A seed treatment product for protection against certain seed and seedling diseases of crop plants

Manufactured by:
ALBAUGH, INC.
1525 NE 36th Street
Ankeny, Iowa 50021

FOR CHEMICAL SPILL, LEAK, FIRE, OR EXPOSURE, CALL CHEMTREC (800) 424-9300
PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if absorbed through skin or inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing vapors or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride (PVC) or Viton. If you want more options, follow the instructions for Category C on an EPA chemical resistance category selection chart.
- Shoes plus socks

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 CONTROL STATEMENTS

When handlers used 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:
1. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
2. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. 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

This product is toxic to fish and aquatic invertebrates. 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 contaminate water when disposing of equipment wash water or rinsates.

CHEMICAL HAZARDS

Do not store near or use with oxidizing agents.

DIRECTIONS FOR USE

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

FLUDIOXONIL 4L ST must be used only in accordance with directions on this label or in separately published Albaugh, Inc. supplemental labeling approved by EPA for 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 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 12 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, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride (PVC) or Viton
- Shoes plus socks

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR 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, except for the purpose of curative control of existing disease pests, may result in reduced germination and/or reduction of seed and seedling vigor. Treat using equipment similar to that planned for treating the total seed lot. Conduct germination tests on a small portion of seed before committing the total seed lot to a selected seed treatment. Due to seed quality and seed storage conditions beyond the control of Albaugh, Inc., no claims are made to guarantee the germination of carry-over seed or propagating material for all crop seed.

INFORMATION

FLUDIOXONIL 4L ST is a seed treatment fungicide which provides protection against certain soil-borne and seed-borne diseases of crop plants. FLUDIOXONIL 4L ST is active against Fusarium, Rhizoctonia, Helminthosporium, and weakly pathogenic fungi such as Aspergillus and Penicillium. When rate ranges are given, use higher rate when disease pressure is expected to be severe.

MIXING PROCEDURES

Apply FLUDIOXONIL 4L ST 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 FLUDIOXONIL 4L ST into the required amount of water for the slurry treater and dilution rate to be used. Follow the manufacturer application instructions for the seed treatment equipment being used. Maintain constant agitation of the slurry during the treatment. Allow seed to dry before bagging. Treated seed bagged for later use must contain an EPA-approved dye or colorant that imparts an unnatural color to the seed.

Federal law requires that bags containing treated seed shall be labeled with the following information: “This seed has been treated with fludioxonil fungicide. Do not use for feed, food, or oil purposes. Store away from feed and foodstuffs. Forage may not be grazed until 30 days after planting.”

FLUDIOXONIL 4L ST does not control diseases caused by Pythium spp. or Phytophthora spp. If these diseases are expected to be a problem, apply FLUDIOXONIL 4L ST tank mixed with Apron XL®. If Apron XL is not registered on that crop, apply Maxim as a tank mix with another labeled seed treatment product that has activity against these diseases. Consult the label for appropriate use rate and follow all use instructions for the products.

Follow the label directions for the most restrictive of label precautions and limitations. This product cannot be mixed with any product containing a label prohibition against such mixing.

BRASSICA (COLE) LEAFY VEGETABLE GROUP

Broccoli (including Chinese and raab), Brussels sprouts, cabbage (including Chinese bok choy, Chinese napa, and Chinese mustard), cauliflower, cabbage, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, and rape greens.

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

BULB VEGETABLES

Garlic (including great headed), leek, onion (dry bulb and green), Welch onion, and shallot.

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed or propagating material.

CEREAL GRAINS (includes Forage and Silage)

Barley, buckwheat, corn (field corn, popcorn, and sweet corn), millet (pearl and proso), oats, rice, rye, sorghum, teosinte, triticale, wheat, and wild rice.

Corn (Field Corn and Popcorn):

For protection against seed-borne and soil-borne fungi which cause seed decay, damping-off, and seedling blights, and for control of seed-borne head smut (Sphacelotheca reiliana), apply FLUDIOXONIL 4L ST as shown below. For Pythium spp. control, use FLUDIOXONIL 4L ST in combination with labeled rates of Apron XL and Dynasty®. Observe all precautions, limitations, rates, and directions for use on the respective labels before applying.

<table>
<thead>
<tr>
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FLUDIOXONIL 4L ST contains 14.18 grams of active ingredient per ounce.

Grain Sorghum:

For protection against seed-borne and soil-borne fungi which cause seed decay, damping-off, and seedling blights, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed (0.0008 – 0.0016 mg fludioxonil per seed*).

Apply Apron XL in combination with FLUDIOXONIL 4L ST for protection against damping-off due to Pythium spp. Apply 0.32 – 0.64 fl. oz. of Apron XL per 100 lbs. of seed (0.0023 – 0.0047 mg mefenoxam per seed*) tank mixed with labeled rates of FLUDIOXONIL 4L ST.

For systemic downy mildew control on cultivars which possess sorghum downy mildew resistance, apply 0.64 fl. oz. of Apron XL per 100 lbs. of seed (0.0047 mg mefenoxam per seed*) as a tank mix with recommended rates of FLUDIOXONIL 4L ST. To those cultivars which do not possess resistance to a particular race of sorghum downy mildew grown in areas with recent history of severe disease, apply 1.28 fl. oz. of Apron XL (0.0094 mg mefenoxam per seed*) tank mixed with recommended rates of FLUDIOXONIL 4L ST. Follow all application instructions found on the Apron XL label.

*Based upon 14,500 seeds per pound of sorghum seed.
Note: Seed treated with the 1.28 fl. oz. of Apron XL should be planted and not stored or carried over to the following year. Only high quality sorghum seed (>90% germ) should be treated with Apron products.

Rice:
For protection against seed-borne and soil-borne fungi which cause seed decay, damping-off, and seedling blights, apply 0.02 to 0.08 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

Sweet Corn:
For protection against seed-borne and soil-borne fungi which cause seed decay, damping-off, and seedling blights, apply 0.08 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

Apply Apron XL seed treatment product in combination with FLUDIOXONIL 4L ST for protection against damping-off due to Pythium spp. Apply Apron XL at 0.32 fl. oz. per 100 lbs. of seed tank mixed with the label rates of FLUDIOXONIL 4L ST. For protection against systemic downy mildew of sweet corn, apply Apron XL at 1.28 fl. oz. per 100 lbs. of seed tank mixed with label rates of FLUDIOXONIL 4L ST. Follow application and other instructions found on the Apron XL product label.

For all other cereal crops:
For protection against seed-borne and soil-borne fungi which cause seed decay, damping-off, and seedling blights, apply 0.08–0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

Important:
(1) Do not use treated seed for feed, food, or oil.  
(2) Cereal forage may not be grazed until 30 days after planting.

CUCURBIT VEGETABLES

Chayote, Chinese waxgourd, citron melon, cucumber, gherkin, gourd edible (includes hyotan, cucuzza, hechima, Chinese okra), Momordica, all muskmelon, pumpkin, all squash, and watermelon.

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

FLAX, COTTON, CRAMBE, JOJOBA, LESQUERELLA, RAPE, SAFFLOWER, SUNFLOWER

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

For sunflower, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed or 0.0025 - 0.005 mg active ingredient per seed.

FRUITING VEGETABLES EXCEPT CUCURBITS

Eggplant, groundcherry, pepino, pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), tomatillo, and tomato.

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

GRASS FORAGE, FODDER, AND HAY

All grasses (including turfgrass, bermudagrass, bluegrass, and fescue or bromegrass), Gramineae family (either green or cured) except sugarcane and those included in the cereal grains group, that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage.

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed or propagating root or tuber material.

Important: Forage may not be grazed until 30 days after planting.

HERBS AND SPICES

Allspice, angelica, anise, anise (star), annatto, balm, basil, borage, burnet, camomile, caper buds, caraway, caraway black, cardamom, cassia bark, cassia buds, catnip, celery seed, chervil, chive, Chinese chive, cinnamon, clary, clove buds, coriander (Chinese parsley or cilantro), costmary, culantro (seed), cumin, curry (leaf), dill seed and dill weed, common fennel and florence fennel, fenugreek, grains of paradise, horehound, hyssop, juniper berry, lavender, lemongrass, lovage, lovage seed, mace, marigold, marjoram, mustard (seed), nasturtium, nutmeg, parsley (dried), pennyroyal, pepper (black and white), poppy seed, rosemary, rue, saffron, sage, savory (summer and winter), sweet bay, tansy, tarragon, thyme, vanilla, wintergreen, woodruff, wormwood.

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed or propagating root or tuber material.
LEAFY VEGETABLES (except Brassica)

Amaranth (leafy, Chinese spinach, tampala), arugula, cardoon, celery (including Chinese), celtuce, chervil, chrysanthemum (edible-leaved and garland), corn salad, cress (garden and upland), dandelion, dock, endive, fennel (finocchio), lettuce (head and leaf), orach, parsley, purslane (garden and winter), radicchio, rhubarb, spinach (including New Zealand and vine), and Swiss chard.

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

LEGUME VEGETABLES (Succulent or Dry) (except Soybeans)

Bean (Lupinus spp. – includes grain lupin, sweet lupin, and white lupin), bean (Phaseolus spp. – includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, and wax bean), bean (Vigna spp. – includes adzuki bean, asparagus bean, black-eyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, and yardlong bean), broad bean, chickpea, guar, jackbean, lablab bean, lentils, pea (dwarf, edible-pod, English, garden, green, snow, sugar snap), pigeon pea, soybean (immature), and sword bean.

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed or propagating root or tuber material.

NON-GRASS ANIMAL FEEDS (Forage, Fodder, Straw, and Hay)

Alfalfa, bean (velvet), clover, kudzu, lespedeza, lupin, sainfoin, trefoil, vetch (including crown vetch and milk vetch).

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

Important: Forage may not be grazed until 30 days after planting.

PEANUTS

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed.

ROOT AND TUBER VEGETABLES

Arracacha, arrowroot, artichoke (Chinese and Jerusalem), beet (garden and sugar), burdock (edible), canna (edible), carrot, cassava (bitter and sweet), celery root, chayote, chervil, chicory, chufa, dasheen, ginger, horseradish, leren, parsley, parsnip, potato (0.08 fl. oz. only), radish (including Oriental), rutabaga, salsify (oyster, black, and Spanish), skirret, sweet potato, tanier, turmeric, turnip, yam bean (jicama, maonic pea), and true yam.

For protection against seed-borne and soil-borne fungi which cause decay, damping-off, and seedling blight, apply 0.08 – 0.16 fl. oz. of FLUDIOXONIL 4L ST per 100 lbs. of seed or propagating root or tuber material.

Note for Application to Potato:
FLUDIOXONIL 4L ST applications to potato seed pieces must be made only through specific types of equipment. Please contact your Albaugh, Inc. seed treatment representative to obtain information on proper equipment for application.

Note for Potatoes Intended for Seed Production:
As a resistance management strategy, if FLUDIOXONIL 4L ST is used on potatoes intended for seed production, a labeled rate of mancozeb seed treatment dust must be applied to seed tubers after the FLUDIOXONIL 4L ST treatment. If the mancozeb dust is not used, an in-furrow application of Quadris® at 0.40 fl. oz./1,000 ft. of row or Amistar® at 0.13 fl. oz./1,000 ft. of row must be applied over the Maxim-treated seed tubers.

SOYBEANS

For protection against seed-borne and soil-borne fungi which cause decay, damping-off and seedling blight, apply FLUDIOXONIL 4L ST as shown here:

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FLUDIOXONIL 4L ST contains 14.18 grams of active ingredient per ounce. Based on 3,000 soybean seeds per pound.

SEED TREATMENT – EXPORT USE

FOR TREATMENT OF THE SEED FOR EXPORT ONLY TO COUNTRIES REQUIRING TREATMENT WITH FLUDIOXONIL 4L ST AND APRON XL BEFORE IMPORTATION.

User should verify actual registered rate in country of destination and/or use.

Seed treated in accordance with the export use pattern must be labeled as follows:
“TREATED SEED. FOR EXPORT ONLY – NOT FOR DOMESTIC SALE OR USE. TREATED WITH THE FUNGICIDE, FLUDIOXONIL.”
USE RESTRICTIONS:
• Store treated seed away from food and feedstuffs.
• Do not allow children, pets or livestock to have access to treated seeds.
• Wear long pants, long-sleeved shirt and protective gloves when handling treated seed.
• Treated seed exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds spilled during loading and planting.
• Dispose of all excess treated seed by burying seed away from bodies of water.
• Do not contaminate bodies of water when disposing of planting equipment wash water.
• Dispose of seed package or containers in accordance with local requirements.

For seeds that are treated and bagged for later use the following must appear on the bag:
“This seed has been treated with fludioxonil seed treatment. Do not use treated seed for feed, food or oil purposes.”

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry, secure place.

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 (less than 5 gallons):
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 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 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, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

CONTAINER HANDLING (greater than 5 gallons):
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. 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 once 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 end 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, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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.

CONDITIONS OF SALE AND LIMITATION
OF WARRANTY AND LIABILITY

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, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ALBAUGH CROP PROTECTION, Inc. or Seller. To the extent permitted by applicable law, Buyer and User agree to hold ALBAUGH and Seller harmless for any claims arising out of or in connection with the use of this product. To the extent permitted by applicable law, Buyer and User agree to hold ALBAUGH and Seller harmless for any claims based on breach of warranty, contract, negligence, tort, strict liability or otherwise resulting from the use or handling of this product.

ALBAUGH warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or ALBAUGH, and, (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, ALBAUGH MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall ALBAUGH 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 ALBAUGH 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) ARISING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ALBAUGH OR SELLER, THE REPLACEMENT OF THE PRODUCT.

ALBAUGH and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of ALBAUGH.