For mixing directly with liquid fertilizer to control listed soil pests.

EPA Reg. No. 279-3473  EPA Est. 279-NY-1

ACTIVE INGREDIENTS:   By Wt.
Bifenthrin *    ..............................................................15.67%
Bacillus amyloliquefaciens strain D747 **    ..........5.00%
Other Ingredients ........................................................................................................79.33%
Total:                                                                  100.00%

* Cis isomers 97% minimum, trans isomers 3% maximum
** Contains a minimum of 1x 10^10 colony-forming units (cfu) per milliliter
This product contains 1.5 lbs bifenthrin per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION

This label must be in the possession of the user at the time of application.

See other panels for additional precautionary information.

First Aid

If swallowed  • Call a poison control center or doctor immediately for treatment advice.
• Have 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.

If in eyes  • Hold eye open and rinse slowly 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 on Skin  • 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.

NOTE TO PHYSICIAN

This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

Precautionary Statements

Hazard to Humans (and Domestic Animals)

Caution
Harmful if swallowed. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE): Handlers who may be exposed to the concentrate through mixing, loading, application, or other tasks must wear:
• Long-sleeved shirt and long pants
• Waterproof gloves
• Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not reuse them. Follow the manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.
Environmental Hazards
This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county, consult the agency responsible for pesticide regulation. 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 required agreements specific to a 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 parts 190–195. This Section 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 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 12 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, Waterproof gloves, and Shoes plus socks.

Resistence Management
Some pests are known to develop resistance to pesticides that have been used repeatedly. While the development of pest resistance is well understood, it is not easily predicted. Therefore pesticides should be used in conjunction with the resistance management strategies in the area. Consult the local or State agricultural advisors for details. If pest resistance should develop in the area, this product used alone may not continue to provide sufficient levels of pest control. If the reduced levels of control are attributable to improper application technique, improper use rates, improper application timing, unfavorable weather conditions or abnormally high pest pressure, a resistant strain may have developed.

To reduce the potential for pesticide resistance use this product in a rotation program with other classes of chemistry and modes of action. Always apply this product at the recommended rates and in accordance with the use directions. Do not use less than recommended label rates alone or in tank mixtures. Do not use reduced rates of the tank mix partner. For optimum performance, scout fields carefully and begin applications when pests are smaller rather than larger. If resistance is suspected, contact the local or State agricultural advisors.

Application and Mixing Instructions
Shake well before using. Ethos XB Insecticide/Fungicide is an insecticide/fungicide that contains 1.5 pounds of bifenthrin per gallon along with Bacillus amyloliquefaciens strain D747 at a minimum of 1x10^10 colony-forming units (cfu) per milliliter. Bacillus amyloliquefaciens strain D747 is a naturally occurring beneficial bacterium used for control or suppression of fungal and bacterial plant diseases. Ethos XB Insecticide/Fungicide can be mixed directly with liquid fertilizer or with water. The rate of application is variable according to pest pressure, timing of treatments and field scouting. Use lower rates under light to moderate pest infestations, and higher rates under more severe pest pressure or in drier climates and crop canopy. Apply at a rate of 120–150 gallons per acre. Fill the tank one half full with liquid fertilizer or water and begin spray tank agitation. Add the proper amount of Ethos XB Insecticide/Fungicide, and then add the rest of the fertilizer or water. Maintain agitation until the mixture has been applied.

Agitate the Ethos XB Insecticide/Fungicide spray solutions in nurse tanks prior to moving the solution to spray system. Cultivation within 10 feet of a water body is prohibited to allow for the growth of a vegetated filter strip.

In New York State this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

Ethos XB Insecticide/Fungicide can be applied in-furrow with the seed, as a T-band (band over the open furrow), as a broadcast application, as a band over the row or as a transplant-water drench during setting. Refer to the individual crop use directions for pest control or suppression instructions.

Ethos XB Insecticide/Fungicide can be mixed with commonly used liquid starter or pop-up fertilizers. Follow liquid fertilizer recommendations regarding seed safety and use guidelines. Conduct a preliminary jar test using the appropriate ratio of fertilizer and Ethos XB Insecticide/Fungicide. Do not allow a tank mixture to set overnight, but if this occurs agitate tank mixture prior to application.

Crop Rotation Restrictions
Crops for which bifenthrin tolerances exist may be rotated at any time. All other crops may be rotated 30 days following the final application of bifenthrin.

Tank-Mixtures
Ethos XB Insecticide/Fungicide may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. To insure successful applications, product compatibility tests should be conducted.

Maximum Allowable Ethos Insecticide/Fungicide Use Per Acre Per Season
Refer to the individual crop sections for maximum allowable Ethos XB Insecticide/Fungicide use per acre per season. The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the many months period. The 12 month period is to begin upon the initial application to the acre.

BUFFER ZONES
Vegetative Buffer Zones
Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing bifenthrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.


Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast) – Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Buffer Zone for ULV Aerial Operations – Do not apply within 50 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Buffer Zone for Non-ULV Aerial Operations – Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Spray Drift Requirements
Wind Direction and Speed
Only apply this product if the wind direction favors off-target deposition. Do not apply when the wind velocity exceeds 15 mph.

Temperature Inversion
Do not make aerial or ground applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the...
ground surface.

**Droplet Size**

Use only Medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (SS572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

**Additional Requirements for Ground Applications**

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application. For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

**Flight speed and nozzle orientation must be considered in determining droplet size.**

**Additional Requirements for Aerial Applications**

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

**Flight speed and nozzle orientation must be considered in determining droplet size.**

**Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.**

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

**CORN (AT PLANT)**

**Field Corn (Grain and Silage), Popcorn, Field Corn Grown for Seed, Sweet Corn, Sweet Corn Grown for Seed**

When applied as directed, Ethos XB Insecticide/Fungicide will provide control of the pests listed in the table below. Apply as a 5 to 7 inch band (T-band) over an open furrow, or in-furrow with the seed. For Army cutworm, Stalkborer, Cutworm species, True armyworm or Armyworm species, apply as a 5 to 7 inch band over the row on the soil surface, a 5 to 7 inch band over the open furrow (T-band), in-furrow with the seed, or broadcast to the soil surface.

### **PEST**

<table>
<thead>
<tr>
<th>USE RATES</th>
<th>USE RATES</th>
<th>USE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid oz/acre</td>
<td>Fluid oz/1000 Linear ft</td>
<td>Pound bifenthrin/acre</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Corn rootworm larvae (Northern, Southern and Western)</td>
<td>6.8 to 17.0</td>
<td>0.39 - 0.98</td>
</tr>
<tr>
<td>Wireworm, Grape colaspis, Grub, Seedcorn maggot, Root aphids, Army cutworm, Cutworm species, True armyworm or Armyworm species, Stalkborer, Seed corn beetle, Sugarcane beetle</td>
<td>3.4 to 17.0</td>
<td>0.2 - 0.98</td>
</tr>
<tr>
<td><strong>Suppression of “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, or Phytophthora</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Restrictions:**

Do not apply more than 0.2 pound bifenthrin active per acre per season as an at-plant application.

**For field corn:** Do not apply more than 0.3 pound bifenthrin active ingredient per acre per season including ppi, at-plant, pre-emergence, and foliar applications of other bifenthrin products.

**For sweet corn:** Do not apply more than 0.2 pound bifenthrin active ingredient per acre total per season including ppi, at-plant, pre-emergence, and foliar applications of other bifenthrin products.

### **PEST**

<table>
<thead>
<tr>
<th>USE RATES</th>
<th>USE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid oz/acre</td>
<td>Pound bifenthrin/acre</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Black Cutworm</td>
<td>4 to 5.3</td>
</tr>
<tr>
<td>Grape colaspis</td>
<td>Pre-Plant</td>
</tr>
<tr>
<td>Wireworm</td>
<td>Incorporated (PPI)</td>
</tr>
<tr>
<td>Seedcorn maggot</td>
<td>0.047 to 0.082</td>
</tr>
<tr>
<td>Armyworm species</td>
<td>Pre-Plant</td>
</tr>
<tr>
<td>Seed corn beetle</td>
<td>Incorporated (PPI)</td>
</tr>
<tr>
<td>Black Cutworm</td>
<td>3.4</td>
</tr>
<tr>
<td>Armyworm species</td>
<td>Pre-Emergence</td>
</tr>
<tr>
<td>Stalkborer</td>
<td>(PRE)</td>
</tr>
<tr>
<td>Seed corn beetle</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Suppression of “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, or Phytophthora</strong></td>
<td>3.4 to 5.3</td>
</tr>
<tr>
<td></td>
<td>(PPI and PRE)</td>
</tr>
<tr>
<td></td>
<td>0.04 to 0.082</td>
</tr>
<tr>
<td></td>
<td>(PPI and PRE)</td>
</tr>
</tbody>
</table>

**Restrictions:**

* Use highest application rate for better disease management, however, under moderate to severe disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, mix Ethos XB Insecticide/Fungicide with other fungicides for improved performance.

**Restrictions:**

* Use highest application rate for better disease management, however, under moderate to severe disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, mix Ethos XB Insecticide/Fungicide with other fungicides for improved performance.

**For field corn:** Do not apply more than 0.3 pound bifenthrin active ingredient per acre per season including ppi, at-plant, pre-emergence, and foliar applications of other bifenthrin products.

**For sweet corn:** Do not apply more than 0.2 pound bifenthrin active ingredient per acre total per season including ppi, at-plant, pre-emergence, and foliar applications of other bifenthrin products.
STORAGE AND DISPOSAL
Do not contaminate water, food, or feed by storage and disposal.
Pesticide Storage
If storing this product below freezing, user should shake or roll the container to ensure proper product consistency. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Store at less than 95°F. Carefully open containers. After partial use, replace lids 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): (800) 424-9300. To confine spill, dig surrounding area or absorb with sand, cat litter or commercial clay. Place damaged package in a holding container. Identify contents.
Pesticide Disposal
Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Container Disposal
U-Turn® Container: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.
Metal or Plastic Container: Non-refillable container (in sizes 5 gallons or less) - Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds, pour rinsate into application equipment or mix tank or store rinsate for future use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or reconditioning, or puncture and dispose of in sanitary landfill, incinerated, or otherwise disposed of by State and local authorities. Do not cut or weld metal containers.
Non-refillable container (in sizes greater than 5 gallons) - Do not reuse or refill the container. Triple rinse or pressure rinse. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip back and forth several times. Turn the container over onto its other end and tip back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Returnable/Refillable Containers (if other than U-Turn Container): Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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 or FMC or Seller. 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 buyer assumes the risk of any such use.

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.

Ethos and FMC - Trademarks of FMC Corporation
© 2015 FMC Corporation. All rights reserved.