

For Greenhouse, Nursery, Agriculture and Turf

ACTINOVATE® SP SPECIMEN LABEL

- *Biological Fungus Control.
- *Controls soil-borne plant diseases such as *Pythium*, *Rhizoctonia*, *Phytophthora*, *Verticillium*, *Fusarium* and others.
- *100% Soluble. Will not clog machinery.
- * Enhances plant vitality.
- *Encourages larger root systems.

ACTIVE INGREDIENTS:

*Streptomyces lydicus**.....00.0371%

OTHER INGREDIENTS:.....99.9629%

*End-use product contains not less than 1 X 10⁷ colony forming units per gram *Streptomyces lydicus* WYEC108

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

See back panel for additional precautionary statements.

US Patent Number: 5,403,584
EPA Reg. No.: 73314-1
EPA Establishment No.: 73314-TX-001

Manufactured by:
Natural Industries, Inc.
6223 Theall Road
Houston, Texas 77066
Questions? (888) 261-4731

Net Contents: 18-oz

PRECAUTIONARY STATEMENTS

Hazard to humans and domestic animals: Caution. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

Personal Protective Equipment (PPE): Applicators and other handlers must wear long-sleeved shirt and long pants, and shoes plus socks. Mixer/loaders and applicators must wear a dust/mist-filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. Follow manufacturer's instructions for cleaning / maintaining PPE. Keep and wash PPE separately from other laundry.

User Safety Requirements: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove PPE immediately after handling this product. If gloves are worn, wash the outside of gloves before removing. Users should remove clothing immediately if pesticide gets inside. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when cleaning equipment or disposing of equipment washwater.

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

Do not allow worker entry into treated areas during the restricted entry interval (REI) of four (4) hours.

PPE requirements 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 and shoes plus socks. Exception: If the product is soil-incorporated, the Worker protection Standard, under certain circumstances, allows workers to enter treated area if there will be no contact with anything that has been treated.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of the product 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.

Keep unprotected persons out of treated areas until sprays have dried or dusts have settled.

General Information:

Actinovate® SP is a biological fungicide for the control of root rot and damping-off fungi. Fungi controlled include *Fusarium*, *Rhizoctonia*, *Pythium*, *Phytophthora*, *Phytophthora*, *Phytophthora*, *Aphanomyces*, *Monosporascus*, *Armillaria*, *Sclerotinia*, *Postia*, *Verticillium*, *Geotrichum*, and other root-decay fungi. The active ingredient in Actinovate® SP colonizes the root system and protects it from harmful fungi. Actinovate® SP can also effectively suppress foliar diseases such as Powdery Mildew, *Botrytis* and Downy Mildew. When applied to the soil Actinovate® SP also breaks down mineral and micronutrients making them more available to plants resulting in increased size and vitality. Plants and lawns treated with Actinovate® SP as a soil drench will become hardier, more vigorous and have a robust and protected root system.

APPLICATION DIRECTIONS:

Actinovate® SP is completely soluble and does not require agitation to keep suspended. Avoid applying bactericides and soil fumigants to the areas treated with Actinovate® SP. Consult manufacturer for compatibility questions.

Greenhouses and Nurseries:

Soil Drench/Soil Incorporation

Mix 6 oz. of Actinovate® SP in 100 gallons of water to create solution. Apply solution to plants/growing media at a rate of 1 gallon per cubic foot of growing media (enough to saturate soil without creating run-off). Consult your potting mix guide for the number of 'containers per cubic foot' to determine the ounces of solution to be applied to each pot. For Example: Filling 6" pots, you get 18 pots per cubic foot of growing media, therefore, 1 gallon of solution (128-oz) divided by 18 pots = 7-8 oz. per pot. One container of Actinovate® SP will treat approximately 5,000 6" pots.

Turf Grass

Mix Actinovate® SP with appropriate amount of water (100-125 gallons per acre). Apply at a rate of 52-oz of Actinovate® SP per acre for initial application or problem areas. Apply maintenance applications of 18 oz. per acre every 6 to 8 weeks is recommended.

Greenhouses: Foliar Application

For preventative control of *Botrytis*, Powdery Mildew and Downy Mildew on greenhouse crops. Apply 6-12 oz Actinovate® SP per acre. Dissolve Actinovate® SP in appropriate amount of water and apply to foliage and blossoms every 7 to 14 days depending on disease pressure. Crop size, spray equipment and local practice will determine the volume of water needed. Spray to wet, but avoid run-off. Actinovate® SP can be applied using hand-held backpack or ground spray equipment. Clean application

equipment before use of this product, and use prepared sprays within 4 hours of preparation. For best results use a spreader-sticker in conjunction with application. Consult manufacturer or sales representative for specific product recommendations.

Cutting or Bare Rooted Transplant Dip:

Dip cuttings or transplants in Actinovate® SP dry powder or in a solution of 18-oz Actinovate® SP and 5 gallons water. Plant treated cuttings or transplants in potting mix or soil in the usual manner.

Ornamental Bulb Crops:

Soak bulbs in solution of Actinovate® SP at 18-oz per 100 lbs. of bulbs. Thoroughly cover all surfaces of bulbs with solution for 1 hour prior to planting.

Do not apply through any type of irrigation system.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Pesticide Storage: Store in a dry, cool place out of direct sunlight and away from heat sources. Keep from overheating or freezing. Optimum storage temperature is 40 F to 85 F.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty package into application equipment. Then dispose of empty package in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Limited Warranty / Disclaimer

Manufacturer warrants that this product is suited for the labeled use when applied according to label directions. Manufacturer makes no warranty of merchantability. There are no warranties that extend beyond the description on this label and in no event shall manufacturer be liable for any consequential damages.

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MATERIAL SAFETY DATA SHEET

Actinovate® SP

I. PRODUCT INFORMATION

General Use: Biological fungicide

Chemical Formulation: N/A.

Common Name: Actinovate® SP

Molecular Weight: N/A

II. PHYSICAL PROPERTIES

Bulk Density: 5.5

Solubility in H₂O: 100% soluble

pH (apparent): 8.3

Appearance: pale white

Odor: slight odor of rich soil

Boiling Point (degC): N/A

Melting Point (degC): N/A

Evaporation Rate: N/A

Vapor Pressure: N/A

III. INGREDIENTS

Components	% Range
Inert Ingredients (confidential)	00.0371
<i>Streptomyces Lydicus WYEC 108</i>	99.9629

IV. HEALTH AND HAZARD INFORMATION

A. Toxicity: none
B. Carcinogenicity: N/A not listed by NTP, LARC, OSHA, ACGIH,

ORHIOSH

C. Primary Route(s) of Exposure: Skin Contact, Ingestion

D: Health Effects of Over Exposure:

- Inhalation: Nasal Irritation
- Ingestion: Irritation of mucous membranes.
- Skin: No negative side effects. Wash with soap and water.
- Eyes: Slight irritation may occur. Flush with water.

E. Emergency and First Aid Measures:

- Inhalation: Flush nose with water
- Ingestion: Ingestion has shown no mammalian toxicity
- Skin: Wash with soap and water.
- Eyes: Flush with water for five minutes

V. FIRE AND EXPLOSION DATA

- A. Fire: Not considered a fire hazard.
B. Explosion: Not considered an explosion hazard.
C. Fire Extinguishing Media: Water, CO₂, or dry chemicals may be used.
D. Precautions: No precautions are necessary under normal conditions

of use. As with any dust avoid high concentrations

VI. PERSONAL PROTECTIVE GEAR

- A. Eyes and Face: Though not necessary, safety glasses may be worn.
B. Respiratory: No respirator is required under normal conditions of use.
C. Skin: Though not necessary, gloves may be worn.
D. Shoes: Safety shoes are not necessary.

VII. STORAGE AND HANDLING

Actinovate® SP may be stored in all types of containers made of various materials of construction. Avoid contact with strong oxidizing agents.

VIII. SHIPPING INFORMATION

- A. DOT Shipping Name: None
B. DOT Hazard Class: None
C. DOT Category: None
E. Reportable Qualities (RQ): None
F. HMIS: Personal Protective Code - A (Safety Glasses)
G. NFPA Rating: 0 (Health) - 0 (Flammability) - 0 (Reactivity)

IX. ENVIRONMENTAL PROTECTION PROCEDURES

- A. Spill Response: No negative environmental impact. No special cleanup requirements
B. Waste Disposal: No negative environmental impact. No special preparation required for disposal.

This information presented in this Materials Safety Data Sheet (MSDS) is subject to revisions and is not all inclusive, but represented as the best information available to date. This information was drawn from recognized sources, believed to be reliable. However, Natural Industries, Inc. will not be responsible for damages of any kind resulting from the use or reliance upon such information. The product discussed is sold without warranty, expressed or implied, and upon conditions that purchasers shall perform their own verification and testing to determine its suitability for a particular purpose.

Prepared by: Fred Sims Effective Date: February 16, 1998

Revisions: Matthew Kowalski - Natural Industries Inc. (281) 580-1643