

Actino-Iron®

biological
fungicide

PROD. # 5200-710

Grade: 0-0-0

GUARANTEED ANALYSIS

Iron (Fe) 15.0%

Molybdenum (Mo) 0.001%

Iron derived from magnetite ore complexed
by siderophores of *Streptomyces lydicus* WYEC 108

Also contains non-plant food ingredient:

1% Humic Acid derived from decomposed plant residue

% w/w

ACTIVE INGREDIENT

Streptomyces lydicus WYEC 108* 00.013%

OTHER INGREDIENTS 99.987%

Total 100.0%

*Contains a minimum of 1 x 10⁶ colony forming units per gram.

**Other ingredients include Iron at a minimum of 15.0% and Humic Acid at a minimum of 1.00%. Iron is derived from magnetite ore.

ATTENTION: This product contains molybdenum (Mo). Crops high in molybdenum can be toxic to ruminant animals. Use only according to manufacturer's directions.

KEEP OUT OF REACH OF CHILDREN CAUTION

Biological fungicide with iron & humic acid

Biological soil additive for fungus
suppression/control

Controls soil-borne plant diseases such
as *Pythium*, *Phytophthora*, *Rhizoctonia*,
Fusarium and root decay fungi

Contains complexed iron

For greenhouse, nursery, turfgrass and
agricultural use

Batch code and expiration date

US Patent Number: 5,403,584
EPA Registration Number: 73314-2
EPA Establishment Number: 73314-TX-001
Made in the USA. Information regarding the contents
and levels of metals in this product is available on the
internet at <http://www.aapfco.org/metals.html>
13071 12.13 2621-156-1213

Net weight
10 lb (4.54 kg)
CALIFORNIA

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 a poison control center or doctor for treatment advice
IF INHALED:	• Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for 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 further treatment advice
IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. Have a 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
HOT LINE NUMBER Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific Time (PT), seven days a week. During other times, call the poison control center at 1-800-222-1222	

See attached booklet for additional Precautionary Statements, Complete Directions for Use and Warranty.


novozymes®
Rethink Tomorrow

Novozymes BioAg Inc.
13100 W. Lisbon Road, Suite 600
Brookfield WI 53005
1-800-245-4104

Precautionary statements

Hazards to humans and domestic animals. CAUTION.

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE):

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- 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 the manufacturer's instructions for cleaning / maintaining PPE. If no instructions are available, use detergent and hot water for washables. Keep and wash PPE separately from other laundry.

User safety requirements

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. 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 disposing of equipment washwater 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 State or Tribal agency responsible for pesticide regulation. Do not apply this product through any type of irrigation system.

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 interval. 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 treated areas during the restricted-entry interval (REI) of 4 hours.

EXCEPTION: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Chemical resistant gloves (made of any waterproof material)
- Shoes plus socks

Non-agricultural use requirements

The requirements in this box apply to uses of this 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 dusts have settled.

Product information:

Actino-Iron Biological Fungicide is a biological soil additive and fungicide for the suppression/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 microorganism colonizes on the root systems of plants, protecting the plant from soil-borne diseases. Fungi controlled include *Fusarium*, *Pythium*, *Rhizoctonia*, *Phytophthora* and other root decay fungi.

Integrated Pest Management:

Integrate Actino-Iron Biological Fungicide into an overall disease and pest management strategy whenever fungicide use is necessary. Apply Actino-Iron Biological Fungicide alone or in combination and/or rotation with chemical fungicides. Follow practices known to reduce disease development. Consult local agricultural authorities for specific IPM strategies developed for your crop(s) and location.

Application directions**Application uses:**

For indoor/outdoor greenhouse, nursery, turf grass, ornamental plant, and field uses. Actino-Iron Biological Fungicide is a biological fungicide for use in soil applications (top dressing, soil incorporation and in furrow) for growing plants.

Greenhouses and nurseries potting soil mix:

Evenly mix 5 lbs of Actino-Iron Biological Fungicide per cubic yard of planting media. Re-apply to planting media when repotting.

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 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. Consult other product's labels for additional information or restrictions concerning tank mixing. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures. Do not exceed label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

Turfgrass:

Use on all cool and warm season turf grass varieties such as Bentgrass, Bluegrass, Bermudagrass (common and hybrid), Fescue, Ryegrass, St. Augustine, Zoysia, Paspalum and Poa Annu. Use on Greens, Tees, Fairways and Roughs, Sports Turf, Parks, Cemeteries, (Residential) Lawns, Sod Farms, Seed Production Grasses and all ornamental grass varieties. Apply Actino-Iron Biological Fungicide throughout the growing season on all types of soils and turfgrass varieties.

For problem areas with a history of, or potential for, fungal disease evenly apply 9 lbs of Actino-Iron Biological Fungicide per 1,000 square feet of turfgrass. 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 Actino-Iron Biological Fungicide into top dressing (sand, peat, humus, compost). Water in immediately after application.

Outdoor field use on growing crops and ornamental plants:

For use throughout the growing season on all types of soils and all outdoor field grown food crops including vegetables, herbs, small fruits, berries and fruit and nut trees. For use throughout the growing season on all types of soils and on all outdoor grown ornamentals, landscape plants, trees, shrubs, annuals, perennials, ground covers, and tropical plants.

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 and 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

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container handling

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances.

WARRANTY

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. Novozymes BioAg warrants that at the time of the first sale of this product it conforms to the chemical description on the label and when used according to the label directions under normal growing conditions is reasonably fit for the purposes referred to above. Buyers/Users of this product assume full risk for any use contrary to the specified directions. If this product does not perform as warranted above and to the extent consistent with applicable law, customer's sole remedy for breach of warranty shall be replacement of the product or refund of the purchase price paid, at the option of Novozymes BioAg.

EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESSED REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESSED OR IMPLIED WARRANTY OR GUARANTEE TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, INCLUDING ANY OTHER EXPRESSED OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY, AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO.

Actino-Iron[®]

biological
fungicide

PROD. # 5200-710

Grade: 0-0-0

GUARANTEED ANALYSIS

Iron (Fe) 15.0%

Molybdenum (Mo) 0.001%

Iron derived from magnetite ore complexed
by siderophores of *Streptomyces lydicus* WYEC 108

Also contains non-plant food ingredient:

1% Humic Acid derived from decomposed plant residue

% w/w

ACTIVE INGREDIENT

Streptomyces lydicus WYEC 108* 00.013%

OTHER INGREDIENTS 99.987%

Total 100.0%

*Contains a minimum of 1 x 10⁶ colony forming units per gram.

**Other ingredients include Iron at a minimum of 15.0% and Humic Acid at a minimum of 1.00%. Iron is derived from magnetite ore.

ATTENTION: This product contains molybdenum (Mo). Crops high in molybdenum can be toxic to ruminant animals. Use only according to manufacturer's directions.

Storage and disposal

Do not contaminate water food or feed by storage and 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

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container handling

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances.

Batch code and expiration date

US Patent Number: 5,403,584
EPA Registration Number: 73314-2
EPA Establishment Number: 73314-TX-001
Made in the USA. Information regarding the contents and levels of metals in this product is available on the internet at <http://www.aapfco.org/metals.htm>
13071 12.13 2621-156-1213

Net weight
10 lb (4.54 kg)
CALIFORNIA

KEEP OUT OF REACH OF CHILDREN CAUTION

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 a poison control center or doctor for treatment advice
IF INHALED:	• Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for 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 further treatment advice
IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. Have a 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
HOT LINE NUMBER Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific Time (PT), seven days a week. During other times, call the poison control center at 1-800-222-1222	

See booklet for additional Precautionary Statements, Directions for Use, Application Instructions and Warranty.

novozymes[®]



Rethink Tomorrow

Novozymes BioAg Inc.
13100 W. Lisbon Road, Suite 600
Brookfield WI 53005
1-800-245-4104

