

PM-23

476-581

P. 1/11

Combined

(Stauffer Shield)

CAPTAN 50-WP

A Fungicide For Plant Disease Control

ACTIVE INGREDIENTS:

*Captan	48.9%
Related Derivatives	1.1%

<u>INERT INGREDIENTS:</u>	50.0%
	<u>100.0%</u>

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

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

PELIGRO **ACCIDENT KEEP OUT OF REACH OF CHILDREN** DANGER

per self center

SEP 16 1987

U.S. Environmental Protection Agency
EPA Reg. No. 476-581

CORROSIVE

PRECAUCION AL USUARIO:
SI USADO NO LEE INGLES,
NO USE ESTE PRODUCTO HASTA
QUE LA ETIQUETA LE HAYA
SIDO EXPLICADA AMPLIAMENTE

CAUSES IRREVERSIBLE EYE DAMAGE

STATEMENT OF PRACTICAL TREATMENT

First Aid:

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

If in eyes: Flush with plenty of water. Call a physician.

If swallowed: Drink promptly a large quantity of milk, egg whites, gelatin solutions, or if these are not available, drink large quantities of water. Avoid alcohol.

If inhaled: Remove victim to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. Get medical attention.

If on skin: Wash with plenty of soap and water. Get medical attention if abnormal reaction occurs.

FOR ADDITIONAL MEDICAL OR TOXICOLOGICAL INFORMATION, CALL COLLECT, DAY OR NIGHT, STAUFFER EMERGENCY MEDICAL ASSISTANCE (203) 226-6602, OR CHEMTREC (800) 424-9300.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Causes irreversible eye damage. Harmful if swallowed or inhaled. May cause allergic skin reactions. Do not get in eyes. Wear goggles or face shield when handling. Avoid contact with skin and clothing. Avoid inhalation of dust or spray mist. Remove and separately launder clothing before reuse.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

STORE IN COOL, DRY PLACE -- PROTECT FROM EXCESSIVE HEAT

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

_____ LBS. NET _____ KG

EPA Reg. No. 476-581

EPA Est. No. 476-

RS-870910

Made in U.S.A. By
STAUFFER CHEMICAL COMPANY
WESTPORT, CT. 06881-0854

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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.

Consult State Agricultural Experiment Stations or State Agricultural Extension Service for additional information, as the time of applications needed will vary with the local conditions.

COMPATIBILITY AND PLANT SAFETY: CAPTAN 50-WP can be combined safely and effectively at recommended dosage rates with most commonly used fungicides and insecticides, with the exception of oil and strongly alkaline materials. Alkaline materials such as spray lime, lime-sulfur and bordeaux mixture will reduce the fungicidal activity of CAPTAN. Do not apply CAPTAN in combination with or immediately before or closely following oil sprays. 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 formulations 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 power equipment (including concentrate and semi-concentrate equipment). Pour recommended amount of this material into nearly filled spray tank. Add balance of water. Maintain agitation during filling and spraying operations. Do not allow mixture to stand. Do not combine with emulsifiable liquids or wettable powders unless previous experience has proven them to be physically compatible and safe to plants. (Read compatibility and plant safety information).

For aerial or concentrate spray applications, apply the same amount of CAPTAN 50-WP per acre as would normally be applied for dilute spray applications. Apply aerial or concentrate sprays in sufficient water for coverage. Use spray volumes of 5 to 20 gallons per acre for aerial applications.

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

USE PRECAUTIONS

Wear goggles or face shield when handling. Wash thoroughly with soap and water after handling. Remove contaminated clothing and separately launder clothing before reuse.

A dust mask must be worn when mixing and loading this product.

Mixers/loaders when mixing and loading this product must wear a long sleeved shirt and long pants or a coverall that covers all parts of the body except the head, hands and feet. Wear chemical resistant gloves, goggles or a face shield and a chemically resistant apron.

Fieldworkers and harvesters must wear chemical resistant gloves if entering treated areas within 4 days following applications. Leather or fabric gloves are not acceptable.

During application only, from a tractor with a completely enclosed cab or from an aircraft with an enclosed cockpit, a long sleeved shirt and long legged pants must be worn. Chemically resistant gloves must be available in the cab or cockpit and worn while exiting.

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.

AFTER WORK: Take off all clothes and shoes. Shower using soap and water. Do not wear contaminated clothing. Wash protective clothing and equipment with soap and water after each use. Personal clothing worn during use must be laundered separately from household articles. Clothing and protective equipment heavily contaminated or drenched with captan must be destroyed according to state and local regulations.

RE-ENTRY

- . Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.
- . Do not allow persons to enter treated areas within 4 days following application unless a long-sleeved shirt and long pants or a coverall that covers all parts of the body except the head, hands and feet and chemically resistant gloves are worn. Conspicuously post reentry information at site of application.
- . Certain states may require more restrictive reentry intervals for various crops treated with this product. Consult your State Department of Agriculture for further information.

- . Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers.

RECOMMENDATIONS

Unless otherwise specified, rates are given in terms of CAPTAN 50-WP per 100 gallons water for fruit and nut crops and ornamentals. For vegetables crops, rates are expressed as CAPTAN 50-WP per acre in sufficient water to provide thorough coverage. 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.

FRUIT AND NUT CROPS

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.

ALMONDS: Brown rot twig and blossom blight, shothole, scab, leaf blight -- Apply 9 lbs. Captan 50-WP per acre in 20 to 300 gallons of water using ground equipment. Apply at popcorn, bloom and petal fall stages and up to 5 weeks after petal fall. Do not apply within 30 days of harvest. Hulls may be fed to livestock. Subsequent applications may be made up to 12 days of harvest in accordance with pest infestations and state agricultural extension service recommendations, provided the hulls are not fed to dairy animals or animals being finished for slaughter.

APPLES (Eastern U.S.): Primary scab, black rot (frog-eye), botrytis blossom-end rot -- Apply 8 lbs. Captan 50-WP per acre in 20 to 400 gallons of water using ground equipment. Apply at 5 to 7 day intervals as needed to maintain control in prebloom, bloom, petal fall and first cover sprays.

Secondary scab, Brooks fruit spot, sooty blotch, fly speck, black rot, black pox, botryosphaeria rot, bitter rot -- Apply 4 to 8 lbs. Captan 50-WP per acre in 20 to 400 gallons of water using ground equipment. Apply at 10 to 14 day intervals in second and later cover sprays up to start of harvest. Powdery mildew -- If powdery mildew is a problem add 6 to 12 pounds sulfur per acre or 1 to 2 pounds of Karathane per acre to all post-bloom sprays until foliage matures. Use 2 pounds Karathane per acre if interval between sprays is longer than 7 days. CAUTION -- Do not use CAPTAN 50-WP in combination with or closely following or in alternation with wettable sulfur products on sulfur sensitive varieties of apples such as Red Delicious, Staymen, Baldwin, King, etc. as severe injury and defoliation may occur.

APPLES (Western U.S.): Primary scab -- Apply 8 lbs. Captan 50-WP per acre in a high volume application for preblossom sprays. For preblossom sprays use low volume apply 16 lbs. per acre. In mid-summer, the dosage may be reduced to 4 lbs. per acre in high volume applications or 10 lbs. per acre in low volume applications. (Pacific northwest)
- Bull's eye rot, Botrytis rot -- Apply 8 lbs. Captan 50-WP per acre in 20 to 400 gallons of water using ground equipment. Make 1 or 2 applications with late cover sprays and 1 to preharvest applications.

APRICOTS: Brown rot (twig blight), jacket rot -- Apply 5 lbs. Captan 50-WP per acre in 20 to 250 gallons of water using ground equipment. Apply in red bud, bloom, 75% petal fall, and cover sprays.

CHERRIES (Eastern U.S.): Brown rot, leaf spot, Botrytis rot -- Apply 4 lbs. Captan 50-WP per acre in 20 to 200 gallons of water using ground equipment. Apply in pre-bloom, bloom, petal fall, shuck, cover and pre-harvest sprays. Applications at 3 to 4 day intervals may be necessary during bloom to control blossom blight. Repeat applications at 7 to 10 day intervals as needed to maintain control up to start of harvest. If powdery mildew is a problem add 6 lbs. sulfur per acre to the petal fall, shuck and early cover sprays. If sulfur is added, CAPTAN 50-WP may be reduced to 2 lbs. per acre in these sprays. Post harvest sprays: leaf spot -- Apply 4 lbs. Captan 50-WP per acre in 20 to 200 gallons of water using ground equipment. Apply immediately after harvest and repeat application in 10 to 14 days.

CHERRIES (Western U.S.): Brown rot blossom blight, brown rot (fruit), leaf spot -- Apply 4 lbs. Captan 50-WP per acre in 20 to 200 gallons of water using ground equipment. Apply in pre-bloom, bloom, petal fall, shuck, cover and preharvest sprays.

GRAPES (Eastern U.S.): Black rot, downy mildew -- Apply 4 lbs. Captan 50-WP per acre in 20 to 200 gallons water using ground equipment. Make first application just before bloom, repeat just after bloom and at 10 to 14 day intervals for 1 to 3 additional applications depending upon the susceptibility of the grape variety. Dead Arm (current season infection) -- Apply 2 to 4 lbs. Captan 50-WP per acre in 20 to 200 gallons of water using ground equipment. Apply first application when shoots are 1/2 to 1 inch long. Repeat application when shoots are 4 to 6 inches long.

GRAPES (California): Bunch rot (Botrytis) -- Apply 4 lbs. Captan 50-WP per acre in 20 to 200 gallons of water using ground equipment. Make 2 application before bloom and 1 immediately after bloom. Repeat periodically making 3 cover applications before the bunches close. Dead Arm (current season infection) -- Apply 3 to 6 lbs. Captan 50-WP per acre in 20 to 200 gallons of water using ground equipment. Apply 4 lbs. Captan 50-WP 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.

NECTARINES: Brown rot, scab -- Apply 5 lbs. Captan 50-WP per acre in 20 to 250 gallons of water using ground equipment. 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 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 spray. If sulfur is added, CAPTAN 50-WP may be reduced to 2.5 lbs. per acre in these sprays. Coryneum blight (peach blight, shothole) -- Apply 5 lbs. Captan 50-WP 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).

PEACHES: Brown rot, scab -- Apply 8 lbs. Captan 50-WP 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 50-WP may be reduced to 4 lbs. per acre in these sprays. Coryneum blight (peach blight, shothole) -- Apply 8 lbs. Captan 50-WP 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).

PEACHES (NURSERY STOCK)(California): Preventative preplant dip treatment for crown gall. Use 4 pounds CAPTAN 50-WP plus 3.2 pints diluted sodium hypochlorite (5.25% household bleach) per 100 gallons 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.

PEARS (Eastern U.S.): -- Scab -- Apply 8 lbs. Captan 50-WP per acre in 20 to 200 gallons water using ground equipment. Apply in preblossom, petal fall and cover sprays. Repeat cover applications at 7 to 14 day intervals under severe scab infection conditions. Russeting may be reduced on Bosc pears. Do not use on D'Anjou pears.

PEARS (Western U.S., except Pacific Northwest): Pear scab -- Apply 8 lbs. Captan 50-WP per acre in 20 to 400 gallons of water using ground equipment. Apply during early finger stage, petal fall and first cover sprays. Under severe scab infection conditions additional treatments may be necessary. Russeting may be reduced on Bosc pears. Do not use on D'Anjou pears.

PLUMS, PRUNES (Eastern U.S.): Brown rot -- Apply 6 lbs. Captan 50-WP per acre in 20 to 300 gallons of water using ground equipment. 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.

PLUMS, PRUNES (Western U.S.): Brown rot -- Apply 6 lbs. Captan 50-WP per acre in 20 to 300 gallons of water using ground equipment. Apply at green bud, popcorn, bloom and petal fall stages. Repeat in cover sprays as conditions warrant. Prune russet scab (lacy scab) (in California only) -- Apply 6 lbs. Captan 50-WP per acre in 20 to 300 gallons of water using ground equipment. Apply at full bloom.

STRAWBERRIES: Botrytis (gray mold), leaf spot -- Apply 6 lbs. Captan 50-WP per acre in sufficient water for thorough coverage. Begin applications when new growth starts in the spring and before fruit starts to form. Repeat at weekly intervals. Under conditions favorable to fruit rot continue applications through harvest period treating immediately after each picking.

VEGETABLE CROPS

CANTALOUPE, CUCUMBER:

Angular leaf spot, anthracnose -- Apply 4 lbs. Captan 50-WP per acre in sufficient water for thorough coverage. Begin applications at first signs of infection and repeat at 5 to 7 day intervals or as needed to maintain control.

TOMATOES: Anthracnose, gray leaf spot, septoria leaf spot -- Apply 6 lbs. Captan 50-WP per acre in sufficient water for thorough coverage. Under severe infection conditions use 6 to 8 pounds per acre in sufficient water for thorough coverage. Apply at first signs of infection and repeat at 5 to 7 day intervals or as needed to maintain control.

SPECIAL USES

POST HARVEST DIP: For control of various molds and storage rots (Botrytis, Gleosporium, Rhizopus). Use as a post harvest dip or wash on the following fruits: Apples, Cherries, Pears -- Use 2-1/2 lbs. Captan 50-WP per 100 gallons of water. Apply as a spray or in a dip tank. When used as a dip, recharge wash solution periodically when tank volume is reduced by 25%. Bring water back to volume and add 1 lb. Captan 50-WP for each 25 gallons added. At end of every 8 hour shift, empty tank, flush and charge with fresh dilution. Do not allow dip tank solution to stand overnight. Maintain continuous agitation during dipping operation.

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

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

BEGONIAS (Tuberous): Damping-off, tuber rot -- Use 4 lbs. Captan 50-WP per 100 gallons of water. Dip tubers 30 minutes, drain and plant.

CAMELLIAS: Petal blight -- Use 1 lb. Captan 50-WP per 100 gallons of water. Apply to drench soil around plants beginning when flowers start to open. Repeat at 7 to 10 day intervals through bloom.

CARNATIONS: Alternaria leaf spot, rust -- Use 2 lbs. Captan 50-WP per 100 gallons of water. Begin application at first sign of disease. Repeat at 7 to 10 day intervals. Shorten intervals during frequent rains and heavy dews. Damping-off of cuttings -- Use 4 lbs. Captan 50-WP per 100 gallons of water. Dip cuttings before bedding.

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

DICHONDRA (California Only): White mold (*Sclerotium rolfsii*) -- Use 2 lbs. Captan 50-WP per 100 gallons of water. Apply 1 gallon spray per 10 square feet. Make 2 to 3 applications at 7 day intervals.

GLADIOLUS (Corms): Corm rot and decay, damping-off -- Use 1/2 to 1-1/2 lbs. Captan 50-WP per 10 gallons, dip corms 20 to 30 minutes. Drain and plant.

GRASSES (Ornamental in Non-Pastured Areas Only): Leaf spot, damping-off, brown patch, melting out, seedling blights, and brown spot on St. Augustine grass -- Use 2 lbs. Captan 50-WP per 100 gallons of water. Apply 10 gallons spray per 1,000 square feet. Begin when growth starts in spring. Repeat at 7 to 14 day intervals throughout season. Do not graze treated areas or feed clippings to livestock.

GRASSES (Lawn Seedbeds): Damping-off and other soil borne diseases -- Use 1/4 to 1/3 lb. Captan 50-WP per 1,000 square feet or 2 lbs. Captan 50-WP in 100 gallons water, using 15 gallons spray per 1000 square feet. Cultivate into upper 3 to 4 inches before planting.

ROSES: Black spot, Botrytis blossom blight -- Use 2 lbs. Captan 50-WP per 100 gallons of water. Begin at first growth or first sign of disease. Repeat at 7 to 14 day intervals, and more frequently during frequent rains and heavy dews.

SOIL AND GREENHOUSE BENCH TREATMENT: Preplanting for damping-off and root rot diseases on seedling or transplants of roses (and other shrubs, trees, flowers). Lawn seedbeds, -- Use 2 lbs. Captan, 50-WP per 100 gallons water at a rate of 15 gallons 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.

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. Keep container tightly closed when not in use. Protect from excessive heat. Store in a cool, dry place.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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

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NOTICE -- READ CAREFULLY

CONDITIONS OF SALE: Stauffer (and seller) offer(s) this product for sale subject to, and buyer and all users are deemed to have accepted, the following conditions of sale and warranty which may only be varied by written agreement of a duly authorized representative of Stauffer.

WARRANTY LIMITATION: Stauffer warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the directions for use on the label subject to the inherent risks referred to below. Stauffer makes no other express warranties; THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY and there are no warranties which extend beyond the description on the label hereof.

INHERENT RISKS: The directions for use of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks associated with use. Buyer assumes all risks associated with use or application of this product contrary to label instructions or resulting from extraordinary weather conditions.

LIMITATION OF LIABILITY: In no case shall Stauffer (and/or Seller) be liable for special, indirect, or consequential damages resulting from the use or handling of this product and no claim of any kind shall be greater in amount than the purchase price of the product in respect of which such damages are claimed.