additional First Aid, precautionary, handling and use statements, see inside of this booklet.

How can we help? 1-866-406-6262

# ADAMA

Net Contents: 2.5 GAL



## Fungicide

<b>FIRST AID</b>	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by the poison control center or doctor.</li> <li>• Do not give anything to an unconscious person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>Have the product container or label with you when calling a poison control center or doctor or going for treatment.</b> You may also contact PROSAR at 1-877-250-9291 for emergency medical treatment information.</p>	
<p><b>NOTE TO PHYSICIAN:</b> Probable mucosal damage may contraindicate the use of gastric lavage.</p>	

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Causes moderate eye irritation. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

##### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. 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 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
- Protective eyewear;
- Chemical-resistant gloves (except pilots, flaggers, and applicators driving motorized equipment)
- Chemical-resistant apron when mixing/loading, participating in dip treatments, cleaning up spills, cleaning equipment, or otherwise exposed to the concentrate.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning

and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENGINEERING CONTROLS STATEMENT

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 pesticide is toxic to fish. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not 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 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 expectations pertaining to the statements on this label about personal protective equipment (PPE) 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). The REI for each crop is listed in the Directions For Use associated with each crop.**

## AGRICULTURAL USE REQUIREMENTS (cont.)

### 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
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protection eyewear

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

### ADDITIONAL POST-APPLICATION REQUIREMENTS:

**Eye-Protection:** To mitigate eye irritation concerns from post-application exposures, for at least seven days following the application of Captan GOLD™ 4L:

1. At least one container designed specifically for flushing eyes must be available in operating condition at the WPS-required decontamination site for workers entering the area treated with Captan GOLD 4L, and
2. Workers must be informed orally, in a manner that 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 residues out of their eyes
  - That if they do get residues in their eyes, they should immediately flush their eyes with the eyeflush container that is located at the decontamination site, and,
  - How to operate the eyeflush container

## NON AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of this Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

### Entry Restrictions for all other Non-WPS uses:

Do not enter or allow others to enter until sprays have dried.

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 GOLD 4L 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.

## RESISTANCE MANAGEMENT

Captan GOLD 4L contains a Group M4 fungicide. Fungal isolates/bacterial strains with acquired resistance to Group M4 may eventually dominate the fungal/bacterial population if Group M4 fungicides/bactericides 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 GOLD 4L or other Group M4 fungicides.

To delay fungicide/bactericide resistance consider:

- Avoiding the consecutive use of Captan GOLD 4L or other target site of action Group M4 fungicides/bactericides that might have a similar target site of action, on the same fungal pathogen species.
- Using tank mixtures or premixes with fungicides/bactericides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank mix or premix rate on the fungal pathogen of concern.
- Basing fungicides/bactericides use on a comprehensive Integrated Pest Management (IPM) program.
- Monitoring treated fungal pathogen populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for fungicides/bactericides resistance management and/or integrated management recommendations for specific crops and resistant biotypes.

## SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. 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 regarding spraying.

Apply only as a medium or coarser spray (ASABE standard 572.1) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Apply only when the wind speed is 2–10 mph at the application site.

### **For ground applications:**

- Do not apply with a nozzle height greater than 4 feet above the crop canopy.

### **For aerial applications:**

- The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or 90% of the rotor blade diameter. Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45°.

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 **Spray Drift Management** section.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap as crop injury may result.

## 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 airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

## Boom Length

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  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 recommended 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 cross-wind, 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 applications in low relative humidity, set up equip-

ment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

## Temperature Inversions

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

## Sensitive Areas

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

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 GOLD 4L can be combined at labeled 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 GOLD 4L. Do not apply Captan GOLD 4L in combination with or immediately before or closely following oil sprays. The time factor governing the safe interval between Captan GOLD 4L 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 GOLD 4L and sulfur should not be used on crops sensitive to sulfur. Used at high rates or in drenching sprays, Captan GOLD 4L 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 GOLD 4L and other spray materials at lowest labeled rates and avoid drenching trees.

Applications can be made by aircraft or ground power equipment (including concentrate and semi-concentrate equipment). Pour labeled 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 GOLD 4L per acre as labeled for dilute spray applications. Apply aerial or concentrate sprays in sufficient water for coverage.

#### CHEMIGATION STATEMENT

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

#### 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. 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 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.

**NOTE:** Some crops have regional use directions; always follow directions for your growing area.

#### USE INSTRUCTIONS

The following tables show suggested minimum spray volumes per acre; however, thorough coverage is essential for best results. The stage of growth and size are major factors in determining spray volume required to obtain thorough coverage. If there is a question regarding spray volumes needed, consult local extension service recommendations for spray volumes applicable to your particular crop.

## FRUIT AND NUT CROPS

ALMONDS			
DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Brown Rot twig and blossom blight, Jacket Rot, Shothole, Scab, Leaf blight Anthracnose	3 - 4.5 when used alone 2 - 3 when tank mixed	<b>Ground application:</b> 20 to 300 gal of water <b>Air application:</b> 5 to 20 gal of water Apply at popcorn, bloom, petal fall, post petal fall, and full cover sprays. <b>Anthracnose:</b> Use in a resistance management program of rotational sprays with other approved materials.	To reduce the potential for disease resistance development to other fungicides having a similar spectrum, use the lower rate in tank mixtures.
<b>RESTRICTIONS:</b>			
<ul style="list-style-type: none"> <li>• REI: 24 hours</li> <li>• PHI: Do not apply within 30 days of harvest.</li> <li>• Do not apply more than 20 qts./A per crop season.</li> <li>• Almond hulls may be fed to livestock.</li> </ul>			

APPLES (Eastern U.S.)			
DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Primary Scab, Black rot (frogeye), Botrytis blossom-end rot	4	<b>Ground application:</b> 20 to 400 gal of water <b>Air application:</b> 5 to 20 gal of water Apply at 5 to 7 day intervals as needed to maintain control in prebloom, bloom, petal fall, and first cover sprays.	<b>SPRAYS</b> –At pre-bloom dilute sprays are more effective. Do not use Captan GOLD 4L 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
Secondary scab, Brooks fruit spot, Sooty blotch, Fly speck, Black rot, Black pox, Botryosphaeria rot, Bitter rot, Powdery mildew	2 - 4	<b>Ground application:</b> 20 to 400 gal of water <b>Air application:</b> 5 to 20 gal of water Apply at 10 to 14 day intervals in second and later cover sprays. <b>Powdery mildew:</b> Add 6 to 12 lbs. sulfur per acre to all postbloom sprays until foliage matures.	
<b>RESTRICTIONS:</b>			
<ul style="list-style-type: none"> <li>• REI: 24 hours</li> <li>• PHI: 0 day. May be applied up to day of harvest.</li> <li>• Do not apply more than 32 qts./A per season.</li> </ul>			

**APPLES**  
(Western U.S.)

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Scab	2 - 4	<b>Ground application:</b> 20 to 400 gal of water <b>Air application:</b> 5 to 20 gal of water	To reduce the potential for disease resistance development to other fungicides having a similar spectrum, use the lower rate in tank mixtures. Captan GOLD 4L is most effective when used in a protective schedule before infection occurs. Primary infection of apple scab may occur at any time during and after the green tip stage when there is adequate moisture for spore germination. Danger from primary infection may extend through the time of the first cover spray.

**RESTRICTIONS:**

- REI: 24 hours
- PHI: 0 days. May be applied up to the day of harvest
- Do not apply more than 32 qts./A per season.

**APPLES**  
(Pacific Northwest)

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Bull's eye rot, Botrytis rot	3	<b>Ground application:</b> 20 to 400 gal of water <b>Air application:</b> 5 to 20 gal of water Make 1 or 2 applications with late cover sprays and 1 final spray prior to harvest.	
Secondary scab		<b>Secondary scab:</b> In mid-summer cover sprays, the dosage may be reduced to 2 qts./A.	

**RESTRICTIONS:**

- REI: 24 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 32 qts./A per crop cycle.

**APRICOTS**

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Brown rot (twig blight), Jacket rot	2.5	<b>Ground application:</b> 20 to 250 gal of water <b>Air application:</b> 10 to 20 gal of water Apply in red bud, bloom, and 75% petal fall sprays.	To reduce the potential for disease resistance development to other fungicides having a similar spectrum, use the lower rate in tank mixtures.

**RESTRICTIONS:**

- REI: 24 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 12.5 qts./A per crop cycle.
- Do not make applications after 75% petal fall.

**BLUEBERRIES**

**(Eastern U.S.)**

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Botrytis gray mold or berry rot, Mummy berry	2.5	<b>Ground application:</b> use sufficient water for thorough coverage <b>Air application:</b> minimum of 5 gal of water Start spray program when buds swell or when buds have loose scales. Repeat at 7 day intervals through blossom period. Repeat at 7 to10 day intervals from late bloom.	

**RESTRICTIONS:**

- REI: 48 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 35 qts./A per crop cycle.

**BLUEBERRIES**

**(Western U.S.)**

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Botrytis gray mold or berry rot, Mummy berry	1–2.5	<b>Ground application:</b> 20 to 200 gal of water <b>Air application:</b> 5 to 20 gal of water Begin at mid-bloom, repeat at 7 to 10 day intervals until maturity.	

**RESTRICTIONS:**

- REI: 48 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 35 qts./A per crop cycle.

**CANEberries**

**(BLACKBERRIES, RASPBERRIES, AND DEWBERRIES)**

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Anthracnose, Botrytis, Spur blight	2	<b>Ground application:</b> 45 to 100 gal of water. Use the higher volume as foliage increases. Apply when blossoms are in bud (young canes are 8-10 inches long). Make a second application 14 days later. Apply a fall spray after old canes are removed.	
Fruit rot	2	<b>Fruit rot:</b> Apply at early bloom (5-10% bloom) and again at full bloom. Additional applications can be made at 10 to 14 day intervals as needed.	

**RESTRICTIONS:**

- REI: 48 hours
- PHI: 3 day. Do not apply within 3 days of harvest.
- Do not apply more than 10 qts./A per season.

**CHERRIES  
(Eastern U.S.)**

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Brown rot, Cherry leaf spot, Botrytis rot	2	<b>Ground application:</b> 20 to 200 gal of water <b>Air application:</b> 10 to 20 gal of water Apply in pre-bloom, 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.	
Powdery Mildew	2	<b>Powdery Mildew:</b> Add 3 - 6 lbs. sulfur per acre to the petal fall, shuck, and early cover sprays. If sulfur is added, Captan GOLD 4L may be reduced to 1 qt. per acre.	
Cherry Leaf Spot (post harvest spray)	2	<b>Cherry Leaf Spot (post harvest spray):</b> Apply immediately after harvest and repeat application in 10 to 14 days.	

**RESTRICTIONS:**

- REI: 24 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 14 qts./A per crop cycle.

**CHERRIES  
(Western U.S.)**

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Brown rot blossom blight, Brown rot (fruit), Cherry leaf spot, Botrytis Rot	1.5 - 2	<b>Ground application:</b> 20 to 200 gal of water <b>Air application:</b> 10 to 20 gal of water Apply in pre-bloom, bloom, petal fall, shuck, cover, and preharvest sprays.	

**RESTRICTIONS:**

- REI: 24 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 14 qts./A per crop cycle.

**GRAPES  
(U.S. except CA)**

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Phomopsis cane and leaf spot, Downy mildew, Black rot (suppression)	1 - 2	<b>Ground application:</b> 20 to 200 gal of water <b>Air application:</b> 7 to 20 gal of water Apply when shoots are ½ to 1½ inches long, when shoots are 3 to 5 inches long, and when shoots are 9 to 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 higher rate on susceptible grape varieties and during periods of weather favorable for disease development.

**RESTRICTIONS:**

- REI: 48 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 12 qts./A per season.



**GRAPES  
(California)**

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Bunch rot (Botrytis)	2	<b>Ground application:</b> 20 to 200 gal of water	
Phomopsis cane and leaf spot (current season infection)	1.5 - 2 by ground 2 by air	<b>Air application:</b> 7 to 20 gal of water <b>Bunch rot :</b> Make 2 applications before bloom and 1 immediately after bloom. Repeat periodically, making 3 cover applications before the bunches close. <b>Phomopsis:</b> 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.	
<b>RESTRICTIONS:</b> <ul style="list-style-type: none"> <li>• REI: 48 hours</li> <li>• PHI: 0 day. May be applied up to day of harvest.</li> <li>• Do not apply more than 12 qts./A per season.</li> </ul>			

**NECTARINES**

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Brown rot, Scab	2.5 - 4	<b>Ground application:</b> 20 to 250 gal of water <b>Air application:</b> 10 to 20 gal of water 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 7½ lbs. sulfur per acre to the petal fall, shuck, and early cover spray. If sulfur is added, Captan GOLD 4L may be reduced to 1.5 qts. per acre in these sprays.	To reduce the potential for disease resistance development to other fungicides having a similar spectrum, use the lower rate in tank mixtures.
Coryneum blight (peach blight, shothole)	4	<b>Coryneum blight:</b> Apply in pink bud, full bloom, petal fall, and cover sprays as necessary, and as a postharvest spray (but before leaves drop).	
<b>RESTRICTIONS:</b> <ul style="list-style-type: none"> <li>• REI: 24 hours</li> <li>• PHI: 0 day. May be applied up to day of harvest.</li> <li>• Do not apply more than 24 qts./A per crop cycle (including postharvest sprays).</li> </ul>			

**PEACHES**

<b>DISEASES</b>	<b>APPLICATION RATE QUARTS/ACRE</b>	<b>APPLICATION INSTRUCTIONS</b>	<b>NOTES</b>
Brown rot, scab	2 - 4	<p><b>Ground application:</b> 20 to 400 gal of water  <b>Air application:</b> 10 to 20 gal of water                      Apply in full pink, bloom, petal fall, shuck stages, and in cover and preharvest sprays.                      When conditions are favorable, make applications at 3 to 4 day intervals during bloom to control blossom blight. 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 GOLD 4L may be reduced to 2 qts./A in these sprays.</p>	To reduce the potential for disease resistance development to other fungicides having a similar spectrum, use the lower rate in tank mixtures.
Coryneum blight (peach blight, shot-hole)	4	<p><b>Ground application:</b> 20 to 400 gal of water  <b>Air application:</b> 10 to 20 gal of water                      Apply in pink bud, full bloom, petal fall stages, and cover sprays as necessary and as a post harvest spray (but before leaves drop).</p>	

**RESTRICTIONS:**

- REI: 24 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 32 qts./A per crop cycle (including postharvest sprays).

**PLUMS, FRESH PRUNES (Used for Dried Plums)  
(Eastern U.S.)**

<b>DISEASES</b>	<b>APPLICATION RATE QUARTS/ACRE</b>	<b>APPLICATION INSTRUCTIONS</b>	<b>NOTES</b>
Brown rot	3	<p><b>Ground application:</b> 20 to 300 gal of water  <b>Air application:</b> 10 to 20 gal of water                      Apply in full pink, bloom, and petal fall sprays. Repeat applications at 7 to 14 day intervals as needed to maintain control.                      Continue applications up to day harvest if conditions favor brown rot. The addition of a neutral spreader has improved coverage.</p>	

**RESTRICTIONS:**

- REI: 24 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 27 qts./A per crop cycle.

**PLUMS, FRESH PRUNES (Used for Dried Plums)  
(Western U.S.)**

<b>DISEASES</b>	<b>APPLICATION RATE QUARTS/ACRE</b>	<b>APPLICATION INSTRUCTIONS</b>	<b>NOTES</b>
Brown rot	2-3	<p><b>Ground application:</b> 20 to 300 gal of water  <b>Air application:</b> 10 to 20 gal of water                      Apply at green bud, popcorn, bloom, and petal fall stages. Repeat in cover sprays as conditions warrant.</p>	Use lower rates when tank mixes with fungicides of similar spectrum of activity are used.
Prune russet scab (lacy scab)	2 - 3	<p><b>Ground application:</b> 20 to 300 gal of water                      Apply at full bloom.</p>	

**RESTRICTIONS:**

- REI: 24 hours
- PHI: 0 day. May be applied up to day of harvest.
- Do not apply more than 27 qts./A per crop cycle.

## STRAWBERRIES

DISEASES	APPLICATION RATE QUARTS/ACRE	APPLICATION INSTRUCTIONS	NOTES
Anthraconose ( <i>Colletotrichum acетatum</i> ) Botrytis (gray mold), leaf spot	2 – 3	<b>Ground application:</b> sufficient water for thorough coverage <b>Air application:</b> 10 to 20 gal of water 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 up to day of harvest period treating immediately after each picking.	
If applying as a directed/banded spray; use band rate of Captan GOLD 4L according to the following formula:			
$\frac{\text{Plant Bed Width (inches)}}{\text{Row Spacing (inches)}} \times \text{Broadcast rate per acre} = \text{Banded rate of Captan GOLD 4L per acre}$			
<b>RESTRICTIONS:</b>			
<ul style="list-style-type: none"> <li>● REI: 24 hours</li> <li>● PHI: 0 day. May be applied up to day of harvest.</li> <li>● Do not apply more than 24 qts./A per crop cycle.</li> </ul>			

## SPECIAL USES

**PEACH PREPLANT ROOT DIP (California):** Preventative preplant dip treatment for crown gall; 48 hour REI.

- Use 2 qts. Captan GOLD 4L plus 1.6 qts. diluted sodium hypochlorite (5.25% household bleach) per 100 gal of water.
- Wash nursery trees to remove soil from roots.
- Cut off all dormant buds and suckers in crown area; prune root system if necessary.
- Submerge entire dormant tree for 5 minutes.
- Recharge dip during operations at rate of 1.6 qts. diluted sodium hypochlorite per 100 gal of water.

**POSTHARVEST FRUIT APPLICATION: For control of various molds and storage rots (*Botrytis*, *Gleosporium*, *Rhizopus*).**

**Use as a post harvest dip or spray wash on the following fruits: Apples, Cherries, Pears;**

- Use 1.25 qts. Captan GOLD 4L per 100 gallons of water.
- For use in mechanical fruit-dip operations only.
- 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 1.25 qts. Captan GOLD 4L for each 100 gallons added.
- At end of every 8-hour shift, empty tank, flush, and charge with fresh dilution.
- Do not allow tank solution to stand overnight.
- Maintain continuous agitation during dipping operation.
- Hand dipping of fruit is prohibited.
- Do not allow 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 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 ornamentals sites, observing all restrictions such as maximum pounds of captan applied per application and season.

When calculating application rates, if analytical services are not available to determine the exact quantity of captan remaining in the mixture, assume that the tank still contains 1.25 qts. of Captan GOLD 4L per 100 gallons of water. If the dip or spray mixture contains other pesticides in addition to Captan GOLD 4L, refer to the product label(s) for information regarding disposal. Captan GOLD 4L 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

The REI for Ornamentals for commercial or research use is 48 hours. Do not apply spray to ornamental plants listed below beyond the point of drip from the leaf surface. Apply only sufficient mixture to wet the surface of the soil except when the dose is specified in terms of volume of mixture per square foot of area.

**AZALEAS**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Damping-off of cuttings	2	Dip cuttings in the mixture before bedding.
Petal Blight	1	Apply to soil around plants and spray plants just before bloom. Repeat at 7 to 14 day intervals through bloom.

**BEGONIAS (Tuberous)**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Damping-off of cuttings, tuber rot	2	Dip tubers in mixture for 30 minutes, drain, and plant.

**CAMELLIAS**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Petal Blight	0.5	Apply to soil around plants and spray plants just before bloom. Repeat at 7 to 10 day intervals through bloom.

**CARNATIONS**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Alternaria leaf spot, rust	1	Begin application at first sign of disease. Repeat at 7 to 10 day interval. Shorten intervals if there are frequent rains and heavy dews.
Damping-off of cuttings	2	Dip cuttings in the mixture before bedding.

**CHRYSANTHEMUMS**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Botrytis flower blight, Septoria leaf spot	1	Apply at first sign of disease. Repeat at 7 to 10 day intervals.

**DICHONDRA (California only)**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
White Mold	1 gal per 100 square ft.	Make 2 to 3 applications at 7 day intervals.
<b>USE RESTRICTIONS:</b>		
<ul style="list-style-type: none"> <li>• The max seasonal application rate is 8.6 lbs. ai/A per season</li> <li>• The max single application rate is 4.3 lbs. ai/A.</li> </ul>		

**GLADIOLUS**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 10 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Cormrot and decay, damping-off	0.25 to 0.75 per 10 gal water	Dip corms 20 to 30 minutes. Drain and plant.

**GRASSES (Ornamental in Non-Pastured Areas Only)**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Leaf spot, damping-off, brown patch, melting out, seedling blights and brown spot on St. Augustine grass	1	Apply 10 gals spray per 1,000 square ft. 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.

**USE RESTRICTIONS:**

- The max seasonal application rate is 8.6 lbs. ai/A per season.
- The max single application rate is 4.3 lbs ai/A.
- Do not apply to turfgrass in residential sites, including homes, apartment buildings, daycare centers, schools, playgrounds, parks, recreational areas, sports fields or other residential areas.

**GRASSES (Lawn Seedbeds)**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Damping-off and other soil borne diseases	1	Use 0.125 to 0.167 qts. Captan GOLD 4L per 1,000 square ft or 1 qt. Captan GOLD 4L per 100 gals of water, using 15 gals spray per 1,000 square ft. Cultivate into upper 3 to 4 inches before planting.

**USE RESTRICTIONS:**

- The max seasonal application rate is 8.6 lbs. ai/A per season.
- The max single application rate is 4.3 lbs ai/A.
- Do not apply to turfgrass in residential sites, including homes, apartment buildings, daycare centers, schools, playgrounds, parks, recreational areas, sports fields or other residential areas.

**ROSES**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Black spot, Botrytis blossom blight	1	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**

<b>DISEASES</b>	<b>APPLICATION RATES QUARTS PER 100 GAL WATER</b>	<b>APPLICATION INSTRUCTIONS</b>
Preplant treatment for damping-off, root rot diseases on seedling or transplants of roses (and other shrubs, trees, flowers) and lawn seedbeds	1	Mix in 100 gals of water at a rate of 15 gals spray per 1,000 sq ft. Cultivate into upper 3 to 4 inches of soil before planting.

**USE RESTRICTIONS:**

The REI for Soil and Greenhouse bench treatments is 48 hours. Once the treatment and any seeding or transplanting done as part of the treatment is complete, the 48 hour REI begins. **Exception:** Once the seeds or transplants are planted in the soil, the Worker Protection Standard (WPS) allows workers to enter the treated area without restriction if there will be no contact with the soil subsurface.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

### PESTICIDE STORAGE:

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of reach of children, preferably in a locked storage area.

Do not store above 100°F for extended periods of time. Storage below 20°F can result in formation of crystals. If product crystallizes, store at 50°F to 70°F and agitate to redissolve crystals. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

### PESTICIDE DISPOSAL:

Open dumping is prohibited. Pesticide wastes are toxic. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the hazardous waste representative at the nearest EPA Regional Office for guidance.

### CONTAINER HANDLING:

**Rigid, Nonrefillable containers small enough to shake (i.e.**

**with capacities equal to less than five gallons):** Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

### Recycle or Disposal of Containers

End users are authorized to remove tamper evident cable as required to remove the product from the container unless the container is equipped with one way valves and refilling or returning is planned.

### LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES, and LIMITATIONS OF LIABILITY.**

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product.

Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

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**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Makhteshim Agan of North America, Inc.'s election, the replacement of product.

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