



We create chemistry

Bacillus amyloliquefaciens
strain MBI 600

Group

44

Fungicide

Integral[®]

Liquid Biofungicide

For use as an in-furrow treatment

Active Ingredient:

Bacillus amyloliquefaciens strain MBI 600*† 6.80%

Other Ingredients: 93.20%

Total: 100.00%

* **Integral[®] liquid biofungicide** contains a minimum of 2.2×10^{10} colony forming units per mL

† Formerly named *Bacillus subtilis* strain MBI 600

EPA Reg. No. 71840-5

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

You may contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).

Net Contents:

Batch Code: Located on physical container

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF for emergency medical treatment information at 1-800-832-HELP (4357).

Precautionary Statements

Personal Protective Equipment (PPE)

The PPE requirements apply to both Worker Protection Standard (WPS) uses (in general, agricultural-plant uses are covered by the Worker Protection Standard (40 CFR Part 170)) and Non-WPS uses.

Applicators and other handlers must wear:

- Long-sleeve shirt and long pants
- Waterproof gloves
- Shoes plus socks

Mixers/loaders and applicators must wear a NIOSH-approved particulate respirator with any N, P, or R filter with NIOSH-approval number prefix TC-84A or a NIOSH-approved powered air purifying respirator with an HE filter with NIOSH-approval number prefix TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Follow the 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.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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

Environmental hazards statements for the following container sizes: 3.4 fl ozs, 6.8 fl ozs, and 13.6 fl ozs

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. **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 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

NONAGRICULTURAL 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.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

Pesticide Storage

Ensure container closures are tight. Store in a cool, dry place.

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

For containers with capacities less than or equal to 5 gallons

Nonrefillable container. DO NOT reuse or refill this container. Triple rinse (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. Fill the container 1/4 full with water and recap. Shake for 10 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. **DO NOT** burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

Product Information

Integral® liquid biofungicide contains bacteria that colonize germinating seeds and inhibit seed pathogens such as *Alternaria* spp. The same bacteria then colonize the developing root systems of plants and suppress disease organisms that attack such root systems (e.g., *Fusarium* spp., *Rhizoctonia* spp. and under some conditions, *Pythium* spp.). As root systems develop, the bacteria grow with the roots, extending the protection throughout the growing season. Because of this biological protection, vigorous root systems are established by plants, which often results in more uniform stands, and greater yields.

In addition, **Integral** has been shown to increase root nodulation by nitrogen-fixing bacteria when used on legumes. This increase in nodulation is a result of a healthier root system allowing formation of more sites for nitrogen-fixing nodules.

Label statement required by the State of Oregon

Information regarding the contents and levels of metals in this product is available on the Internet at <http://www.aapfco.org/metals.html>

Use Limitations

Chemigation: DO NOT apply this product through any type of irrigation system.

Application Instructions

For Use as an In-Furrow Treatment

Mixing Instructions: Apply **Integral** as a water-based slurry alone, or with other in-furrow products (fungicides, insecticides, nematicides, fertilizers, etc.). Additionally, rhizobial inoculant products, such as BASF's **Vault® Liquid Peanut Rhizobial Inoculant**, can be added to the tank mix.

Prior to mixing, determine physical compatibility by mixing proportional quantities of the products in water. **DO NOT** mix **Integral** with any other in-furrow product that bears a label prohibition against such mixing. When tank mixing **Integral** with any other in-furrow product, observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

ATTENTION: If rhizobial inoculants are to be used in the tank mix with other in-furrow treatments (fungicides, insecticides, nematicides, fertilizers, etc.), make sure that they are compatible (not harmful) to the rhizobia. Likewise, use only cool, chlorine-free water in the tank mix. If one or more treatments are not compatible (harmful), mix those products in, and apply them from, a separate mix tank.

To mix, first add the other in-furrow product(s) and/or the rhizobial inoculant product(s) to the mix tank with approximately 1/2 of the required water. Slowly add **Integral** to the slurry until a uniform suspension is obtained. Add the remainder of the water while maintaining constant

agitation. **DO NOT** store mixed slurries for longer than 24 hours.

Application Instructions: For preventative control and suppression of seed pathogens (e.g., *Alternaria* spp.) and plant root pathogens (e.g., *Rhizoctonia* spp. and *Fusarium* spp.), apply **Integral® liquid biofungicide** in 2.5 to 20 gal (9 to 76 L) of water per acre via standard agricultural application machinery. Some ingredients in **Integral** may not completely solubilize; therefore, it is important to maintain a uniform suspension by continuously agitating the solution throughout the application process. **DO NOT** exceed label application dosage rates.

Peanuts - Vault® Liquid Peanut Rhizobial Inoculant Plus Integral

Integral can also be used in conjunction with rhizobia-based inoculant products, such as BASF's **Vault Liquid Peanut Rhizobial Inoculant**. When used in combination with the **Vault Liquid Peanut Rhizobial Inoculant**, **Integral** provides the additional benefit of improving the nodulation of the roots by rhizobia bacteria in the **Vault Liquid Peanut Rhizobial Inoculant**.

The **Vault Liquid Peanut Rhizobial Inoculant** consists of one (1) plastic bladder containing 1.1 gal (4.2 L).

The **Vault Liquid Peanut Rhizobial Inoculant** is co-packed in the same box with one (1) 3.4 fl ozs (100 mL) plastic bottle of **Integral**.

One (1) **Vault Liquid Peanut Rhizobial Inoculant** and one (1) 3.4 fl ozs (100 mL) bottle of **Integral** are designed to be used together to treat approximately 10 acres of peanuts.

Note that **Integral** is designed to work with the **Vault Liquid Peanut Rhizobial Inoculant**. Furthermore, the **Vault Liquid Peanut Rhizobial Inoculant** does not affect the activity of **Integral**.

Mix the one (1) plastic bottle of **Integral** with the one (1) plastic bladder of **Vault Liquid Peanut Rhizobial Inoculant**, and an appropriate quantity of chlorine-free water. For more detailed mixing instructions see directions on the outside panel of the **Vault Liquid Peanut Rhizobial Inoculant Plus Integral** co-pack box.

Conditions of Sale and 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. However, 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 the presence of other or untested or unapproved materials, seed of low quality or low vigor or low germination, use of the product in a manner inconsistent with its labeling, misapplication of this product, or weather conditions at planting or environmental conditions during seed storage, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THIS PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** that may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713


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