

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Keep out of reach of children. Corrosive. Causes severe eye and skin damage. Do not get in eyes, on skin, or on clothing. Harmful if swallowed. Avoid contamination of food.

#### Personal Protective Equipment (PPE):

Applicators and other handlers (other than mixers and loaders) must wear: Long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and protective eyewear.

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, 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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

#### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not store on side. Do not reuse empty container.

#### PESTICIDE DISPOSAL

Pesticide wastes are acutely hazardous. Improper disposal of pesticide spray or mixture of this pesticide 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 Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### CONTAINER DISPOSAL

Do not reuse container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.



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Manufactured By:  
**MARIL PRODUCTS, INC.**

620 South B Street, Suite A, Tustin, CA 92780 • (714) 544-7711



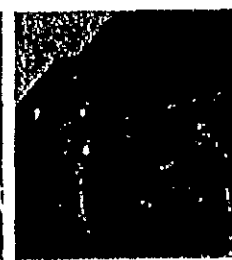
## GREENHOUSE DISINFECTANT

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#### ACTIVE INGREDIENTS

n-alkyl (60% C <sub>14</sub> , 30% C <sub>16</sub> , 5% C <sub>12</sub> , 5% C <sub>18</sub> ) dimethyl benzyl ammonium chloride	10%
n-alkyl (60% C <sub>12</sub> , 32% C <sub>14</sub> ) dimethyl ethylbenzyl ammonium chloride	10%
INERT INGREDIENTS	80%
	100%

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 this label, find someone to explain it to you in detail.)

#### STATEMENT OF PRACTICAL TREATMENT

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse. If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution, or - if these are not available - drink large quantities of water. Avoid alcohol. Call a physician immediately.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

See left panel for additional precautionary statements.

EPA Est. #40873 CA-01 NET CONTENTS 32 FL. OZ. (1 QT.) EPA Reg. #55364-5

## 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. Refer to "INSERT #1" supplemental labeling under "AGRICULTURAL USE REQUIREMENTS" in the Directions for Use section for information about this standard.

PHYSAN 20 is a general Bactericide, Fungicide, Virucide and Algicide for hard inanimate non-porous surfaces. It will help to control cross-contamination of fungal, bacterial and viral plant pathogens and algae. PHYSAN 20 has been designed for horticultural applications in domestic and commercial greenhouses where cross-contamination can occur.

#### GENERAL CONTROL OF PLANT PATHOGENS ON INANIMATE HARD SURFACES

Pre-clean all surfaces prior to applying disinfection solution for control of plant pathogens on inanimate hard surfaces.

Apply PHYSAN 20 to floors, walls, benches, tools, pots, and flats with a cloth, mop, mechanical device or by immersion so as to thoroughly wet all surfaces. All hard non-porous inanimate surfaces must remain thoroughly wet for ten minutes for disinfection. Fresh solution should be prepared daily or when solution becomes visibly dirty.

#### PLANT PATHOGENS CONTROL

To help control the spread of pathogens on hard non-porous surfaces, add 1/4 fluid ounce (one tablespoon) PHYSAN 20 per one gallon of water. The activity of PHYSAN 20 has been evaluated and found to be effective in reducing the spread of bacterial, fungal, and viral organisms such as:

- Pseudomonas catleyae - causes crown rot on Orchids
- Erwinia cypripedii - causes brown rot on Orchids
- Erwinia caratovora - causes soft rot on Orchids
- Agrobacterium tumefaciens - causes crown gall on Orchids, Roses, and Grape Myrtle
- Enterobacter agglomerans - causes brown spot on Orchids, Roses, and Grape Myrtle
- Botrytis cinerea - causes petal blight on Orchids, Roses, and Grape Myrtle

NOT INTENDED FOR USE IN GREENHOUSES WHERE FOOD CROPS ARE GROWN. FOR ADDITIONAL USE APPLICATIONS, INCLUDING USE ON PLANTS, REFER TO "INSERT #1".



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NOT APPROVED FOR USE ON PLANTS IN CALIFORNIA

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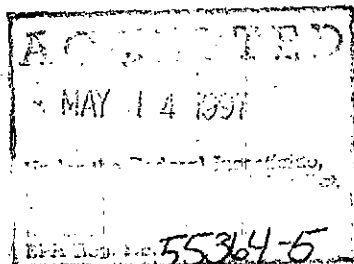
USE: 1 tablespoon PHYSAN 20 concentrate in 4 gallons of water.

Snapdragons - Anthracnose, Downy Mildew, Phyllosticta Blight, Powdery Mildew, Rust, Stem Rot, Wilts.

Spray with PHYSAN 20 solution when symptoms appear. Spray upper and lower sides of leaves until thoroughly wet, every 7-10 days. Collect and burn the tops in the Fall.

USE: 2 leaspoons of PHYSAN 20 concentrate in 1 gallon of water.

DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM



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DISINFECTANT • SANITIZER • DEODORIZER  
FUNGICIDE • ALGAEICIDE  
VIRUCIDE

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EPA REG. #55364-5



**MARIL PRODUCTS, INC.**

620 South B Street, Suite A, Tustin, California 92780  
(714) 544-7711

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## Directions for Use

### 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). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls, waterproof gloves, shoes plus socks and protective eyewear.

### USAGE CONVERSION TABLE

TABLESPOONS	OUNCES
1	1/2
2	1
3	1 1/2
4	2

This chart illustrates tablespoons and their ounce equivalents. One tablespoon is equal to three (3) teaspoons.

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### HARD SURFACES/EXTERIORS

#### Algae-Walkways

For heavy infestation, spray or swab. Let stand for an hour or more. Brush and wash away dead algae. Soak area again with PHYSAN 20 solution. Do not rinse. This product will inhibit the growth of algae on walkways. Allow to dry on surface, and repeat application when algae growth returns.

USE: 1 tablespoon PHYSAN 20 concentrate in 1 gallon of water.

#### Algae Control - Greenhouse Glass

Spray or swab surfaces. Let stand for one hour or more or until the algae visibly begins to change to a lighter color. Wash off dead algae with water. Spray clean surfaces again with the PHYSAN 20 solution.

USE: 1 teaspoon PHYSAN 20 solution per gallon of water.

#### Disinfecting Cutting Tools

Soak cutting edge of tool for 10 minutes in PHYSAN 20 solution before use to kill such diseases as Botrytis, Root Rot, Stem Rot and Tobacco Mosaic Virus (TMV). Use wet tool on plants. Dry and oil tools at the end of work.

Use: 1 teaspoon PHYSAN 20 concentrate in 1 quart water.

#### Mildewstat - Table Tops, Floors

To control mold and mildew on pre-cleaned hard, non-porous surfaces (such as floors, walls, table tops). Apply solution with a cloth, mop or sponge, making sure to wet all surfaces completely. Let air dry. Prepare a fresh solution for each use. Repeat application at

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weekly intervals or when mildew growth reappears.

USE: 3 tablespoons of PHYSAN 20 concentrate in 2 gallons of water.

#### Pots, Flats and Flower Buckets

Used pots and flats should be brushed or washed, then soaked in PHYSAN 20 solution for 10 minutes before using to kill such diseases as Anthracnose, Blight Crown Rot, Mildew, Root Rot and Rusts.

USE: 1 tablespoon PHYSAN 20 concentrate in 1 gallon of water.

#### Work Area and Benches

Before each work period, spray or swab working surfaces. Spray or swab again after each plant is completed to kill such diseases as Botrytis, Crown Rot, Downy Mildew, Root Rot, etc.

USE: 1 tablespoon PHYSAN 20 concentrate in 1 gallon of water.

#### ADULT PLANTS/HOUSE PLANTS

##### House Plants

To control algae and cross contamination in terrariums, bubbles, etc., wipe inside of glass with paper towel dampened with PHYSAN 20 solution.

USE: 1 teaspoon PHYSAN 20 concentrate in 1 gallon of water.

#### BIRD BATHS/SWIMMING POOLS/FOUNTAINS

##### Algae Control for Bird Baths

DO NOT USE WITH FISH!

Clean to remove algae growth prior to filling bird bath

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by spraying all exposed surfaces with PHYSAN 20 solution. Allow to air dry; brush off the dead algae.

USE: 2 tablespoons of PHYSAN 20 concentrate in 2 gallons of water to clean.

#### Algae Control - Swimming Pools

Initial dose should be 2 quarts PHYSAN 20 per 50,000 gallons of water (or 13 ounces per 10,000 gallons of water) followed by cleaning out settled algae next day and retreatment at the same dosage. This is repeated until the pool is clear of visible algae. Then 1 pint of PHYSAN 20 per 50,000 gallons of water (or 3 1/5 ounces per 10,000 gallons of water) is used every 5-7 days to maintain control. Apply Physan along edges of the pool. After adding the PHYSAN 20, wait 30 minutes before using the pool to allow PHYSAN 20 to be distributed evenly throughout the pool. At the beginning of the swimming season or after a storm, remove branches, leaves and other foreign material before treating the pool with PHYSAN 20.

#### Evaporative Coolers - Algae, Fungus, and Odors

Controls algae and slime-forming fungi on cooler pads and certain fungal plant pathogens that may carry over in the cooler as well as bacterial odors.

USE: 1 teaspoon PHYSAN 20 concentrate in 15 gallons of water every other week.

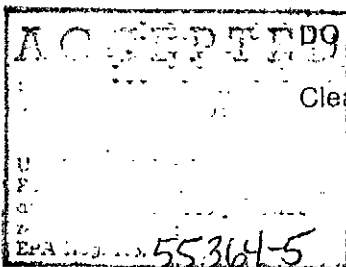
#### SEEDS/SEEDLINGS/CUT FLOWERS

##### Cut Flowers in containers, tubes, and decorative vases - Bacterial Stem Plugging.

To eliminate stem plugging (which restricts uptake of water) and to control bacteria and fungi (which create ethylene gas, a cause of petal drop), flower spikes should be hardened by keeping the stems in

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PHYSAN 20 solution during harvesting, storage and shipping.

USE: 1 teaspoon of PHYSAN 20 concentrate in 1 gallon of water.

**Plant Cuttings - Begonia, Chrysanthemum, Fuchsia, and Geranium.**

For controlling Crown Gall, Gray Mold Leaf Spots, and Powdery Mildew, soak completely immersed cuttings 2-5 minutes in PHYSAN 20 concentrate in 1 gallon of water. Plant in compost completely saturated in PHYSAN 20 solution.

USE: 2 teaspoons of PHYSAN 20 concentrate in 1 gallon of water.

**Seeds and Seedlings - Damping Off**

Treat seeds and seedlings by soaking in a solution of 1 1/2 teaspoons of PHYSAN 20 concentrate in 1 gallon of water for 5 minutes. Fill the flask containing the seed or seedlings with enough PHYSAN 20 solution to completely cover the seeds/seedlings. Drain the PHYSAN 20 solution off the seeds/seedlings before planting. Use a fresh solution of PHYSAN 20 for each flask.

**Seedlings - Damping Off (ornamental plants only)**

Make a solution of 1 1/2 teaspoons of PHYSAN 20 concentrate in 1 gallon of water. Soak seedlings in PHYSAN 20 for 5 minutes. Use a soak container large enough to completely immerse one flask of seedlings at a time. Change the solution daily or more often if solution becomes visibly dirty.

If a garden soil is used for planting seedlings,

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completely saturate the soil in PHYSAN 20. Place the soil in a pot or tray and add enough PHYSAN 20 solution to completely cover the soil. Let the solution drain through the soil or pour off excess.

USE: 1 1/2 teaspoons of PHYSAN 20 concentrate in 1 gallon of water.

PHYSAN 20 solution is effective in stopping the spread of damping off when sprayed on seedlings. Spray seedlings so that all surfaces are thoroughly wet.

USE: 2 tablespoons of PHYSAN 20 concentrate in 3 gallons of water or 2 tsp. PHYSAN 20 concentrate in 1 gallon of water.

**Seedlings - Downy Mildew (Ornamental Plants only)**

Most common on seedlings. The fungus sporulates on the lower surface of leaves as a white, sparse downy growth. The disease can cause the death of aerial plant parts. Spray seedlings so that all surfaces are thoroughly wet with Physan 20 solution at 5-day intervals until under control.

USE: 2 tablespoons of PHYSAN 20 concentrate in 3 gallons of water.

**TREES/LAWN/TURFGRASS**

**Flowering Dogwood (cornus florida) - Anthracnose, Leaf Blights, Leaf Spots**

Small circular, dirty yellow spots with reddish purple margins on flowers, leaves and young shoots. Spray 4 times -- when flower buds begin to open; as soon as flower bracts have fallen; 4 weeks later; and in late Summer after flower buds are well formed. If possible, spray just before rainy periods.

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USE: 2 tablespoons of **PHYSAN 20** concentrate in 3 gallons of water.

**Trees (Ash, Sycamore, etc.) Anthracnose**

Spray upper and underside of leaves and twigs until thoroughly wet. A large tree requires 50-60 gallons of spray per treatment for adequate coverage. Treat tree with three applications; as buds start to swell in April; as leaves start to expand; as leaves are about 3/4 grown.

USE: 2 tablespoons **PHYSAN 20** concentrate in 3 gallons of water.

**Lawn - Grass - Dichondra - for Control of Certain Fungal Diseases and Rusts**

1 pint of concentrate diluted treats 6,400 square feet. Controls the following fungal diseases: Algae, Dollar Spot, Fading-Out, Fairy Ring, Leaf Spot, Rust, Sclerotium rolfsii, Toad Stools. Spray with **PHYSAN 20** solution at a rate of 5 gallons solution per 1,000 square feet of turf. Be sure all surfaces or grass are treated and the area is thoroughly soaked with solution. When disease reappears, repeat application. Do not graze treated areas or feed clippings to livestock.

USE: 1 tablespoon **PHYSAN 20** concentrate in 1 gallon of water.

**SPECIFIC PLANT APPLICATIONS**

**Aucuba, Dahlia, Fuchsia, Geranium, Gladiolus, Peony, Pieris - Botrytis, Downy Mildew, Gray Mold, and Rusts**

Downy mildew primarily affects new growth with symptoms of soft decay of flowers, leaves or stems followed by a covering of downy gray mold. Control of

the disease consists of quick removal of dead plant parts and application of **PHYSAN 20** at the first signs of disease. For Botrytis, spray buds and blooms lightly 2 to 3 times a week using a fine mist. For Rust, apply at 7-14 day intervals during wet periods starting in early Summer. Before shipping, dip spikes in **PHYSAN 20** solution.

USE: 2 teaspoons of **PHYSAN 20** concentrate in 1 gallon of water.

**Begonias, Ferns and Gesneria (Corytholoma, Isoloma, Allopiectus, Episcia, Trichosporum) - Bud Rot, Gray Mold, Leaf Spots, and Spot Rot.**

All phases of culture. Remove all plant refuse or dead leaves. Garden clean-up is important in control. Spray **PHYSAN 20** solution before the buds open. Then spray when blossom petals have fallen. Spray when 3/4 of the blossom petals have fallen. Spray again two weeks after petal fall.

USE: 1 teaspoon of **PHYSAN** concentrate in 1 gallon of water.

**Bulbs - Daffodil, Easter Lilies, Gladioli, Hyacinth, Iris, Narcissus, and Tulips**

Pre-storage and pre-planting treatments: Treat the corms and bulbs immediately after they are "cleaned" and treat again immediately before planting by soaking them 10 minutes in **PHYSAN 20** solution to control fusarium basal rot. Air dry.

USE: 1 tablespoon **PHYSAN 20** concentrate in 1 gallon of water.

**Cactus - Bacterial Leaf Spot, Root Rot, Top Rot**

For rotting of underground parts by fungi and bacterial

leaf spot or rot of the tops, sterilize seeds and disease-free cuttings by dipping in **PHYSAN 20** solution for 5 minutes before planting. Spray at 10-14 day intervals.

USE: 2 tablespoons of **PHYSAN 20** concentrate in 3 gallons of water.

**Cactus - Slimy Collar Rot**

Just before planting, dip entire plant in **PHYSAN 20** solution.

USE: 2 teaspoons **PHYSAN 20** concentrate in 1 gallon of water.

**Calendulas, China Asters, Chrysanthemums, Crape Myrtle, Dahlias, Lilac, Live Oak - Powdery Mildew**

Spray with **PHYSAN 20** solution when symptoms appear. Spray upper and lower surface of leaves and branches with **PHYSAN 20** solution until thoroughly wet. Spray when buds burst in Spring and repeat in 2 weeks. Spray with **PHYSAN 20** solution every two weeks during mildew season. Also, spray Live Oaks at bud break and again in April.

USE: 2 tablespoons **PHYSAN 20** concentrate in 3 gallons of water.

**Carnations - Canker Rot, Carnation Rust, Crown Rot, Gray Mold Rot, Leaf Spots, Root Rot, and Stem Rot.**

For Rust, completely immerse cuttings in **PHYSAN 20** solution before planting. For Gray Mold, apply **PHYSAN 20** solution 1-2 times just before bud bloom. Apply a light mist spray as the flowers are opening. Carefully collect and burn infected buds, blossoms, and stems.

USE: 2 teaspoons of **PHYSAN 20** concentrate in 1 gallon of water.

**Crassula, Kalanchoe, and Sedum - Crown Gall, Crown Rot, and Root Rot.**

Destroy infected plants or plant parts and drench the remainder with **PHYSAN 20** solution. Spray plants weekly to assure solution getting around and in the base of leaves.

USE: 2 teaspoons of **PHYSAN 20** concentrate in 1 gallon of water.

**Fuchsia, Gardenia, Geranium, Heliotrope - Bud Rot, Gray Mold and Stem Rot.**

At the first sign of disease, pick off and burn infected leaves and blossoms; spray, mist, or fog weekly as needed.

USE: 2 teaspoons of **PHYSAN 20** concentrate in 1 gallon of water.

**Hawthorn (crataegus) - Leaf Blights**

After a very wet Spring, small reddish brown spots appear on the upper surfaces of leaves. When spots are numerous, leaves drop. Make 3 spray applications: First, as soon as the leaves emerge from the buds; then when leaves are half grown; and again when fully grown.

USE: 2 tablespoons of **PHYSAN 20** concentrate in 3 gallons of water.

**Hawthorn, Hollyhock, Snapdragons - Rust**

Spraying for protection should begin with the development of new leaves following Winter clean-up or dormancy. Spraying should begin before the

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onset of the rainy season. Be sure the undersides of infected leaves are covered by PHYSAN 20 spray solution. For Hollyhocks, apply at weekly intervals. Start as soon as growth begins. Repeat applications in late Summer. For Snapdragons, collect and burn the tops in the Fall. Avoid sprinkling the foliage while indoors. Apply PHYSAN 20 solution at 7-10 day intervals. Start when plants are set in the garden.

USE: 2 teaspoons of PHYSAN 20 concentrate in 1 gallon of water.

**Iris - Botrytis, Crown Rot of Iris, Gray Mold, Rot on Rhizomatous Iris**

Treat all new rhizomes before planting with PHYSAN 20 solution. Submerge rhizomes and 3 to 4 inches of leaves for 30 minutes. Plant at once (while still wet with PHYSAN 20 solution)

USE: 2 tablespoons of PHYSAN 20 concentrate in 3 gallons of water.

**Iris - Botrytis Leaf Spots**

Circular spots, yellowish, then light brown with red border. Spray weekly while plants are growing.

USE: 2 teaspoons PHYSAN 20 concentrate in 1 gallon of water.

**Palms - Heart Rot and Penicillium Leaf Base Rot**

At the first sign of rot, completely fill cup, or "heart" formed by palm branches at top center of plant. Repeat every 7 days until controlled.

USE: 2 tablespoons PHYSAN 20 concentrate in 3 gallons of water.

**Roses - Brown Canker**

Use regular spraying. Application should begin in early Spring as soon as new growth starts and should be made often enough to provide protection throughout the rainy periods and to keep the new growth covered. On the average, an application once a week will be needed from early Spring until plants are dormant.

USE: 2 teaspoons of PHYSAN 20 concentrate in 1 gallon of water.

**Roses - Black Spot, Powdery Mildew, Rusts, Stem Gall**

Spray with PHYSAN 20 solution when symptoms appear. Spray upper and lower surface of leaves and branches with PHYSAN 20 solution until thoroughly wet. Spray with PHYSAN 20 solution several times, 7 to 10 days apart.

USE: 2 teaspoons of PHYSAN 20 concentrate in 1 gallon of water.

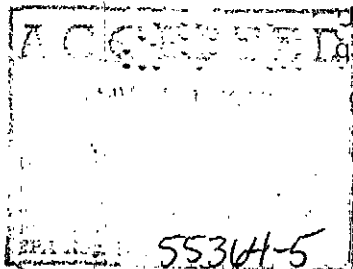
**Rubber Plant - Anthracnose on Leaves and Stems, Crown Gall on Stems**

At the first sign of disease, pick off and burn infected leaves, spray, mist or fog weekly with PHYSAN 20 solution as needed.

USE: 1 teaspoon of PHYSAN 20 concentrate in 1 gallon of water.

**Saintpaulia (African Violets) - Bud Rot, Crown Rot, Downy Mildew, Gray Mold Rot (Botrytis), Powdery Mildew, Root Rot.**

Dip plant and pot in PHYSAN 20 solution. Spraying is okay, but complete coverage of all surfaces is important. Spray every 10 days until controlled.



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