



U.S. ENVIRONMENTAL PROTECTION AGENCY  
 Office of Pesticide Programs  
 Biopesticides and Pollution Prevention Division (7511P)  
 1200 Pennsylvania Ave., N.W.  
 Washington, D.C. 20460

**EPA Reg. Number:**

279-9650

**Date of Issuance:**

7/27/2021

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
 (under FIFRA, as amended)

**Term of Issuance:**

Unconditional

**Name of Pesticide Product:**

F4034-5

**Name and Address of Registrant (include ZIP Code):**

FMC Corporation  
 2929 Walnut Street  
 Philadelphia, PA 19104

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product, always refer to the above EPA Registration Number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA or the Act).

Registration is in no way to be construed as an endorsement or recommendation of this product by the U.S. Environmental Protection Agency (EPA). In order to protect health and the environment, the Administrator, on his or her motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under the Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration or registration review of your product when the EPA requires all registrants of similar products to submit such data.

**Signature of Approving Official:**

Jeannine Kausch, Product Manager 92  
 Microbial Pesticides Branch  
 Biopesticides and Pollution Prevention Division (7511P)  
 Office of Pesticide Programs

**Date:**

7/27/2021

2. Make the following labeling change before you release this product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 279-9650.”
3. Submit one (1) copy of the final printed labeling for the record before you release this product for shipment.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA’s Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6. A stamped copy of the labeling is enclosed for your records. Please also note that the record for this product currently contains the following acceptable Confidential Statement of Formula (CSF):

- Basic CSF dated 04/13/2021

If you have any questions, please contact Monica Thapa by phone at (703) 347-8688 or via email at [thapa.monica@epa.gov](mailto:thapa.monica@epa.gov).

Sincerely,



Jeannine Kausch, Product Manager 92  
Microbial Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)  
Office of Pesticide Programs

Enclosure: Stamped Label

# F4034-5

## MASTER LABEL

Sub-Label A: Seed Treatment Use

Sub-Label B: In-Furrow and Transplant Drench Uses

EPA Reg. No. 279-OALN

EPA Est. No. \_\_\_\_\_

**Active Ingredients:**

	<b>By Wt.</b>
<i>Bacillus velezensis</i> strain RTI301* .....	7.5%
<i>Bacillus subtilis</i> strain RTI477** .....	2.5%
<b>Other Ingredients:</b> .....	<u>90.0%</u>
	100.0%

\*Contains a minimum of  $1.5 \times 10^{10}$  colony-forming units (cfu) per milliliter of product.

\*\*Contains a minimum of  $1.15 \times 10^9$  colony-forming units (cfu) per milliliter of product.

This product contains a total of 0.97 pounds of active ingredient per gallon.

### KEEP OUT OF REACH OF CHILDREN CAUTION

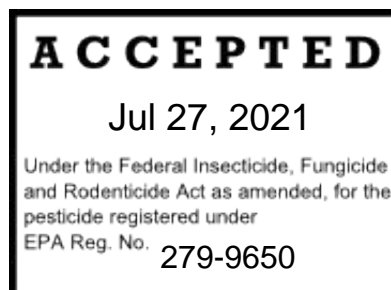
See other panels for additional precautionary information.

<b>FIRST AID</b>	
<b>If on Skin:</b>	-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.
<b>HOTLINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.	

**Net Contents:**

**Sold By:**  
FMC Corporation  
2929 Walnut Street  
Philadelphia, PA 19104

**Batch/Lot code:** \_\_\_\_\_  
[For nonrefillable containers only. Will be located on  
this label or on the physical container.]



# F4034-5

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Sub-Label A:  
FOR SEED TREATMENT USE

# F4034-5

[ABN: ATAPLAN Biological Fungicide]

A biological fungicide for seed treatment use for early season protection against listed fungal diseases.

EPA Reg. No. 279-OALN

EPA Est. No. \_\_\_\_\_

Active Ingredients:	By Wt.
<i>Bacillus velezensis</i> strain RTI301* .....	7.5%
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[For nonrefillable containers only. Will be located on  
this label or on the physical container.]

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

#### CAUTION

Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

#### Personal Protective Equipment (PPE)

Applicators and other handlers (except treated seed baggers and bag sewers) must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks
- a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with an HE filter.  
(Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.)

Treated seed baggers and bag sewers must wear:

- long-sleeved shirt and long pants
- shoes plus socks
- a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with an HE filter.  
(Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.)

#### User Safety Requirements

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

#### Engineering Controls

When handlers use closed systems in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.

#### User Safety Recommendations

Users should:

- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove clothing/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**

For terrestrial uses: Do not apply directly to water, or 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 washwater or rinsate.

## **DIRECTIONS FOR USE**

**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.**

**Read entire label before using this product.**

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.

### **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 conditions, 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
- Waterproof gloves
- Shoes plus socks

### **Non-Agricultural Use Requirements**

The requirements in this box apply to uses that are NOT within the scope of the Worker Protection Standard (WPS) 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 treatment area until seeds have dried or been packaged.

### **Product Information**

F4034-5 is a soluble seed treatment formulation containing the biopesticides *Bacillus velezensis* strain RTI301 and *Bacillus subtilis* strain RTI477. F4034-5 provides early season protection of seedlings against diseases caused by *Rhizoctonia solani*, *Fusarium* spp., and *Phytophthora* spp. in a variety of crops. Seed must be sound and well-cured before treatment. Treatment of highly mechanically scarred or damaged seed, or seed known to be of low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Conduct germination tests on a small portion of treated seed using equipment similar to that planned for treating the total seed lot before committing the total seed lot to treatment with this product or this product in combination with other seed treatment products. Due to seed quality, crop or variety sensitivity, and seed storage conditions beyond the control of FMC Corporation, no claims are made to guarantee the germination of carry-over seed or propagating material for all crop seed.

### **Seed Treatment Equipment**

F4034-5 may be used both for commercial and for on-farm application. F4034-5 can be applied with mechanical, slurry, or mist-type seed treating equipment, as long as the equipment can be calibrated to accurately and uniformly apply the product to seed without undue mechanical damage to the seed. Uniform application to seed is important for all seed treatment products.

### **Application Instructions**

Seed must be sound and well-cured before treatment. Refer to the application rates below. F4034-5 is diluted with water and/or mixed with other products to attain an appropriate slurry application volume (fl. oz./cwt slurry rates) to provide effective treating. Mix the targeted application rate from those listed on this label with a sufficient quantity of water or other formulated product to attain a total slurry rate of at least 4 fl. oz. of slurry (product + water)/100 lb. of seed on large seed crops such as corn and soybeans. On smaller size seeds such as turf grasses or canola, a final targeted slurry rate of at least 8 fl. oz. of slurry (product + water)/100 lb. of seed is necessary to ensure adequate and uniform coverage. The appropriate volume of slurry depends on crop, temperature, humidity, type of treater, and other factors and should be adjusted per normal treating practices for the circumstances. Contact your local supplier or distributor representative for specific recommendations for slurry volumes and questions on any tank mixes or restrictions.

F4034-5 plus water and/or other treatments must be mixed thoroughly prior to treating seed. Recalibrate treating equipment to compensate for the required slurry rate to ensure all products are applied at the correct rate.

**NOTE: This product does not contain a dye.** To comply with 40 CFR 153.155, all seed commercially treated with this product must be colored with an EPA-approved dye or colorant of a suitable color to prevent accidental use as food for humans or feed for animals.

Do not use F4034-5 in combination with other seed treatment products unless compatibility has been verified. Read and follow carefully all label directions of each product used in the treating mixture. When using combinations of products, the most restrictive of label limitations and precautions must be followed.

Seed may be treated either on a per seed unit basis or on a per weight of seed basis, as shown in the table below.



## Crops, Pests and Application Rates

CROP	Early season protection of seedlings against injury from:	APPLICATION RATE (Product per Seed Unit or Seed Weight)
<b>Corn (Field corn, Popcorn, Sweet corn, Corn Grown for Seed)</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> and <i>Fusarium</i> spp.	<u>Per seed Unit:</u> 0.092 to 0.18 fl. oz./80,000 seeds
<b>Dried Bean and Pea (excluding Soybean)</b> ( <i>Lupinus</i> spp., <i>Phaseolus</i> spp., <i>Vigna</i> spp., and <i>Pisum</i> spp.)	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> and <i>Fusarium</i> spp.	<u>Per Seed Weight:</u> 0.16 to 0.32 fl. oz./cwt
<b>Soybean</b>	Seed rot, seedling blight and root rot caused by <i>Rhizoctonia solani</i> , <i>Phytophthora</i> spp., and <i>Fusarium</i> spp.  Sudden Death Syndrome caused by <i>Fusarium virguliforme</i>	<u>Per seed Unit:</u> 0.16 to 0.32 fl. oz./140,000 seeds
<b>Fruiting Vegetables</b> African eggplant; Bell pepper; Bush Tomato; Cocona; Currant tomato; Eggplant; Garden huckleberry; Goji Berry; Ground cherry; Martynia; Naranjilla; Non-bell pepper; Okra; Pea eggplant; Pepino; Roselle; Scarlet eggplant; Sunberry; Tomatillo; Tomato; Tree tomato; cultivars, hybrids, and varieties of these	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per Seed Weight:</u> 0.7 to 7 fl. oz./cwt
<b>Cucurbit Vegetables</b> Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd (includes hyotan, cucuzza, hechima, Chinese okra); <i>Momordica</i> spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); Muskmelon (includes cantaloupe); Pumpkin; Squash, summer; Squash, winter, (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); Watermelon	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per Seed Weight:</u> 0.7 to 7 fl. oz./cwt

<b>Cereal Grains (except Corn and Sorghum)</b> Barley; Buckwheat; Millet, pearl; Millet, proso; Oats; Rice; Rye; Teosinte; Triticale; Wheat	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> and <i>Fusarium</i> spp.	<u>Per Seed Weight:</u> 0.07 to 0.35 fl. oz./cwt
<b>Sorghum</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per Seed Weight:</u> 0.45 to 0.9 fl. oz./cwt
<b>Canola, Rapeseed, and Mustard</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per Seed Weight:</u> 1.1 to 5.5 fl. oz./cwt
<b>Cotton</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per seed Unit:</u> 0.27 fl. oz./100,000 seeds
<b>Alfalfa</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per Seed Weight:</u> 0.7 to 5.5 fl. oz./cwt
<b>Forage Grasses and Turf Grasses</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per Seed Weight:</u> 0.7 to 5.5 fl. oz./cwt
<b>Root and Tuber Vegetables (except Potato and Sugarbeet)</b> Arracacha; Arrowroot; Artichoke, Chinese; Artichoke, Jerusalem; Beet, garden; Burdock, edible; Canna, edible; Carrot; Cassava, bitter and sweet; Celeriac; Chayote (root); Chervil, turnip-rooted; Chicory; Chufa; Dasheen (taro); Ginger; Ginseng; Horseradish; Leren; Parsley, turnip-rooted; Parsnip; Radish; Radish oriental; Rutabaga; Salsify; Salsify, black; Salsify, Spanish; Skirret; Sweet potato; Tanier; Turmeric; Turnip; Yam, bean; Yam, true	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per Seed Weight:</u> 0.7 to 7 fl. oz./cwt
<b>Sunflower</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per seed Unit:</u> 0.11 to 0.22 fl. oz./100,000 seeds
<b>Sugar beet</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	<u>Per seed Unit:</u> 0.04 to 0.11 fl. oz./100,000 seeds

## **SEED BAG LABEL REQUIREMENTS**

The Federal Seed Act requires that bags containing seeds treated with this product shall be labeled with the following information:

- This seed has been treated with *Bacillus velezensis* strain RTI301 and *Bacillus subtilis* strain RTI477.
- Do not use for feed, food or oil purposes.
- Store away from feed and food stuffs.

User is responsible for ensuring that the seed bag meets all requirements under the Federal Seed Act.

## **USE RESTRICTIONS**

Do not use treated seed for food or feed purposes or process for oil. For at-planting seed treatments, treat only those seeds needed for immediate use. Care must be exercised in the handling of treated seed. Augers used for handling treated seed should not be used to move seed for feed, food or oil processing. Do not re-use bags from treated seed to handle food or feed products.

## **STORAGE AND DISPOSAL**

Do not contaminate food or feed by storage or disposal.

### **Pesticide Storage**

Do not freeze. Shake or roll container to redissolve solids after storage and before use. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lid of container and close tightly. Do not put concentrate or dilute material into food or drink containers. In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call CHEMTREC (Transportation and Spills) at 1-800-424-9300. To confine spill, dike surrounding area or absorb with sand, cat litter or commercial clay. Place damaged package in a holding container. If a leaky container must be contained within another, mark the outer container to identify the contents.

### **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 Plastic Containers (Containers equal to or less than 5 gallons):** 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. Add water – at least 2% of the container volume, and up to  $\frac{1}{3}$  of the volume of water needed to make the proper slurry composition with a maximum of  $\frac{1}{4}$  of the container volume, and recap. Shake for 30 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. If used in application equipment, adjust the slurry volume application rate to account for any added rinsate water. Then offer container for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill or by incineration. If burned, stay out of smoke.

**Nonrefillable Plastic Containers (Containers greater than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Empty the remaining contents into application equipment or a mix tank. Add water – at least 2% of the container volume, and up to  $\frac{1}{3}$  of the volume of water needed to make the proper slurry composition with a maximum of  $\frac{1}{4}$  of the container volume. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 60 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times. If used in application equipment, adjust the slurry volume application rate to account for any added rinsate water. Then offer container for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill or by incineration. If burned, stay out of smoke.

## Conditions of Sale and Limitation of Warranty and Liability:

**Notice:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

**Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) Seller or FMC, and, to the extent consistent with applicable law, Buyer assumes the risk of any such use.**

Treatment of seed, especially seed that is mechanically damaged or seed known to be of low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination tests on a small test sample of seed before treating commercial quantities with a selected chemical treatment that includes this product. Due to seed quality and seed storage conditions beyond the control of FMC, FMC makes no claims or guarantees as to germination of carry-over seed.

To the extent consistent with applicable law, FMC or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

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D-4080 042821

# F4034-5

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Sub-Label B:  
FOR IN-FURROW AND TRANSPLANT DRENCH USES

# F4034-5

A biological fungicide for in-furrow or transplant drench water use for early season protection against listed fungal diseases.

EPA Reg. No. 279-OALN

EPA Est. No. \_\_\_\_\_

Active Ingredients:	By Wt.
<i>Bacillus velezensis</i> strain RTI301* .....	7.5%
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This product contains a total of 0.97 pounds of active ingredient per gallon.

## KEEP OUT OF REACH OF CHILDREN CAUTION

See other panels for additional precautionary information.

FIRST AID	
<b>If on Skin:</b>	-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.
HOTLINE NUMBER	
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Net Contents:

Sold By:  
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2929 Walnut Street  
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#### CAUTION

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#### Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
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- a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with an HE filter.  
(Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.)

#### User Safety Requirements

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

#### Engineering Controls

When handlers use closed systems in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.

#### User Safety Recommendations

Users should:

- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove clothing/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**

For terrestrial uses: Do not apply directly to water, or 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 washwater or rinsate.

### **DIRECTIONS FOR USE**

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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.

#### **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 conditions, 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
- Waterproof gloves
- Shoes plus socks

## Product Information

F4034-5 is a formulation containing the biopesticides *Bacillus velezensis* strain RTI301 and *Bacillus subtilis* strain RTI477. F4034-5 provides early season protection of seedlings against diseases caused by *Rhizoctonia solani*, *Fusarium* spp. and *Phytophthora* spp. in a variety of crops.

## Application and Mixing Instructions

Shake well before using.

Fill the tank one-half full with water and begin spray tank agitation. Add the proper amount of F4034-5, and then add the rest of the water. Maintain agitation until the mixture has been applied.

F4034-5 can be applied in-furrow with the seed or as a transplant-water drench during setting.

Apply in a minimum of 5 gallons of finished spray per acre.

### In-furrow

Apply in the open furrow in a narrow band at the seeding depth during planting. Use the following table to convert the per acre rates in the crop specific directions to rate/1000 row-ft.

	Fl oz/1000 row-ft			
	36-inch rows	30-inch rows	20-inch rows	15-inch rows
4 fl oz/ac	0.28	0.23	Don't use	Don't use
7 fl oz/ac	0.48	0.40	0.27	0.20
10 fl oz/ac	0.69	0.57	0.38	0.29

### Transplant drench water

Determine the amount of F4034-5 to be mixed as follows:

1. Determine the number of plants per acre to be planted.
2. Divide the desired F4034-5 application rate (rates per acre for specific crops as listed on this label) by the number of plants per acre to be planted. This provides the fluid ounces of F4034-5 per transplant for one acre.
3. Multiply the fluid ounces of F4034-5 per transplant by the number of acres to be planted. This provides the total amount of F4034-5 needed for the acres to be planted.
4. Calculate the amount of dilution water needed in order to apply in a minimum of 2 fluid ounces of treatment solution per transplant.

Transplants should be well-watered before transplanting. Apply at transplanting in a minimum of 2 fluid ounces of treatment solution per transplant. Ensure water volume is sufficient to thoroughly wet the transplant root zone.

### Crop Rotation Restrictions

Any crop may be rotated at any time after application of F4034-5.

### Tank-Mixtures

F4034-5 may be applied in tank mixtures with other products approved for use on registered crops. When using combinations of products, the most restrictive of label limitations and precautions must be followed. To ensure successful applications, product compatibility tests should be conducted.

### Crops, Pests and Application Rates

CROP	Early season protection of seedlings against injury from:	APPLICATION RATE (fl oz/A)
<p><b>CEREAL GRAINS CORN</b> (Field corn, Popcorn, Sweet corn, Corn Grown for Seed)</p> <p>Including: Barley; Buckwheat; Corn (includes field corn, popcorn, sweet corn, and corn grown for seed); Millet, pearl; Millet, proso; Oats; Rice; Rye; Sorghum; Teosinte; Triticale; and Wheat</p>	<p>Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> and <i>Fusarium</i> spp.</p>	<p>4-10</p>
<p><b>DRIED BEAN and PEA</b> (excluding Soybean) (<i>Lupinus</i> spp., <i>Phaseolus</i> spp., <i>Vigna</i> spp., and <i>Pisum</i> spp.)</p>	<p>Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> and <i>Fusarium</i> spp.</p>	<p>4-10</p>
<p><b>SOYBEAN</b></p>	<p>Seed rot, seedling blight and root rot caused by <i>Rhizoctonia solani</i>, <i>Phytophthora</i> spp., and <i>Fusarium</i> spp.</p> <p>Suppression of Sudden Death Syndrome caused by <i>Fusarium virguliforme</i></p>	<p>4-10</p>
<p><b>FRUITING VEGETABLES</b> Including: African eggplant; Bell pepper; Bush tomato; Cocona; Currant tomato; Eggplant; Garden huckleberry; Goji berry; Ground cherry; Martynia; Naranjilla; Non-bell pepper; Okra; Pea eggplant; Pepino; Roselle; Scarlet eggplant; Sunberry; Tomatillo; Tomato; Tree tomato; cultivars, hybrids, and varieties of these</p>	<p>Seed rot and seedling blight caused by <i>Rhizoctonia solani</i>.</p>	<p>4-10</p>

<b>CROP</b>	<b>Early season protection of seedlings against injury from:</b>	<b>APPLICATION RATE (fl oz/A)</b>
<b>HEAD and STEM BRASSICA VEGETABLES</b> Including: Broccoli; Chinese broccoli (gailon, white flowering broccoli); Brussel sprouts; Cauliflower; Cavalo broccoli; Kohlrabi; Cabbage; Chinese cabbage (napa); and Chinese mustard cabbage (gai choy)	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	4-10
<b>CUCURBIT VEGETABLES</b> Including: Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd (includes hyotan, cucuzza, hechima, Chinese okra); <i>Momordica</i> spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber); Muskmelon (includes cantaloupe); Pumpkin; Squash, summer; Squash, winter, (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash); Watermelon	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	4-10
<b>LEAFY BRASSICAS</b> Including: Broccoli raab; Bok choy; Collards; Kale; Mizuna; Mustard greens; Mustard spinach; Rape greens; Turnip greens	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	4-10
<b>CANOLA, RAPESEED, MUSTARD SEED, and SUNFLOWER</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	4-10
<b>COTTON</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	4-10
<b>ALFALFA</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	4-10

CROP	Early season protection of seedlings against injury from:	APPLICATION RATE (fl oz/A)
<b>FORAGE GRASSES and TURF GRASSES</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	4-10
<b>ROOT and TUBER VEGETABLES (except Potato and Sugarbeet)</b> Including: Arracacha; Arrowroot; Artichoke, Chinese; Artichoke, Jerusalem; Beet, garden; Burdock, edible; Canna edible; Carrot; Cassava, bitter and sweet; Celeriac; Chayote (root); Chervil, turnip-rooted; Chicory; Chufa; Dasheen (taro); Ginger; Ginseng; Horseradish; Leren; Parsley, turnip-rooted; Parsnip; Radish; Radish oriental; Rutabaga; Salsify; Salsify, black; Salsify, Spanish; Skirret; Sugar beet; Sweet potato; Tanier; Turmeric; Turnip; Yam, bean; Yam, true	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	4-10
<b>SPINACH</b>	Seed rot and seedling blight caused by <i>Rhizoctonia solani</i> .	4-10

## **STORAGE AND DISPOSAL**

Do not contaminate food or feed by storage or disposal.

### **Pesticide Storage**

Do not freeze. Shake or roll container to redissolve solids after storage and before use. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lid of container and close tightly. Do not put concentrate or dilute material into food or drink containers. In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call CHEMTREC (Transportation and Spills) at 1-800-424-9300. To confine spill, dike surrounding area or absorb with sand, cat litter or commercial clay. Place damaged package in a holding container. If a leaky container must be contained within another, mark the outer container to identify the contents.

### **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 Plastic Containers (Containers equal to or less than 5 gallons):** 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. Add water – at least 2% of the container volume, and up to  $\frac{1}{3}$  of the volume of water needed to make the proper slurry composition with a maximum of  $\frac{1}{4}$  of the container volume, and recap. Shake for 30 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. If used in application equipment, adjust the slurry volume application rate to account for any added rinsate water. Then offer container for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill or by incineration. If burned, stay out of smoke.

**Nonrefillable Plastic Containers (Containers greater than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Empty the remaining contents into application equipment or a mix tank. Add water – at least 2% of the container volume, and up to  $\frac{1}{3}$  of the volume of water needed to make the proper slurry composition with a maximum of  $\frac{1}{4}$  of the container volume. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 60 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times. If used in application equipment, adjust the slurry volume application rate to account for any added rinsate water. Then offer container for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill or by incineration. If burned, stay out of smoke.

## Conditions of Sale and Limitation of Warranty and Liability:

**Notice:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

**Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) Seller or FMC, and, to the extent consistent with applicable law, Buyer assumes the risk of any such use.**

Treatment of seed, especially seed that is mechanically damaged or seed known to be of low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination tests on a small test sample of seed before treating commercial quantities with a selected chemical treatment that includes this product. Due to seed quality and seed storage conditions beyond the control of FMC, FMC makes no claims or guarantees as to germination of carry-over seed.

To the extent consistent with applicable law, FMC or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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