

<b>GROUP</b>	<b>4A</b>	<b>INSECTICIDE</b>
<b>GROUP</b>	<b>4 12</b>	<b>FUNGICIDES</b>

# UPSHOT™

**SOYBEANS**

SEED TREATMENT

## INSECTICIDE WITH FUNGICIDES

A seed treatment product for protection against damage from listed insects, seed-borne diseases, and seedling diseases on soybean

EPA Reg. No. 100-1427-279 EPA Est. 067497-IL-001

ACTIVE INGREDIENTS:	By Wt.
Thiamethoxam*	23.10%
Mefenoxam**	3.46%
Fludioxonil***	1.15%
Other Ingredients	72.29%
Total:	100.00%

\*CAS No. 153719-23-4

\*\*CAS No. 70630-17-0 and CAS No. 69516-34-3

\*\*\*CAS No. 131341-86-1

One gallon of UpShot Soybeans Seed Treatment contains 2.17 lb thiamethoxam, 0.33 lb mefenoxam and 0.11 lb fludioxonil.

## KEEP OUT OF REACH OF CHILDREN CAUTION

See other panels for additional precautionary information.

Sold By:



**FMC Corporation**  
2929 Walnut Street  
Philadelphia PA 19104

**NET CONTENTS: 15 Gallon**

### 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**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 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 treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

### HOT LINE NUMBER

**FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE:** Call **PROSAR** at 1-800-331-3148.

**FOR 24-HOUR CHEMICAL EMERGENCY** (spills, leaks, fire, exposure or accident) call **CHEMTREC:** 1-800-424-9300.

For non-emergency (e.g., current product information), call **FMC** at 215-299-6000.

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

#### CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet.

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category C on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:** Long-sleeved shirt and long pants, Chemical-resistant gloves made of any waterproof material – Category C (e.g., barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride [PVC] ≥ 14 mils, or Viton® ≥ 14 mils), Shoes plus socks.

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

#### Engineering Control Statements

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)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### User Safety Recommendations:

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### Environmental Hazards

This product is highly toxic to fish and wildlife and highly toxic to aquatic invertebrates. Exposed treated seed may be hazardous to wildlife. Do not contaminate water when disposing of equipment washwater.

### Physical and Chemical Hazards

Do not use, pour, spill or store near heat or open flame.

## 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. All such risks shall be assumed by Buyer and User, and, to the extent permitted by applicable law, 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 PERMITTED BY 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 permitted by applicable law, buyer assumes the risk of any such use.**

To the extent permitted by 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 PERMITTED BY 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.

## DIRECTIONS FOR USE

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

### 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 48 hours.** Exception: If the seed is treated with the product and the treated seed 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 – Category C (e.g., barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride [PVC] ≥ 14 mils, or Viton® ≥ 14 mils), Shoes plus socks.

### FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR INSECT AND/OR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.

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. Treat a quantity of seed using equipment similar to that planned for treating the total seed lot. Prior to treatment, conduct germination tests on a portion of seed before committing the total seed lot to a selected seed treatment.

Due to seed quality, crop or variety sensitivity, and seed storage conditions beyond the control of FMC, no claims are made to guarantee the

germination of seed or propagating material for all crop seed when treated with UpShot Soybeans.

## USE INFORMATION

UpShot Soybeans is a seed treatment product containing the active ingredients: thiamethoxam (insecticide) and fludioxonil and mefenoxam (fungicides). UpShot Soybeans Seed Treatment protects against damage from listed early season insects, soil-borne and seed-borne diseases of soybeans.

Thiamethoxam is a systemic seed treatment insecticide belonging to the neonicotinoid class of chemistry. Thiamethoxam protects against listed chewing and sucking insects through contact and ingestion.

Mefenoxam fungicide is active against Pythium, Phytophthora and systemic downy mildew.

Fludioxonil fungicide is active against Fusarium, Rhizoctonia, and suppresses seed-borne Sclerotinia and Phomopsis species.

## MIXING PROCEDURES

**Important:** Always re-circulate UpShot Soybeans thoroughly before using.

The typical density of UpShot Soybeans Seed Treatment is 9.41 pounds per gallon. Consult the manufacturer of the application equipment you plan to use for suitability for this application and for instructions on operation and calibration of the equipment. Follow the manufacturer application instructions for the seed treatment equipment being used.

Apply UpShot Soybeans Seed Treatment as a water-based slurry utilizing standard slurry seed treatment equipment which provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of disease control. Thoroughly mix the specified amount of UpShot Soybeans Seed Treatment into the required amount of water or liquid inoculant for the slurry treater and dilution rate to be used.

Certain crops require addition of inoculants when the seed is treated or planted. UpShot Soybeans Seed Treatment is compatible with several liquid inoculant products. Consult the maker of the inoculant product and a FMC representative for directions before applying UpShot Soybeans Seed Treatment with inoculants.

Under certain disease conditions, additional amounts of fungicides may be required. When needed, apply additional Apron XL® according to the **CROP USE DIRECTIONS**. Other tank mix partners may be used with UpShot Soybeans Seed Treatment; however, the user must consider the use rate, formulation, seed and crop safety factors and compatibility of each product to be mixed when determining the total application volume.

The total application volume must be sufficient to provide desired level of coverage. Dilution is typically done with water or liquid inoculants. The minimum slurry volume to achieve adequate coverage is 4.0 fluid ounces per 100 pounds of seed. More diluent may be required to obtain complete coverage.

Continuous agitation or mixing of the slurry mixture is necessary to prevent settling out of the solution.

Use an EPA-approved dye or colorant that imparts an unnatural color to the seed as required in 40 CFR 153.155 (c).

Allow seed to dry before bagging.

Follow planter manufacturer specifications for use of talc or other hopper box additives at planting. Seed must be completely dry before adding to planter.

## SEED BAG LABEL REQUIREMENTS

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

- This seed has been treated with thiamethoxam insecticide and fludioxonil and mefenoxam fungicides.
- Do not use for feed, food, or oil purposes.
- User is responsible for ensuring that the seed bag meets all requirements under the Federal Seed Act.

In addition, the U.S. Environmental Protection Agency requires the following statements on bags containing seeds treated with UpShot Soybeans Seed Treatment:

### • Ground Water Advisory:

Thiamethoxam has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into the ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Mefenoxam is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

### • Pollinator Precautions:

Thiamethoxam is highly toxic to bees, and effects are possible as a result of exposure to translocated residues in blooming crops.

- Store away from feeds and foodstuffs.
- Wear long-sleeved shirt, long pants and chemical resistant gloves when handling treated seed.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds spilled during loading.

- Treated seed must be planted into the soil at a depth greater than 1 inch.
- Dispose of all excess treated seed. Leftover treated seed may be doublesown around the headland or buried away from water sources in accordance with local requirements.
- Do not contaminate water bodies when disposing of planting equipment wash waters.
- Dispose of seed packaging in accordance with local requirements.
- In the event of a crop failure or harvest of a crop grown from UpShot Soybeans Seed Treatment treated seed, the field may be replanted immediately to alfalfa, Brassica (cole) leafy vegetables, cereal grains (including barley, buckwheat, corn, pearl millet, proso millet, oats, popcorn, rice (dry-seeded), rye, sorghum, teosinte, triticale, wheat and wild rice), canola, cotton, cucurbit vegetables, dry bulb onions, fruiting vegetables, leafy vegetables, legume vegetables, mint (peppermint and spearmint), oil seed crops (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, rapeseed seed, and safflower seed), peanuts, root vegetables, strawberry, sunflowers, tobacco, and tuberous and corm vegetables. For any other crop, the minimum plant-back interval is 120 days from the date UpShot Soybeans Seed Treatment treated seed was planted. A cover crop other than the crops listed above that is planted for erosion control or soil improvement may be planted sooner than the 120 day interval; however, the crop may not be grazed or harvested for food or feed.
- Do not allow children, pets, or livestock to have access to treated seed.
- Do not use at a rate that will result in more than 0.083 lb thiamethoxam per acre (37.8 grams ai/A) as a seed treatment application.
- This seed has been treated with 0.0756 mg ai thiamethoxam, 0.0113 mg ai mefenoxam and 0.0038 mg ai fludioxonil per seed.
- Do not apply a neonicotinoid insecticide within 45 days of planting seed treated with UpShot Soybeans.
- Excess treated seed may be used for ethanol production only if (1) by-products are not used for livestock feed and (2) no measurable residues of pesticide remain in the ethanol by-products that are used in agronomic practice.

## CROP USE PRECAUTIONS

### Resistance Management

UpShot Soybeans Seed Treatment contains thiamethoxam, a Group 4A insecticide; fludioxonil, a Group 12 fungicide; and mefenoxam, a Group 4 fungicide.

Some insect pests are known to develop resistance to products after repeated use. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area. FMC encourages responsible product stewardship to ensure effective long-term control of the insects on this label.

UpShot Soybeans Seed Treatment contains the fungicide mefenoxam, a systemic fungicide having a specific mode of action against fungal pathogens.

**Note:** The fungicide mefenoxam contained in this product could be subject to development of insensitive strains of fungi or may be ineffective against naturally occurring strains of fungi. Development of insensitivity or natural tolerance cannot be predicted. Therefore, FMC cannot assume liability for crop damage resulting from insensitive or tolerant strains of fungi. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance and ways to control any possible insensitive or tolerant strains of fungi which may occur.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

UpShot Soybeans Seed Treatment contains a Group 4A insecticide (thiamethoxam, belonging to the neonicotinoid class of chemistry). Insect biotypes with acquired or inherent resistance to Group 4A insecticides may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species. This may result in partial or total loss of control of those species by UpShot Soybeans Seed Treatment or other Group 4A insecticides.

### In order to maintain susceptibility to this class of chemistry:

- Avoid using Group 4A insecticides exclusively for season long control of insect species with more than one generation per crop season.
- For insect species with successive or overlapping generations, apply UpShot Soybeans Seed Treatment or other Group 4A insecticides using a “treatment window” approach. A treatment window is a period of time as defined by the stage of crop development and/or the biology of the pests of concern. Within the treatment window, depending on the length of residual activity, there may either be single or con-

secutive applications (seed treatment, soil, foliar, unless otherwise stated) of the Group 4A insecticides. Do not exceed the maximum UpShot Soybeans allowed per growing season.

- Following a treatment window of Group 4A insecticides, rotate to a treatment window of effective products with a different mode of action before making additional applications of Group 4A insecticides.
- A treatment window rotation, along with other IPM practices for the crop and use area, is considered an effective strategy for preventing or delaying a pest’s ability to develop resistance to this class of chemistry.
- If resistance is suspected, do not reapply UpShot Soybeans Seed Treatment or any other Group 4A insecticides.

### Other Insect Resistance Management (IRM) practices include:

- Incorporating IPM techniques into your insect control program.
- Monitoring treated insect populations for loss of field efficacy.
- Using tank-mixtures or premixes with insecticides from a different target site of action group as long as the involved products are all registered for the same crop outlet and effective rates are applied.

### For additional information on Insect Resistance Management:

- Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations.
- Visit the Insecticide Resistance Action Committee (IRAC) on the web at: <http://www.irac-online.org/>.

Consult your local pest control advisor or extension office for additional methods for preventing resistance development. FMC encourages responsible product stewardship to ensure effective long term control of the insect pests on this label.

## CROP USE DIRECTIONS

When applied according to the UpShot Soybeans Seed Treatment Rate Table, UpShot Soybeans Seed Treatment provides early season protection against injury by aphids, bean leaf beetle, grape colaspis, leaf miners, leaf hoppers, Mexican bean beetle, seed corn maggot, three-cornered alfalfa hopper, thrips, white grubs, and wireworm.

UpShot Soybeans Seed Treatment provides protection against damping-off and seed borne rots due to *Pythium*, *Phytophthora*, *Fusarium*, *Rhizoctonia* species and early season *Phytophthora* root rot. UpShot Soybeans also suppresses seed-borne *Sclerotinia* and *Phomopsis* species.

### UpShot Soybeans Seed Treatment Rate Table<sup>1</sup>

Crop	Rate of UpShot Soybeans Seed Treatment		Optional Treatment Addition of Apron XL (See When to Add Additional Apron XL* for treatment details.)		
	fl oz per 100 lb seed or fl oz per 140,000 seeds	grams ai per 100 kg seed	mg ai per seed	fl oz per 100 lb seed or gm ai per 100 kg	mg ai per seed or fl oz per 1,000 seeds or fl oz per 140,000 seeds
Soybean including soybean, vegetable	2.94 fl oz or 1.37 fl oz per 140,000 seeds	Thiamethoxam 50 gm Mefenoxam 7.5 gm Fludioxonil 2.5 gm	Thiamethoxam 0.0756 mg Mefenoxam 0.0113 mg Fludioxonil 0.0038 mg Total = 0.0907 mg	0.16-0.32 fl oz or 3.75-7.50 gm ai per 100 kg seed	0.0057-0.0113 mg ai per seed or 0.00053-.00107 fl oz per 1,000 seeds or 0.075-0.149 fl oz per 140,000 seeds

<sup>1</sup>The mg ai per seed, fl oz UpShot Soybeans Seed Treatment per 100 lb seed and fl oz product per 140,000 seed rates are based on 3,000 seeds per pound.

\* When to Add Additional Apron XL:

If target fields have a history of high *Phytophthora* pressure, add additional Apron XL as directed in the rate table and the Apron XL label. The additional Apron XL may reduce compatibility with some rhizobia inoculants. Consult with the maker of rhizobia inoculants before adding the additional Apron XL.

## Stored Grain Protection

When treated according to the directions for post-planting protection against listed pests, UpShot Soybeans Seed Treatment will also provide protection during post treatment storage of the soybean seed against damage from the following stored grain insects: Indian Meal Moth (*Plodia interpunctella*), Rice Weevil (*Sitophilus oryza*), Red Flour Beetle (*Tribolium castaneum*), and Lesser Grain Borer (*Rhizopertha dominica*). If the soybean seed to be treated has existing infestations of stored grain insects, fumigate the seed with a registered product approved for such use, prior to treating with UpShot Soybeans Seed Treatment and bagging.

## **STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment.

### **Pesticide Storage**

Store in a cool, dry place. Storage for extended periods above 90°F is not recommended.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

### **Pesticide Disposal**

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

### **Container Handling [5 gallons or less]**

**Non-refillable container.** Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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 and 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, or by other procedures allowed by state and local authorities.

### **Container Handling [greater than 5 gallons]**

**Non-refillable 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. Fill the container 1/4 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 it back and forth several times. Turn the container over onto its other side and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refillable container.** Refill this container with UpShot Soybeans 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 person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or re-circulate 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!**

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