PHYTON® 27

BACTERICIDE + FUNGICIDE

ACTIVE INGREDIENT

Copper Sulphate Pentahydrate*(CAS# 7758-99-8)
.....21.36%
INERT INGREDIENTS.....78.64%
100.00%

*Copper as Metallic.....5.4%

Contains 2.16 lbs. active ingredient and 0.55 lbs of metallic copper per gallon of product.

KEEP OUT OF REACH OF CHILDREN
DANGER PELIGRO

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

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 on Skin or Clothing:	- Take off contaminated clothing. - Rinse skin immediately with plenty of water for 15-20 minutes. - Call a poison control center or doctor for treatment advice.
If Swallowed:	- Call 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 by a poison control center or doctor. - Do not give anything by mouth to an unconscious person.
If Inhaled:	- Move person to fresh air. - If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable mouth-to-mouth if possible. - Call a poison control center or doctor for further 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 emergency information concerning this product, call the National Pesticides Information Center at 1-800-858-7378, 7:00 AM to 3:30 PM Pacific Time (PT), Monday to Friday. During other times, call the poison control center at 1-800-222-1222.

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. To the extent consistent with applicable law crop injury, lack of performance or other unintended consequences may result because of such factors as use of the product contrary to label instructions, 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. Phyton-27® 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)

Precautionary Statements

DANGER. Corrosive. Causes irreversible eye damage. Causes skin irritation. Harmful if swallowed. Harmful if absorbed through the skin. Do not get in eyes, on skin or on clothing.

Personal Protective Equipment (PPE)

Any waterproof materials are chemical resistant to this product. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart. Mixers, loaders, applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants,
- Chemical-resistant footwear plus socks,
- Chemical-resistant gloves,
- Goggles or faceshield.

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 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.

PHYTON CORPORATION
Phyton Corporation
P.O. Box 385370
Minneapolis, MN 55438
800-356-8733

E.P.A. REG NO. 49538-2
E.P.A. REG NO. 49538-MN-001

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 washwaters or rinsate.

PHYSICAL & CHEMICAL HAZARDS

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

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. Do not use around electrical equipment. 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. Notify the workers by warning them orally.

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, and
Protective eyewear

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-containing products 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 sulfate pentahydrate.
- Workers are informed orally, in a manner they can understand:.
  - that residues in the treated area may be highly irritating to their eyes,
  - that they should take precautions, such as refraining from rubbing their eyes, to keep the residues out of their eyes,
  - that if they do get residues in their eyes, they should immediately flush their eyes with the eyeflush container or eyeflush station that is located with the decontamination supplies, and
  - how to operate the eyeflush container or eyeflush station.

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 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 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 if available or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PRODUCT INFORMATION

Phyton-27® is a systemic bactericide & fungicide that when mixed with the appropriate volume of water, provides systemic, preventative and curative activity on a broad-spectrum of bacterial and fungal diseases listed on this label. Phyton-27® will not leave any visible residue when mixed and applied according to the USE DIRECTIONS listed on this label. Phyton-27® may be applied by spray, drench, dip or injection. Equipment must be calibrated before use.

USE DIRECTIONS

1. Shake well before mixing with water. Use within 48 hours after mixing.
2. Adjust pH of solution to 5.5 - 6.5.
3. Phyton-27® 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.
4. Phyton-27® can be used up to the time of harvest.
5. Do not apply this product through any system using aluminum parts or components as damage to the system may occur.
6. Compatible with most fungal and insecticidal biopesticides when applied at least 2 days before or after application of the biopesticide.
7. Do not tank mix Phyton-27® with B-NINE and do not apply Phyton-27® within seven (7) days either before or after applications of B-NINE, as burning of leaves may result.
8. Do not tank mix Phyton-27® with strongly acidic compounds such as Aliette, and do not apply Phyton-27® within 14 days either before or after applications of such products.
9. Phytotoxicity: Phyton-27® has been tested on a wide variety of herbaceous and woody ornamental plants without phytotoxicity symptoms. However, because it is not possible to test all ornamental 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.
10. Crop injury may occur if applied to foliage under certain environmental conditions such as hot or prolonged moist periods.
11. Liquid equivalents: one fluid ounce = 29.5 milliliters = 6 teaspoons.
12. Apply 100 gallons of Phyton-27® use solution per acre of affected area to be treated depending on the size of the crop, disease to treat, and application equipment.

SEE ATTACHED BOOKLET FOR DIRECTIONS OF USE

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and the method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

DROPLET SIZE: Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

WIND SPEED: Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 250 feet downwind.

TEMPERATURE INVERSIONS: If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

OTHER STATE AND LOCAL REQUIREMENTS: Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

EQUIPMENT: All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

FOR AERIAL APPLICATION: The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

FOR GROUNDBOOM APPLICATION: Do not apply with a nozzle height greater than 4 feet above the crop canopy.

SPECIFIC DIRECTIONS FOR SPRAY APPLICATIONS

Greenhouse, Field, Landscape and Interior: Annual & Perennial Bedding Plants, Potted Flowering Crops, Tropical Foliage, Cut Flower Crops & Nursery Crops.

Spray for thorough foliage coverage. Re-spray rates and intervals vary with severity of disease and adversity of environmental conditions. Lower rates may be as effective as higher rates and should be tried first. Routine preventive programs may be maintained at the lower rates.

Rates above 15 fl. oz. Phyton-27® per 100 gallons water may damage some tender, open blooms. Rates up to 70 fl. oz. Phyton-27® per 100 gallons water can be used for powdery mildew on roses if no blooms are open. Use of low volume equipment is effective against Botrytis and not effective against established powdery mildew and Xanthomonas infections.

Applications on actively growing tissue may be more effective than applications on dormant tissue.
For a single application, do not exceed 2.0 lbs metallic copper/A. Do not exceed 20 lbs metallic copper/A/year. Phyton-27® contains 0.55 lbs of metallic copper per gallon of product. The minimum retreatment interval is 7 days.

For a single application to Easter lilies, do not exceed 2.5 lbs metallic copper/A. Do not exceed 75 lbs metallic copper/A/year. The minimum retreatment interval is 7 days. Do not apply any additional copper pesticide to this land for 36 months for field grown Easter lilies.

Annual & Perennial Bedding Plants

CROP	PATHOGEN	RATE (fl. oz./100 gal)
Alyssum	Botrytis	20-Oct
	Downy Mildew	20-Oct
Argyranthemum*	Botrytis	13 - 20
	Erwinia	13 - 20
Begonia	Botrytis	13 - 20
	Powdery Mildew	15 - 30
	Xanthomonas	15 - 30
Chrysanthemum*	Botrytis	15 - 25
	Pseudomonas	15 - 25
Daylily	Botrytis	13 - 20
	Erwinia	15 - 25
	Powdery Mildew	15 - 25
Dusty Miller	Alternaria	15 - 25
	Botrytis	13 - 20
Fuchsia	Botrytis	13 - 20
	Powdery Mildew	13 - 25
Geranium	Botrytis	15 - 20
	Rust (preventive)	15 - 20
	Rust (therapeutic)	25 - 40
	Pseudomonas (preventive)	15 - 45
	Pseudomonas (therapeutic)	50
	Xanthomonas (preventive)	15 - 45
	Xanthomonas (therapeutic)	50
Hollyhock*	Botrytis	13 - 20
	Powdery Mildew	15 - 25
	Rust	15 - 25

(continue)

(continue)

Annual & Perennial Bedding Plants

CROP	PATHOGEN	RATE (fl. oz./100 gal)
Hosta*	Botrytis	15 - 20
	Erwinia	15 - 30
Impatiens	Alternaria	15 - 35
	Botrytis	13 - 15
	Powdery Mildew	13 - 25
	Pseudomonas	15 - 35
New Guinea Impatiens	Botrytis	13 - 15
	Powdery Mildew	13 - 20
Pachysandra*	Botrytis	13 - 20
	Volutella	13 - 25
Pansy	Botrytis	13 - 20
	Cercospora	15 - 20
	Phytophthora	13 - 20
Periwinkle	Botrytis	13 - 20
	Phytophthora	15 - 20
Ranunculus*	Bacterial Blight	13 - 20
	Botrytis	13 - 20
	Powdery Mildew	15 - 25
Snapdragon	Botrytis	13 - 20
	Downy Mildew	13 - 25
	Rust	13 - 25
Zinnia	Botrytis	13 - 20
	Powdery Mildew	13 - 25
	Pseudomonas	13 - 25
	Xanthomonas	13 - 25
Additional Annuals & Perennials:*	Botrytis	13 - 20
	Downy Mildew	15 - 30
	Powdery Mildew	15 - 25
	Pseudomonas	15 - 25

Anenome	Aster	Bacopa	Baptisia	Carnation
Coleus	Columbine	Coneflower	Coreopsis	Cuphea
Dahlia	Daisy	Dianthus	Delphinium	Echinacea
Ipomoea	Lantana	Lead Plant	Liatris	Lobelia
Lupine	Marigold	Monarda	Ornamental Grasses	Pentas
Petunia	Phlox	Poppy	Prairie Smoke	Primrose
Pulmonaria	Rudbeckia	Salvia	Scabiosa	Sedum
Silphium	Verbena	Veronica	Vinca	Viola

*Not approved for use in California.

POTTED FLOWERING CROPS

CROP	PATHOGEN	RATE (fl. oz./100 gal)
African Violet	Botrytis	13 - 15
	Powdery Mildew	13 - 15
Azalea	Botrytis	13 - 25
	Colletotrichum	15 - 25
	Cylindrocladium	15 - 35
Calla lily	Botrytis	13 - 20
	Erwinia	13 - 20
Chrysanthemum	Botrytis	15 - 25
	Crown Gall *	15 - 25
	Erwinia	15 - 25
	Powdery Mildew	15 - 25
Cineraria *	Botrytis	13 - 20
Cyclamen	Botrytis	15 - 20
	Erwinia	15 - 20
Daffodil *	Botrytis	13 - 20
Easter lily	Botrytis	13 - 20
Exacum *	Botrytis	13 - 20
Gerbera	Botrytis	15 - 25
	Powdery Mildew	15 - 25
Gloxinia *	Botrytis	13 - 20
Holiday Cactus *	Botrytis	13 - 25
	Erwinia	15 - 50
	Pseudomonas	15 - 50
	Xanthomonas	15 - 50
Hyacinth *	Botrytis	13 - 20
Hydrangea	Botrytis	13 - 25
	Powdery Mildew	13 - 25
Iris *	Botrytis	13 - 20
	Erwinia	15- 20
Kalanchoe	Botrytis	15 - 25
	Erwinia	15 - 35
	Powdery Mildew	15 - 35
Lisianthus	Botrytis	13 - 20
Orchid	Botrytis	13 - 15
	Erwinia	15 - 40
	Pseudomonas	15 - 40
	Xanthomonas	15 - 40
Poinsettia	Botrytis	15 - 20
	Scab	20 - 35
	Powdery Mildew (preventive)	15 - 20
	Powdery Mildew (therapeutic)	20 - 35
	Erwinia (preventive)	15 - 20
	Erwinia (therapeutic)	20 - 35
	Xanthomonas (preventive)	15 – 20
	Xanthomonas (therapeutic)	20 – 35
Primula	Botrytis	13 – 20
	Erwinia	15 – 20
Rose bush	Black Spot (preventive)	15 – 30
	Black spot (therapeutic)	35 – 50
	Botrytis (preventive)	15 – 20
	Botrytis (therapeutic)	25 – 50
	Cylindrocladium (preventive)	15 - 20
	Cylindrocladium (therapeutic)	25 - 50
	Downy Mildew (preventive)	15 - 20
	Downy Mildew (therapeutic)	25 - 50
	Powdery Mildew (preventive)	15 - 30
	Powdery Mildew (therapeutic)	35 - 50
Tulip	Botrytis	13 - 20

*Not approved for use in California.

NURSERY CROPS

CROP	PATHOGEN	RATE (fl. oz./100 gal)
Azalea	Anthracnose	15 - 25
	Botrytis	13 - 25
	Cylindrocladium	15 - 35
	Phytophthora	20 - 25
Buxus	Volutella	15 - 25
Cherry Laurel *	Xanthomonas	20 - 35
Conifers *	Botrytis	13 - 25
	Diplodia	10 - 13
Crape Myrtle *	Botrytis	13 - 25
	Powdery Mildew	20 - 30
Dogwood	Anthracnose	20 - 30
	Botrytis	13 - 25
	Powdery Mildew	20 - 30
Elm *	Erwinia	20 - 40
Euonymus	Anthracnose	15 - 30
	Botrytis	13 - 25
Hawthorn	Cedar Apple Rust	15 - 25
Hydrangea	Botrytis	13 - 25
	Cercospora	15 - 25
	Powdery Mildew	13 - 25
Indian Hawthorn	Botrytis	13 - 25
	Entomosporium	15 - 30
Japanese Maple	Botrytis	13 - 25
	Verticillium	15 - 25
	Pseudomonas	15 - 25
Juniper	Phomopsis	13 - 25
Leyland Cypress	Cercospora	13 - 25
Lilac	Botrytis	13 - 25
	Pseudomonas	13 - 25
	Powdery Mildew	15 - 25
Nandina *	Xanthomonas	15 - 25
Oak *	Anthracnose	35
	Botrytis	13 - 25
Oak Trunk Spray *	Phytophthora	30 - 45
Photinia *	Entomosporium	15 - 30
Pinus *	Dothistroma	15 - 25
Rosaceae: Cotoneaster, Malus, Mountain Ash, Ornamental Crabapple, Ornamental Pear, Pyracantha	Apple Scab	40
	Botrytis	13 - 25
	Fireblight	20 - 40
	Pseudomonas	15 - 35
Rhododendron	Botrytis	13 - 25
	Cylindrocladium	15 - 35
	Phytophthora	20 - 35
Rose	See Flowering Potted Crops for Rates	
Ruscus *	Pseudomonas	13 - 25
Sycamore *	Anthracnose	35
	Botrytis	13 - 25
Viburnum *	Botrytis	13 - 25
	Cercospora	15 - 25
	Phytophthora	20 - 25
Additional Nursery Plants: *	Botrytis	13 - 25
	Powdery Mildew	20 - 25
	Pseudomonas	15 - 35
	Rhizoctonia	13 - 25

Shrubs/Vines *

Barberry	Bougainvillea	Clematis	Cornus	Cotinus
Forsythia	Gardenia	Holly	Paeonia	Philadelphus
Physocarpus	Potentilla	Ribes	Rosa	Spirea
Weigela	Wisteria			

Deciduous *

Acer	Amelanchier	Betula	Celtis	Cercis
Crataegus	Ficus	Fraxinus	Ginkgo	Gleditsia
Magnolia	Malus	Populus	Prunus	Pyrus
Tilia				

Conifers *

Abies	Juniper	Picea	Pinus	Pittosporum
Pseudotsuga	Taxus	Thuja	Tsuga	

Non-Bearing Fruit Trees and Vines

(Do not apply to trees that will bear fruit within one year)

Apple	Pear *	Grape	Citrus *

*Not approved for use in California.

CUT FLOWER CROPS		
CROP	PATHOGEN	RATE (fl. oz./100 gal)
Alstromeria*	Botrytis	13 - 15
Carnation*	Botrytis	13 - 20
Chrysanthemum*	Botrytis	15 - 25
Delphinium*	Botrytis	13 - 15
Freesia*	Botrytis	13 - 15
Gerbera	Botrytis	15 - 25
Gladiola	Botrytis	13 - 15
Lisianthus	Botrytis	13 - 20
Orchid	Botrytis	13 - 15
Rose	Botrytis	15 - 50
Snapdragon*	Botrytis	13 - 20
Sweetpea*	Botrytis	13 - 15

*Not approved for use in California.

TROPICAL FOLIAGE CROPS		
CROP	PATHOGEN	RATE (fl. oz./100 gal)
Dracaena	Rust	15 - 25
Ferns*	Botrytis	13 - 20
	Erwinia	13 - 20
Hibiscus	Botrytis	13 - 25
	Pseudomonas	15 - 25
	Xanthomonas	15 - 25
Ivy	Botrytis	13 - 20
	Xanthomonas	15 - 50
Palms*	Botrytis	13 - 20
	Erwinia	13 - 20
	Pseudomonas	13 - 25
	Xanthomonas	13 - 25
Spathiphyllum	Botrytis	13 - 25
	Cylindrocladium	15 - 25
	Phytophthora	15 - 30
Tropical Foliage (general)	Botrytis	13 - 25
	Powdery Mildew	13 - 25
	Erwinia	20 - 50
	Pseudomonas	20 - 50
	Xanthomonas	20 - 50

*Not approved for use in California.

SPECIFIC DIRECTIONS FOR SPRAY AND DIP APPLICATIONS DURING PROPAGATION

When harvesting cuttings on site, spray or fog stock plants 1 to 2 days prior to taking cuttings. Spray cuttings to drench again at same rate 2 to 3 days after sticking in rooting media, or dip cuttings for a few seconds prior to sticking.

When using rooted, callused, or unrooted cuttings shipped in, spray cuttings to drench 2 to 3 days after planting or sticking, or dip cuttings for a few seconds prior to sticking. Under severe disease pressure, repeat in 7 to 10 days. pesticide to this land for 36 months for field grown Easter lilies.

HERBACEOUS & WOODY STOCK PLANTS AND CUTTINGS		
CROP	PATHOGEN	RATE (fl. oz./100 gal)
Azalea	Botrytis	13 - 25
	Cylindrocladium	15 - 35
Chrysanthemum	Botrytis	15 - 25
	Erwinia	15 - 25
Geranium	Botrytis	15 - 20
	Xanthomonas	15 - 50
Holiday Cactus*	Botrytis	13 - 25
	Erwinia	15 - 20
Hydrangea	Botrytis	13 - 25
	Xanthomonas	15 - 25
Lavender*	Botrytis	13 - 20
Mini-Rose	Botrytis	15 - 20
	Cylindrocladium	15 - 50
Poinsettia	Botrytis	15 - 20
	Erwinia	20 - 35
	Scab	20 - 35
	Xanthomonas	20 - 35
Tropical Foliage	Botrytis	13 - 25
	Cylindrocladium	15 - 25
	Erwinia	20 - 50

*Not approved for use in California.

POST-HARVEST DIP APPLICATIONS ON CUT FLOWER CROPS Dip cut flowers/buds for a few seconds soon after cutting.		
CROP	PATHOGEN	RATE (teaspoons/5 gal)
Alstromeria	Botrytis	3/4- 1 tsp.
Carnation*	Botrytis	2 - 3 tsp.
Chrysanthemum*	Botrytis	2 - 3 tsp.
Delphinium*	Botrytis	1- 2 tsp.
Freesia	Botrytis	3/4 - 1 tsp.
Gerbera*	Botrytis	2 - 3 tsp.
Gladiola	Botrytis	1.5 - 3 tsp.
Orchid*	Botrytis	2 - 3 tsp.
Rose	Botrytis	3 - 3 3/4 tsp.
Snapdragon*	Botrytis	1 - 2 tsp.
Sweetpea	Botrytis	1 - 2 tsp.

*Not approved for use in California.

BULB APPLICATIONS Dip bulbs for 5 minutes, or spray bulbs to drip, then allow to dry before planting		
CROP	PATHOGEN	RATE (fl. oz./100 gal)
Calla Lily	Erwinia	30

SPECIFIC DIRECTIONS FOR SOIL DRENCH APPLICATIONS Greenhouse, Field, Landscape & Interior		
CROP	PATHOGEN	RATE (fl. oz./100 gal)
African Violet	Phytophthora	13 - 20
Aster	Phytophthora	20 - 30
Azalea	Cylindrocladium	20 - 35
	Rhizoctonia	
Calla Lily *	Erwinia	15 - 30
Cyclamen	Erwinia	15
Ferns	Rhizoctonia	15 - 30
Geranium	Botrytis	20 - 35
Hosta	Erwinia	15 - 25
Impatiens	Phytophthora	20 - 35
Japanese Maple	Verticillium	25
Pansy	Phytophthora	15 - 25
	Pythium	
Periwinkle	Phytophthora	15 - 20
Pittosporum	Rhizoctonia	15 - 20
Poinsettia	Phytophthora	15 - 25
	Rhizoctonia	20 - 35
Rhododendron	Rhizoctonia	20 - 35
Rose	Black Spot	20 - 35
	Cylindrocladium	
Spathiphyllum	Cylindrocladium	20 - 35
	Phytophthora	
Vinca minor*	Rhizoctonia	15 - 25

*Not approved for use in California.

Shade & Ornamental Trees

SPECIFIC DIRECTIONS FOR TRUNK INJECTION APPLICATIONS

ELM: Dutch elm disease and Cankers (Botryodiplodia, Cytospora, Tubercularia).
Inject once during the growing season for control or prevention. Injection sites should be six inches or less above the soil line. Injection should not be done against Dutch elm disease if the elm appears more than 20% diseased or if the disease may have entered through root grafts from another diseased tree or stump. Remove dead and diseased limbs within 10 days after treatment.

Use the red oak dosage for red (slippery) elm.

Elm size (diameter at breast ht.)	Phyton-27 Rate (fl. oz.)	Water (gal)
12 to 19 inches dbh	2	2
20 to 26 inches dbh	3	3
27 to 33 inches dbh	4	4
34 to 40 inches dbh	5	5
41 to 48 inches dbh	6	6

OAKS and SYCAMORE*: Oak Wilt, Phytophthora, Anthracnose.
On red oak, use preventively only. Follow injection directions for elm, taking care that holes are not too deep on shallow-barked oaks. Treatment is best in the month before fall color in northern climates.

Phyton-27 Rate (fl. oz.)			
Tree size/variety (diameter at breast ht.)	Red Oaks, Red Elm	Oaks, Sycamore	Water (gal)
12 to 19 inches dbh	1	1.5	3
20 to 26 inches dbh	1.5	2	4.5
27 to 33 inches dbh	2	3	6
34 to 40 inches dbh	2.5	3.5	7.5
41 to 48 inches dbh	3	4.5	9

*Not approved for use in California.

SHADE TREE CANKERS: **Cytospora** on GREEN ASH, PAPER BIRCH, COTTONWOOD; Botryodiplodia and **Cytospora** on HACKBERRY, SILVER MAPLE; **Nectria** on HONEY LOCUST.
Follow injection directions for elm.

Tree size (diameter at breast ht.)	Phyton-27 Rate (fl. oz.)	Water (gal)
10 inches dbh	1.3	1 gallon
20 inches dbh	2.5	2 gallons

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 nonuniform 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 knowledgeable 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 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 Phyton-27® application, allow foliage to drip off before beginning the application.

To optimize dilution of the pesticide in the supply tank, first add Phyton-27® to a small amount of water, room temperature or warmer, and mix gently until evenly dispersed

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.

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.

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, inpatient 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.

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.