

# INSTILL-

## BACTERICIDE\* AND FUNGICIDE

### ACTIVE INGREDIENT

Copper Sulfate Pentahydrate\*

(CAS# 7758-99-8) ..... 12.58%

OTHER INGREDIENTS ..... 87.42%

Total ..... 100.00%

\*Copper as Metallic ..... 3.1%

Contains 1.28 lbs. active ingredient and 0.32 lbs of metallic copper per gallon of product.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION AVISO**

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.)

### NET CONTENTS: 2.5 GALLONS

E.P.A. REG. NO. 49538-7- 92632

E.P.A. EST. NO. 49538-MN-001

▲ Non-public health bacteria

SEE ATTACHED LABEL BROCHURE

FOR DIRECTIONS FOR USE AND

PRECAUTIONARY STATEMENTS

DO NOT FREEZE



### FIRST AID

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

#### 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 Swallowed:

- Call a 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 a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

#### 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.

**Note to Physician:** Skin symptoms may be similar to copper allergic reactions and can be treated similarly, including the use of steroid containing lotion. If swallowed, probable mucosal damage may contraindicate the use of gastric lavage.

For medical emergencies, call the Poison Control Centers at 1-800-222-1222.

#### PHYSICAL OR CHEMICAL HAZARDS

For spills, you may contact CHEMTREC at 1-800-424-9300

#### Distributed by:



P.O. Box 385370 Minneapolis, MN 55438  
1-800-356-8733

## NOTICE:

Our directions for use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice, including but not limited to over-fertilization or senescing plant tissue. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions, abnormal conditions, presence of other materials, the manner of application, or other factors, all of which are beyond the control of the manufacturer. All such risks shall be assumed by the buyer. To the extent consistent with applicable law the exclusive remedy is the product purchase price. INSTILL®-O Bactericide<sup>^</sup> & Fungicide is reported compatible with many registered pesticides. However, before adopting the use of additives and/or combinations for general applications, test for physical compatibility and noninjury under your conditions of use. To the extent consistent with applicable law the buyer must assume all responsibility, including injury or damage, resulting from its misuse as such or in combination with other materials as tank mix or applied separately.

### PRECAUTIONARY STATEMENTS HAZARD TO HUMANS (& DOMESTIC ANIMALS)

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

#### Personal Protective Equipment (PPE)

Mixers, loaders, applicators and other handlers must wear the following:

- Long-sleeved shirt and long pants
- Chemical resistant gloves (e.g., barrier laminate, butyl rubber ≥ 14 mils, neoprene rubber ≥ 14 mils).
- Shoes and socks
- Goggles or face shield

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

#### USER SAFETY RECOMMENDATIONS

- User should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- User should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- User should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.
- Wash the outside of gloves before removing.

## ENGINEERING CONTROLS

Pilots must use an enclosed cab that meets the definition listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.305.]

### PHYSICAL CHEMICAL HAZARDS

Do not mix or allow contact with oxidizing agents or reducing agents such as metals, as hazardous chemical reactions may occur.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters or rinsate.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not allow workers to enter into treated areas during the restricted entry interval (REI) of 48 hours.

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, wear:

- Coveralls
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material (such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene polyvinyl chloride (PVC) ≥ 14 mils, viton ≥ 14 mils).
- Protective eyewear

### AGRICULTURAL USE REQUIREMENTS CONTINUED

The restricted entry interval (REI) for greenhouse use is 24 hours if the following conditions are met:

- For at least seven days following the application of copper sulfate pentahydrate in greenhouses:
  - At least one container or station designed specifically for flushing eyes is available in operating condition with the WPS-required decontamination supplies for workers entering the area treated with copper-containing products.
- Workers are informed orally, in a manner they can understand:
  - a) That residues in the treated area may be highly irritating to their eyes.
  - b) That they should take precautions, such as refraining from rubbing their eyes, to keep the residues out of their eyes.
  - c) That if they do get residues in their eyes, they should immediately flush their eyes with the eye flush container or eye flush station that is located with the decontamination supplies and
  - d) How to operate the eye flush container or eye flush station

**Not for use in greenhouses in California**

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses that are NOT within the scope of the 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. Do not enter or allow others to enter until the sprays have dried.

### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE**— Do not freeze or store below 45° F. Store in original container.

**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. Open dumping is prohibited.

**CONTAINER DISPOSAL**—Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or 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 dispose of in a sanitary landfill, or by incineration if allowed by state and local authorities. Do not reuse these containers.

### PRODUCT INFORMATION

INSTIL®-O Bactericide<sup>^</sup> & Fungicide that when mixed with the appropriate volume of water, provides preventive and curative activity on a broad-spectrum of bacterial and fungal diseases listed on this label. INSTILL®-O Bactericide<sup>^</sup> & Fungicide will not leave any visible residue when mixed and applied according to the USE DIRECTIONS listed on this label. INSTIL®-O Bactericide<sup>^</sup> & Fungicide may be applied by spray, drench, dip or injection. Equipment must be properly calibrated before use.

#### Resistance Management:

For resistance management, please note that INSTIL®-O Bactericide<sup>^</sup> & Fungicide contains a Group M01 fungicide/bactericide. Any fungal/bacterial population may contain individuals naturally resistant to INSTIL®-O Bactericide<sup>^</sup> & Fungicide and other Group M01 fungicides/bactericides. A gradual or total loss of pest control may occur over time if these fungicides/bactericides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay fungicide/bactericide resistance, take one or more of the following steps:

- Rotate the use of INSTIL®-O Bactericide<sup>^</sup> & Fungicide or other M01 fungicides/bactericides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides/bactericides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide/bactericide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide/bactericide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal/bacterial populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and /or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact Phyton Corporation at 1-800-356-8733. You can also contact your university extension specialist to report resistance.

## USE DIRECTIONS

1. Shake well before mixing with water. Use within 48 hours after mixing.
2. INSTILL<sup>®</sup>-O Bactericide<sup>^</sup> & Fungicide can be applied with any type of application equipment that gives uniform coverage of all foliage, including ground, aerial, and low volume sprayers and chemigation equipment specified on this label. The volume of water needed will depend on the spray equipment and the size of the crop. Use in sufficient water to provide thorough coverage.
3. INSTILL<sup>®</sup>-O Bactericide<sup>^</sup> & Fungicide can be used up to the time of harvest.
4. Do not apply this product through any system using aluminum parts or components as damage to the system may occur.
5. Compatible with most fungal and insecticidal biopesticides when applied at least 2 days before or after application of the biopesticide.
6. Do not tank mix INSTILL<sup>®</sup>-O Bactericide<sup>^</sup> & Fungicide with B-NINE (or other Daminozide product) and do not apply this product within seven (7) days either before or after applications of B-NINE (or other Daminozide product) as burning of leaves may result.
7. Do not tank mix INSTILL<sup>®</sup>-O Bactericide<sup>^</sup> & Fungicide with strongly acidic compounds such as Aliette, (or other Fosetyl-Al product) and do not apply INSTILL<sup>®</sup>-O Bactericide<sup>^</sup> & Fungicide within 14 days either before or after applications of such products.
8. Phytotoxicity: INSTILL<sup>®</sup>-O Bactericide<sup>^</sup> & Fungicide has been tested on a wide variety of agricultural and ornamental plants without phytotoxicity symptoms. However, because it is not possible to test all plant species, varieties and cultivars and because environmental factors and varietal stage of growth may affect phytotoxic expression, it is recommended that a small group of test plants be treated at the anticipated dosage rate and observed for 5 to 7 days to determine phytotoxicity before treating large numbers of those plants.
9. Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist periods.
10. Application on buds and open blooms: INSTILL<sup>®</sup>-O Bactericide<sup>^</sup> & Fungicide is not phytotoxic at the lowest dosage rates on most buds and open blooms. It is recommended to treat a small group of test plants at the anticipated dosage rate and observe to determine phytotoxicity before treating large numbers of those plants.
11. Liquid equivalents: one fluid ounce = 29.5 milliliters = 6 teaspoons.
12. For all types of application equipment, apply specified amount of INSTILL<sup>®</sup>-O Bactericide<sup>^</sup> & Fungicide in 100 gallons of water to affected area to be treated depending on the size of the crop, disease to treat, and application equipment. Do not apply more than 200 gallons of spray solution per acre.

## SPRAY DRIFT

For Aerial Application:

1. Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
2. Applicators are required to use a medium or coarse droplet size (ASABE S575.1).
3. Do not apply when wind speed exceeds 15 mph at the application site. If the wind is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed-wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
4. Applicators must use ½ swath displacement upwind at the downwind edge of the application area.
5. Do not apply during temperature inversions.

For Groundboom Application:

1. Apply with the spray release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
2. Applicators are required to use medium or coarser droplet size (ABABE S572.1).
3. Do not apply when wind speeds exceed 15 miles per hour at the application site.
4. Do not apply during temperature inversions.

## **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

- Controlling Droplet Size- Ground Boom
  - Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
  - Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
  - Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

- Controlling Droplet Size-Aircraft
  - Adjust Nozzles-Follow nozzle manufacturer's recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

**BOOM HEIGHT – Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

**RELEASE HEIGHT- Aircraft**

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

**SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

**TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

**TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

**WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## FRUIT, VEGETABLES & FIELD CROPS

Spray for thorough foliage coverage. Lower rates may be as effective as higher rates and should be tried first. Routine preventive programs may be maintained at the lower rates. Use of low volume equipment is effective against Botrytis and not effective against established powdery mildew and Xanthomonas infections.

### SPECIFIC DIRECTIONS FOR SPRAY APPLICATIONS

Nursery and Field

<b>Vegetables and Field Crops</b>				
CROP	DISEASE	RATE (fl. oz./100 gal)	Use instructions	†Use restrictions
<b>Potato</b>	Early Blight, Late Blight	8.0 – 24  (.02 - .06 lbs. metallic copper/100 gal)	Apply 0.5 to 1.5 pints at 7 to 10 day intervals or as needed starting when plants are 2 to 6 inches high in locations where disease is light. Apply up to 1.5 pints per acre when disease is more severe.	Under conditions of severe disease, control with Instill-O will be improved by tank mixing with other compatible fungicides registered for use on potatoes. Read and follow all label instructions of tank mix partners.  <b>For single applications:</b> Do not exceed 0.12 lbs. metallic copper/A. (48 fl. oz. Instill-O/A)  <b>Annually:</b> Do not exceed 5.0 lbs. metallic copper/A  <b>Minimum re-treatment interval:</b> 7 days

†Instill-O contains 0.32 lbs. of metallic copper per gallon of product.

TREE CROPS AND SMALL FRUITS				
CROPS	DISEASE	RATE (fl. oz./100 gal)	Use Instructions	†Use restrictions
<b>Almond, Apricot, Cherry, Nectarine, Peach, Plum, Prunes</b>	Bacterial canker, Bacterial blast, Bacterial spot, Shot-hole	34 – 68  (.09 - .17 lbs. metallic copper/100 gal)	<b><u>Dormant, late dormant, up to pink bud</u></b>  Make first application before fall rains and a second application at late dormant stage before foliage and buds begin to swell. The higher rates should be used when conditions favor disease.  <b><u>Bloom/ growing season</u></b> Apply during early bloom. Do not apply after full bloom or injury may occur. Use the higher rates when rainfall is heavy and disease pressure is high.	<b><u>Dormant, late dormant, up to pink bud</u></b>  <b>For single applications:</b> Do not exceed .34 lbs. metallic copper/A. (136 fl. oz. Instill-O/A)  <b>Minimum interval:</b> 7 days  <b><u>Bloom/ growing season</u></b>  <b>For single applications:</b> Do not exceed .34 lbs. metallic copper/A. (136 fl. oz. Instill-O/A)  <b>Minimum re-treatment interval:</b> 5 days  <b><u>Annually</u></b> Do not exceed 18.0 lbs. metallic copper/A
<b>Olives</b>	Olive knot, Peacock Spot	128 – 256  (.32 - .64 lbs. metallic copper/ 100 gal)	Apply before winter rains begin. Reapply in early spring if needed and continue every 30 days if needed.	<b>For single applications:</b> Do not exceed 1.28 lbs. metallic copper/A. (512 fl. oz. Instill-O/A)  <b>Annually:</b> Do not exceed 9.6 lbs. metallic copper/A  <b>Minimum re-treatment interval:</b> 30 days

†Instill-O contains 0.32 lbs. of metallic copper per gallon of product.

Tree Crops and Small Fruits				
CROPS	DISEASE	RATE (fl. oz./100 gal)	Use Instructions	†Use restrictions
<b>Apple</b>	Anthracnose; Apple scab; Blossom blast; Fire Blight ( <i>Erwinia</i> ) Shoot blast;	34 – 68  (.09 - .17 lbs. metallic copper/100 gal)	<p><b><u>Fall, late dormant</u></b></p> <p>Apply as a full cover spray. Use the higher rates under severe disease conditions. After harvest, apply before fall rains.</p> <p><b><u>Between silver-tip and green-tip</u></b></p> <p>For fireblight, apply between silver-tip and green tip.</p> <p><b><u>Bloom, growing season</u></b></p> <p><b>Extended spray schedule where fruit finish is not a concern:</b> Continued applications may be made at 5 to 7 day intervals or as needed between 1/2 inch green-tip and first cover spray. The addition of spray oil may enhance coverage of the wood in dormant sprays.</p>	<p><b><u>Fall, late dormant</u></b></p> <p><b>For single applications:</b> Do not exceed .34 lbs. metallic copper/A. (136 fl. oz. Instill-O/A)</p> <p>Only one application is permitted.</p> <p><b><u>Between silver-tip and green-tip</u></b></p> <p><b>For single applications:</b> Do not exceed .34 lbs. metallic copper/A. (136 fl. oz. Instill-O/A)</p> <p>Only one application is permitted.</p> <p><b><u>Bloom, growing season</u></b></p> <p><b>For single applications:</b> Do not exceed .34 lbs. metallic copper/A. (136 fl. oz. Instill-O/A)</p> <p><b>Minimum re-treatment interval:</b> 5 days</p> <p><b><u>Annually</u></b> Do not exceed 16.0 lbs. metallic copper/A</p>
<b>Walnut</b>	Walnut blight	51 – 85  (.13 - .21 lbs. metallic copper/100 gal)	<p>Apply first spray at early pre-bloom prior to or when catkins are partially extended. Make additional applications during bloom and early nutlet stage if frequent rainfall occurs. For effective control, coverage of catkins, leaves and nutlets is essential.</p>	<p><b>For single applications:</b> Do not exceed .42 lbs. metallic copper/A. (168 fl. oz. Instill-O/A)</p> <p><b>Annually:</b> Do not exceed 12.75 lbs. metallic copper/A</p> <p><b>Minimum re-treatment interval:</b> 7 days</p>

†Instill-O contains 0.32 lbs. of metallic copper per gallon of product



Citrus Crops (Grapefruit, Lemon, Orange)			
DISEASE	RATE (fl. oz./100 gal)	Use Instructions	†Use restrictions
Algal spot; Melanose	34 – 68  (.09 - .17 lbs. metallic copper/100 gal)	Apply as a pre-bloom and post bloom spray. The higher rates should be used when conditions favor disease.	<p><b>For single applications:</b> Do not exceed .34 lbs. metallic copper/A. (136 fl. oz. Instill-O/A)</p> <p><b>Annually:</b> Do not exceed 12.6 lbs. metallic copper/A</p> <p><b>Minimum re-treatment interval:</b> 7 days</p>
Alternaria brown spot		Apply when first flush of spring appears and each flush thereafter. Application to fruit should start after most petals have fallen and be repeated depending on rainfall and disease pressure.	
Black Spot		Begin applications in late spring, post-petal fall and continue once per month through early fall.	
Citrus Canker (suppression)		Apply to flushes 7 to 14 days after shoots begin to grow. Young fruit may require additional application. Disease pressure will determine timing and number of applications. Each flush of new growth should be sprayed under heavy disease pressure.	
Greasy spot		Apply in summer on expanded new flush. Repeat on subsequent flushes if conditions favor disease development. Use the higher rate when disease pressure is severe.	

†Instill-O contains 0.32 lbs. of metallic copper per gallon of product

<b>Grapes</b>			
<b>DISEASE</b>	<b>RATE (fl. oz./100 gal)</b>	<b>Use Instructions</b>	<b>†Use restrictions</b>
Downy Mildew; Gray Mold; Powdery Mildew	25 – 42  (.06 - .11 lbs. metallic copper/100 gal)	Begin applications at bud break with following applications throughout the season, depending on disease severity.  Foliage injury may occur on copper sensitive varieties such as Concord, Delaware, Niagara and Rosette.	<b>For single applications:</b> Do not exceed .22 lbs. metallic copper/A. (88 fl. oz. Instill-O/A)  <b>Annually:</b> Do not exceed 20.0 lbs. metallic copper/A  <b>Minimum re-treatment interval:</b> 3 days

†Instill-O contains 0.32 lbs. of metallic copper per gallon of product

### **USE DIRECTIONS FOR CHEMIGATION**

The following precautions must be observed when using this product in any type of irrigation system.

Apply this product only through overhead sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, big gun, solid set, or hand move; drip (trickle); or flood (basin) irrigation system(s). Do not apply this product through any other type of irrigation equipment.

Do not apply this product through any system using aluminum parts or components as damage to the system may occur.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension specialists, equipment manufacturers or other experts.

Do not connect an irrigation system, (including greenhouse system), used for pesticide application to a public water system unless the pesticide safety devices for public water systems are in place.

A person with knowledge of the chemigation system and responsible for its operation, or under supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Agitation in the pesticide supply tank is recommended at least once every 2 hours and may be more frequent or continuous.

The dosage rate should not be diluted by additional water applied as irrigation. Apply the prescribed rate and allow foliar surfaces to dry before irrigating. If irrigation precedes INSTILL®-O application, allow foliage to drip off before beginning the application.

To optimize dilution of the pesticide in the supply tank, first add INSTILL®-O to a small amount of water, room temperature or warmer, and mix gently until evenly dispersed.

## POSTING

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes, or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corner of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

## SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water system means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

## REQUIREMENTS FOR SPRINKLER & DRIP CHEMIGATION

Observe all the requirements in the USE DIRECTIONS FOR CHEMIGATION section and the following additional requirements:

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment

## REQUIREMENTS FOR FLOOD CHEMIGATION

Observe all the requirements in the USE DIRECTIONS FOR CHEMIGATION section and the following additional requirements.

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from back flow if water flow stops.

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

# INSTILL-

## BACTERICIDE<sup>^</sup> AND FUNGICIDE

### ACTIVE INGREDIENT

Copper Sulfate Pentahydrate\*

(CAS# 7758-99-8) ..... 12.58%

OTHER INGREDIENTS ..... 87.42%

Total ..... 100.00%

\*Copper as Metallic ..... 3.1%

Contains 1.28 lbs. active ingredient and 0.32 lbs of metallic copper per gallon of product.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION AVISO**

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.)

### NET CONTENTS: 2.5 GALLONS

E.P.A. REG. NO. 49538-7-92632  
E.P.A. EST. NO. 49538-MN-001  
^ Non-public health bacteria

SEE ATTACHED LABEL BROCHURE  
FOR DIRECTIONS FOR USE AND  
PRECAUTIONARY STATEMENTS

DO NOT FREEZE



### FIRST AID

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

#### 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 Swallowed:

- Call a 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 a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

#### 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.

**Note to Physician:** Skin symptoms may be similar to copper allergic reactions and can be treated similarly, including the use of steroid containing lotion. If swallowed, probable mucosal damage may contraindicate the use of gastric lavage.

For medical emergencies, call the Poison Control Centers at 1-800-222-1222.

#### PHYSICAL OR CHEMICAL HAZARDS

For spills, you may contact CHEMTREC at 1-800-424-9300

#### Distributed by:

**S.T.BIOLOGICALS**

P.O. Box 385370 Minneapolis, MN 55438  
1-800-356-8733