

**Actino-Iron®**  
**Biological Fungicide**  
**With Iron And Humic Acid**

- \* **Biological Soil Additive for Fungus Control**
- \* **Controls Soil Borne Plant Diseases such as *Pythium*, *Rhizoctonia*, *Fusarium*, *Phytophthora* and root decay fungi.**
- \* **Enhances Root Development and Plant Vitality**
- \* **Contains Complexed Iron.**
- \* **For Greenhouse, Nursery, Turf Grass and Agricultural Use.**

**ACTIVE INGREDIENTS:**

*Streptomyces lydicus* WYEC108\* .....1.3%

**OTHER INGREDIENTS\*\*:**

.....98.7%

\*Contains a minimum of 1 X 10<sup>6</sup> colony forming units per gram.

\*\*Other Ingredients include Iron at a minimum of 21.9% and Humic Acid at a minimum of 47.00%. Iron is derived from magnetite ore. Information regarding the contents and levels of metals in this product is available on the Internet at <http://www.wa.gov.agr>.

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

See back panel for additional precautionary statements.

**First Aid**

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 poison control center or doctor for treatment advice

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-888-261-4731 for emergency medical treatment information

EPA Reg. No.: (pending as 73314-2)  
Net Contents: XX  
EPA Establishment No.: 73314-TX-001

**Manufactured by:**

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

**PRECAUTIONARY STATEMENTS**

**Hazard to humans and domestic animals: Caution.** Causes moderate eye irritation. 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. 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 to treated areas during the restricted entry interval (REI) of four (4) hours.

**PERSONAL PROTECTIVE EQUIPMENT**

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): coverall, 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 areas if there will be no contact with anything that has been treated.

For field applications:

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

Applicators and other handlers must wear: a) long sleeved shirt and long pants; b) shoes plus socks; c) when dumping or opening bags, or other operations where dusts may be created, wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH approved respirator with any N-95, R-95, P-95 or HE filter for biological products.

Follow manufacturer's directions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**General Information:**

Actino-Iron® Biological Fungicide is a biological soil additive and fungicide for the control of soil borne plant root rot and damping-off fungi. Actino-Iron® Biological Fungicide contains agricultural grade iron and humate (fulvic and humic acids) and is inoculated with the patented Actinovate® microorganism, *Streptomyces lydicus* WYEC 108. The Actinovate® microorganism colonizes on the root systems of plants, protecting the plant from soil borne diseases. Fungi controlled include *Fusarium*, *Pythium*, *Rhizoctonia*, *Phytophthora*, *Phytophthora*, *Phytophthora*, *Aphanomyces*, *Monosporascus*, *Armillaria*, *Sclerotinia*, *Postia*, *Verticillium*, *Geotrichum*, and other root decay fungi. In addition, use of Actino-Iron® will produce hardier, more vigorous plants with increased root development. Plants will be larger and greener with Actino-Iron® Biological Fungicide.

**Application Directions:**

**Application Uses:**

For indoor/outdoor vegetable and ornamental plant use. Actino-Iron® is a biological fungicide for use in soil applications (incorporation and in furrow) in or on all raw agricultural commodities, food and fiber crops, ornamentals, landscape plants, including tree seedlings for transplanting to the forest.

**Greenhouses and Nurseries Potting Soil Mix:** Evenly mix 5 lbs of Actino-Iron® Biological Fungicide per cubic yard of planting media. Re-apply when repotting or stepping up.

**For Nursery Beds:** Incorporate at a rate of 2-8 pounds per 1000 square feet of bed by raking or tilling. Application of irrigation water will help move

Actino-Iron® Biological Fungicide into the soil.

**For top dressing:** Apply at a rate of 3-oz per cubic foot of planting media in pot. Water in thoroughly without creating run-off.

If soil is fumigated or steam sterilized apply Actino-Iron® after treatment. Actino-Iron® Biological Fungicide can be used in combination with or in rotation with other fungicides, insecticides, miticides, fertilizers or micronutrients.

**Turf Grass:**

For problem areas, evenly apply 9 lbs of Actino-Iron® Biological Fungicide per 1,000 square feet of turf grass. For general maintenance, evenly apply 4 lbs of Actino-Iron® Biological Fungicide per 1,000 feet of turfgrass. If soil is fumigated or steam sterilized, apply Actino-Iron® Biological Fungicide after treatment. Actino-Iron® Biological Fungicide can be used in combination with or in rotation with other fungicides, insecticides, miticides, fertilizers or micronutrients.

For optimal results apply with a drop spreader or by blending it into top dressing. Water in immediately after application.

**In-furrow soil application:**

Apply Actino-Iron® Biological Fungicide at a rate of 10-15 pounds per acre using properly calibrated application equipment. For best results, apply Actino-Iron® Biological Fungicide using a metering device, mounted to deliver granules into the furrow just behind the furrow opener. Apply Actino-Iron® Biological Fungicide either at seeding or to established crops as a side-dress. Water in after application. Actino-Iron® Biological Fungicide

can be used in combination with or in rotation with other fungicides, insecticides, miticides, fertilizers or micronutrients.

**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.

Lot No.:

Best If Used By:

Label Version: 8.2

**MATERIAL SAFETY DATA SHEET**

**Actino-Iron® Biological Fungicide**

**I. PRODUCT INFORMATION**

General Use: Biological fungicide  
Chemical Formulation: N/A.  
Common Name: Actino-Iron® Biological Fungicide  
Molecular Weight: N/A

**II. PHYSICAL PROPERTIES**

Bulk Density: 5.5  
Solubility in H2O: none  
pH (apparent): 5.5-6.0  
Appearance: dark chocolate brown  
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
Iron	21.9%
Humic Acid	47%
Inert Ingredients (confidential)	29.8%
<i>Streptomyces Lydicus WYEC 108</i>	1.3%

**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:

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

E. Emergency and First Aid Measures:

1. Inhalation: Flush nose with water  
2. Ingestion: Ingestion has shown no mammalian toxicity  
3. Skin: Wash with soap and water.  
4. Eyes: Flush 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. Have the product container or label with you when calling poison control center or doctor or

going for treatment. You may also contact 1-888-21-731 for emergency medical treatment information.

**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. If dust is created when when dumping or opening bags use a dust/ mist filtering respirator  
C. Skin: Gloves must be worn.  
D. Shoes: Normal shoes must be worn with socks.

**VII. STORAGE AND HANDLING**

Actino-Iron®, Biological Fungicide 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

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