



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

November 2, 2015

Ms. Patricia G. Devine  
Product Registration Manager  
E.I. DuPont de Nemours and Company  
DuPont Crop Protection  
P.O. Box 30  
Newark, DE 19714-0030

Subject: Label Amendment – Revising Insect Resistance Management Language, and Add New Tank Mix and Compatibility, Spray Drift Management, Warranty/Stewardship Language, and New Pest Claims  
Product Name: DuPont Steward EC Insecticide  
EPA Registration Number: 352-638  
Application Date: July 17, 2015  
Decision Number: 507239

Dear Ms. Devine:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements 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 Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Eric Bohnenblust by phone at (703) 347-0426, or via email at [Bohnenblust.eric@epa.gov](mailto:Bohnenblust.eric@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Gebken", written in a cursive style.

Richard Gebken  
Product Manager 10  
Invertebrate & Vertebrate Branch 2  
Office of Pesticide Programs

Enclosure



# DuPont™ Steward® EC

## INSECTICIDE

GROUP	22	INSECTICIDE
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### Emulsifiable Concentrate

Contains 1.25 lbs. Active Ingredient per gallon.

#### Active Ingredient

By Weight

Indoxacarb	
(S)-methyl 7-chloro-2,5-dihydro-2-[[[(methoxycarbonyl)[4-(trifluoromethoxy)phenyl]amino]carbonyl]indeno [1,2-e][1,3,4]oxadiazine-4a(3H)-carboxylate	15.84%
<b>Other Ingredients</b>	84.16%
<b>TOTAL</b>	100%

EPA Reg. No. 352-638

Nonrefillable Container

Net: \_\_\_\_\_

OR

Refillable Container

Net: \_\_\_\_\_

**ACCEPTED**

11/02/2015

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 352-638

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

## KEEP OUT OF REACH OF CHILDREN CAUTION

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.)

### 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:** Remove 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 treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-441-3637** for emergency medical treatment information.

## PRECAUTIONARY STATEMENTS HAZARDS 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. Harmful if inhaled. Avoid breathing (dust, vapor or spray mist). Remove contaminated clothing and wash clothing before reuse.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

### PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical resistant to this product are listed below. If you want more instructions, refer to Category A on the EPA chemical resistance category selection chart.

#### Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber), all ≥14 mls.

Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. When handlers use closed systems, enclosed cabs, or aircraft 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. **IMPORTANT:** when reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicator and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

### **USER SAFETY RECOMMENDATIONS**

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

### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to mammals, birds, fish and aquatic invertebrates. 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 rinsewater. Do not apply where/when conditions could favor runoff. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

This product is highly toxic to bees exposed to direct treatment 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.

### **DIRECTIONS FOR USE**

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

DuPont™ STEWARD® EC insecticide must be used only in accordance with the directions on this label, in separate EPA approved labeling or exemptions under FIFRA (Supplemental Labels, Special Local Need Registrations, FIFRA Section 18 exemptions, FIFRA 2(ee) Bulletins), or as otherwise permitted by FIFRA. Always read the entire label, including the Limitation of Warranty and Liability.

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**

DuPont™ STEWARD® EC must be used 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.

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, wear:

Coveralls over long-sleeved shirt and long pants

Socks plus chemical resistant footwear

Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber), all  $\geq$ 14 mls.

### **PRODUCT INFORMATION**

STEWARD® EC is an emulsifiable concentrate that can be applied as a foliar spray to control many important insects. STEWARD® EC is diluted with water for application.

### **USE RESTRICTIONS**

- Do not formulate this product into any other end-use products without written permission of DuPont.
- Do not use in greenhouses.
- This product is only for commercial use.
- Not for use on ornamental plants or plants being grown for ornamental purposes.
- Not for residential use.

**CHEMIGATION:** Do not apply this product through any type of irrigation system except for application to alfalfa, cotton, peanut and soybean and as allowed by Federal Supplemental, Special Local need (SLN) or other supplemental labeling. (See "Application by Chemigation" section of this label.)

Always shake well before use.

## **INTEGRATED PEST MANAGEMENT**

DuPont supports the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an IPM program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, rotation of insecticides with different modes-of-action, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

## **BENEFICIAL ARTHROPODS**

Other than reducing the target pest species as a food source, DuPont™ STEWARD® EC helps conserve certain beneficial arthropods, including parasitic wasps, predatory mites, big-eyed bugs, damsel bugs, minute pirate bugs, and spiders. While these beneficials cannot be relied upon to control pests, they are of potential value and can be monitored along with pests in pest management programs on these crops.

## **SCOUTING**

Monitor insect populations to determine whether or not there is a need for application of STEWARD® EC based on locally determined economic thresholds. More than one treatment of STEWARD® EC may be required to control a population of pests.

## **INSECT RESISTANCE MANAGEMENT**

For resistance management, STEWARD® EC insecticide is a group 22 insecticide. Repeated and exclusive use of STEWARD® EC or other group 22 insecticides may lead to the buildup of resistant strains of insects in some crops.

Some insects are known to develop resistance to products used repeatedly for control. When this occurs, the recommended dosages fail to suppress the pest population below the economic threshold. Because the development of resistance cannot be predicted, the use of this product should conform to resistant management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of mode-of-action classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local or state agricultural authorities for details.

Unless directed otherwise in the specific crop/pest sections of this label, the best practices are to follow these instructions to delay the development of insecticide resistance:

- Avoid using the same mode of action (same IRAC group number) on consecutive generations of insect pests.
- Make no more than 3 applications of STEWARD® EC or other Group 22 products per generation to the same insect species on a crop.
- Application to the next generation of target pest(s) must be with an effective product with a different mode of action (non-Group 22 insecticide).
- Make no more than 3 successive applications within a 30-day period to the same insect species on a crop. The following application to the target pest(s) must be with an effective product with a different mode of action.
- Avoid using less than the labeled rates of STEWARD® EC when applied alone or in tank mixtures.
- Target the most susceptible insect life stages, whenever possible.
- Monitor insect populations for product effectiveness.

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 alternate method of control for your area. For additional information on insect resistance monitoring, visit the Insecticide resistance Action Committee (IRAC) on the web at <http://www.irac-online.org>.

## **APPLICATION**

Apply at the listed rates when insect populations reach locally determined economic thresholds. Consult the cooperative extension service, professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area.

STEWARD® EC applications should target eggs and small instar larvae.

Follow-up treatments of STEWARD® EC should be applied, as needed, to keep pest populations within threshold limits. Apply STEWARD® EC at 5 to 7 day intervals, as specified in the specific crop sections, to maintain control.

Use sufficient water to obtain thorough, uniform coverage.

Because STEWARD® EC is most effective through ingestion of treated plant material, thorough spray coverage is essential for optimum control of targeted pest insects. Using increased water volumes will typically result in better spray coverage, especially under adverse conditions such as dry, hot weather or dense plant foliage. STEWARD® EC may be applied by

ground, aerial or overhead chemigation application equipment. For aerial application use the following directions unless otherwise specified in specific crop/pest sections of this label or EPA-approved supplemental labeling: use a minimum of 3 gals. water per acre (gpa) [minimum of 5 gals water per acre in Arizona and California]. For ground application use the following directions unless otherwise specified in specific crop/pest sections of this label or EPA-approved supplemental labeling: use a minimum of 5 gals. water per acre. Higher gallonage will provide better coverage and performance. For overhead chemigation applications, see "Application by Chemigation" section of the label for guidance on water volumes to be used.

**Use of Adjuvants:**In some situations where coverage is difficult to achieve such as closed canopy, dense foliage, plants with waxy leaf surfaces or less than optimum application equipment, an adjuvant may improve performance. Use only adjuvant products that are labeled for agricultural use and follow the directions on the manufacturer's label.

## **SPRAY PREPARATION**

Spray equipment must be clean and free of previous pesticide deposits before applying DuPont™ STEWARD® EC. Fill spray tank 1/4 to 1/2 full of water. Add STEWARD® EC directly to spray tank. Mix thoroughly to fully disperse the insecticide; once dispersed continued agitation is required. Use mechanical or hydraulic means; do not use air agitation. Spray mix must not be stored overnight in spray tank. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

**Tank Mixing and Compatibility** - Since formulations may be changed and new ones introduced, it is a best practice that users premix a small quantity of a desired tank mix and observe for possible physical incompatibility (settling out, flocculation, crystallization, etc.). This product can be tank mixed with pesticide products labeled for use on crops on this label in accordance with the most restrictive of label limitations and precautions. Do not exceed label application rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

Spray volumes of less than 3 gallons of water and tank mixtures of more than two products can increase the chances of incompatible spray mixtures. A jar test (as described below) should be conducted when label guidance is not given or prior experience with a specific tank mixture is unknown. The jar test should follow the mixing sequence below in water volume proportional to the planned spray tank water volume to assure that the tank mixture is compatible. Constant agitation may be needed during mixing and spraying of mixtures. STEWARD® EC is compatible with most commonly used plant protectants.

Steps to conduct a jar test to determine physical tank mix compatibility of STEWARD® EC with other products:

- Add to jar, clean water proportional to the planned water volume that will be used in the spray tank (a jar size of 8-16 oz is acceptable).
- Using the most restrictive PPE of the products to be tested, mix proper proportions of STEWARD® EC and desired tank mix partner(s) as will be present in the spray tank, add one product at a time following the sequence of addition (below) according to formulation type provided in this label.
- Seal and shake mixture after each product is added.
- Allow to stand for 1 hour.
- View jar to determine if settling, flocculation, crystallization or any other undesirable changes have happened.
- If none of the above is observed or the solution can be easily remixed after shaking, the mixture is compatible with STEWARD® EC.
- If the tank mix is not compatible, a higher water volume, reduced rate of the tank mix partner(s), reduced number of tank mix partners or a compatibility agent may be needed.

This product can be mixed with pesticide products labeled for use on alfalfa, cotton, peanuts, and soybeans in accordance with the most restrictive of label limitations and precautions. Do not exceed label application rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

**Tank Mixtures and Crop Safety** - Crop varieties can differ in their responsiveness to tank mixtures, and environmental conditions can influence product performance and crop response. It is not possible to test STEWARD® EC alone or with all possible tank mix combinations on all varieties under all environmental conditions. When considering the use of a tank mixture on a labeled crop without prior experience, or which is not specifically described on STEWARD® EC product labeling or in other DuPont product use instruction, it is important to check crop safety first. To test for crop safety prepare a small volume of the intended tank mixture, apply it to an area of the target crop as directed by both this and the tank mix partner product labels, and observe the treated crop to ensure that a phytotoxic response does not occur.

Use of STEWARD® EC in any tank mixture applications that is not specifically described on STEWARD® EC product labeling or in other DuPont product use instructions, could potentially result in crop injury. Follow the precautions on this label and on the label for any other product to be used in tank mixtures before making such applications to your crops. Follow the most restrictive label. DuPont will not be responsible for any crop injury arising from the use of a tank mixture that is not specifically described on STEWARD® EC product labeling or in other DuPont product use instruction.

**Tank Mixing Sequence** -Add different formulation types in the sequence indicated below.\* Allow time for complete mixing and dispersion after addition of each product.

1. Products in water soluble bags (WSB)

2. Water soluble granules (SG)
3. Water dispersible granules (WG, XP, DF)
4. Wettable powders (WP)
5. Water based suspension concentrates (SC)
6. Water soluble concentrates (SL)
7. Suspoemulsions (SE)
8. Oil based suspension concentrates (OD)
9. DuPont™ STEWARD® EC or other emulsifiable concentrates (EC)
10. Surfactants, oils or adjuvants
11. Soluble fertilizers
12. Drift retardants

\* Unless otherwise specified by manufacturer directions for use or by local experience.

## **SPRAY TANK CLEANOUT**

Prior to application, start with clean, well maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove.

Drain spray equipment. Thoroughly rinse sprayer and flush hoses, boom and nozzles with clean water.

Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. Do not clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

## **SPRAY DRIFT MANAGEMENT**

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

### **IMPORTANCE OF DROPLET SIZE**

The most effective drift management strategy is to apply the largest droplets which are consistent with pest control objectives. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions. A droplet size classification system describes the range of droplet sizes produced by spray nozzles. The American Society of Agricultural and Biological Engineers (ASABE) provide a Standard that describes droplet size spectrum categories defined by a number of reference nozzles (fine, coarse, etc.). Droplet spectra resulting from the use of a specific nozzle may also be described in terms of volume mean diameter (VMD). Coarser droplet size spectra have larger VMD's and lower drift potential.

### **CONTROLLING DROPLET SIZE - GROUND APPLICATION**

**Nozzle Type** - Select a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. The use of low-drift nozzles will reduce drift potential.

**Pressure** - The lowest spray pressures recommended for the nozzle produce the largest droplets. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, using a higher-capacity nozzle instead of increasing pressure results in the coarsest droplet spectrum.

**Flow Rate/Orifice Size** - Using the highest flow rate nozzles (largest orifice) that are consistent with pest control objectives reduces the potential for spray drift. Nozzles with higher rated flows produce coarser droplet spectra.

### **CONTROLLING DROPLET SIZE - AIRCRAFT**

**Number of Nozzles** -Using the minimum number of nozzles with the highest flow rate that provide uniform coverage will produce a coarser droplet spectrum.

**Nozzle Orientation** -Orienting nozzles in a manner that minimizes the effects of air shear will produce the coarsest droplet spectra. For some nozzles such as solid stream, pointing the nozzles straight back parallel to the airstream will produce a coarser droplet spectrum than other orientations.

**Nozzle Type** -Solid stream, or other low drift nozzles produce the coarsest droplet spectra.

Do not apply as a ULV application.

### **BOOM LENGTH AND HEIGHT**

**Boom Length (aircraft)** -The boom length should not exceed 3/4 of the wing length; using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.

**Boom Height (aircraft)** -Application more than 10 ft above the canopy increases the potential for spray drift. Applications made at the lowest height consistent with pest control objectives, and the safe operation of the aircraft will reduce the potential for spray drift.

**Boom Height (ground)** -Applications made at the lowest height consistent with pest control objectives, and that allow the applicator to keep the boom level with the application site and minimize bounce, will reduce the exposure of spray droplets to evaporation and wind and reduce spray drift potential.

## **WIND**

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed.

**AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.**

To minimize drift, avoid applying when wind speeds are greater than 15 mph.

Note: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

## **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

## **SURFACE TEMPERATURE INVERSIONS**

To minimize drift, avoid applying during temperature inversions. Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes small-suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

## **AIR ASSISTED (AIRBLAST) FIELD CROP SPRAYERS**

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

## **APPLICATION BY CHEMIGATION – ALFALFA, COTTON, PEANUT AND SOYBEAN**

### **Instructions for the Use of DuPont™ STEWARD® EC in Overhead Sprinkler Chemigation Systems.**

Overhead chemigation applications offer the advantage of greater penetration and coverage of the target plant. However, typical chemigation applications are more dilute than ground or aerial applications. For best results, it is recommended to keep the concentration of STEWARD® EC as high as possible in the application. Apply STEWARD® EC in 0.1 to 0.2 inches of water per acre.

STEWARD® EC is most active as an ingestion insecticide, although it does have activity as a direct contact insecticide. For best results, applications of STEWARD® EC should ensure thorough coverage of the target plant to maximize the opportunity for target insects to ingest STEWARD® EC.

### **Types of Chemigation Systems:**

STEWARD® EC may be applied only through overhead sprinkler irrigation systems. Overhead irrigation systems include the following; center pivot, end tow, hand move, lateral move, side roll, solid set and wheel line. Center pivot and lateral move irrigation systems are preferred. Other overhead sprinkler systems may be used if they provide uniform water distribution. Do not apply STEWARD® EC through any other type of irrigation system. Do not use filter screens smaller than 50 mesh throughout the system, due to possible build up of material on 100 mesh or smaller screens.

### **Directions for Chemigation:**

#### **Preparation**

A pesticide tank is recommended for the application of STEWARD® EC in chemigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. With the mix tank 1/4 to 1/2 full with water and the agitator running,



measure the required amount of STEWARD® EC and add it to the tank. Then add additional water to bring your total pesticide mixture up to the desired volume for your application. Note: Always add the STEWARD® EC to water, never put STEWARD® EC into a dry tank or other mixing equipment without first adding water. See "Tank Mixing Sequence" section of the container label for tank mixing sequence. Continue to agitate the mixture throughout the application process. Use mechanical or hydraulic agitation, do not use air agitation. Highly alkaline water should be buffered so that the pH of the spray solution is in the range of neutral to slightly acidic.

### **Injection Into Chemigation Systems**

Inject the proper amount of DuPont™ STEWARD® EC into the irrigation water flow using a positive displacement injection pump. Injection should occur at a point in the main irrigation water flow to ensure thorough mixing with the irrigation water. For continuously moving systems, inject the solution containing STEWARD® EC into the irrigation water line continually and uniformly throughout the irrigation cycle. Apply in no more than 0.2 inches of water per acre. For overhead sprinkler systems that are stationary, add the solution containing STEWARD® EC to the irrigation water line and apply no more than 0.2 inches of water per acre just before the end of the irrigation cycle.

### **Uniform Water Distribution**

The irrigation system used for application of STEWARD® EC must provide for uniform distribution of STEWARD® EC treated water. Non-uniform distribution can result in crop injury, lack of effectiveness or illegal pesticide residues in or on the crop being treated. Ensure the irrigation system is calibrated to uniformly distribute the chemigation application to the crop. Contact the equipment manufacturer, the local University Extension agent or other experts if you have questions about achieving uniform distribution of the application.

### **Equipment Calibration**

Calibrate the irrigation system and injector before applying STEWARD® EC. Calibrate the injection pump while the system is running using the expected irrigation rate. If you have questions about calibration, you should contact your state extension service specialists, equipment manufacturer or other experts.

### **Monitoring of Chemigation Applications**

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise. Wear the personal protective equipment as defined in the PPE section of the label for applicators and other handlers when making adjustments or repairs on the chemigation system when STEWARD® EC is in the irrigation water.

### **Required System Safety Devices**

Do not connect any irrigation system used for pesticide applications to a public water system unless the pesticide label-prescribed safety devices are in place. Public water system means a system for the provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.

1. The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

### **Operation**

Start the water pump and sprinkler, and let the system achieve the desired pressure and speed before starting the injector. Start the injector and calibrate the injection system according to the directions above. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.

- End guns must be turned off during the application, if they irrigate nontarget areas or if they do not provide uniform application and coverage.
- It is recommended that nozzles in the immediate area of wells, control panels, chemical supply tanks and system safety devices be plugged to prevent contamination of these areas.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

- Do not apply when system connections or fittings leak or when nozzles do not provide uniform distribution.
- Do not allow irrigation water to collect or run-off during chemigation.

### **Cleaning the System**

Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. Consult your owner's manual or your local equipment dealer for cleanout procedures for your injection system.

### **CROP ROTATION**

Crops on this label and the following crops or crop groups may be planted immediately following harvest: Bean, dried (crop subgroup 6C); Bean, succulent (crop subgroups 6A, 6B); Bushberries (crop subgroup 13-07B); Cucurbit vegetables (crop subgroups 9A, 9B); Fruiting vegetables (crop subgroups 8-10A, 8-10B, 8-10C); Garden beets; Grapes; Leafy green vegetables (crop subgroup 4A); Leafy petiole vegetables (crop subgroup 4B); Low growing berry (except strawberry) (crop subgroup 13-07H); Mint (peppermint & spearmint); Okra; Pome fruit (crop group 11); Small fruit vine climbing subgroup (except fuzzy kiwifruit) (crop subgroup 13-07F); Stone fruit (crop group 12); Sweet corn; Tuberous and corm vegetables (crop subgroup 1C: arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, edible canna (Queensland arrowroot), bitter and sweet cassava, chayote (root), chufa, dasheen (taro), ginger, leren, potato, sweet potato, tanier (cocoyam), tumeric, yam bean (jicama, manoic pea) and true yam).

Do not plant for food or feed any other crops not registered for use with indoxacarb for 30 days after last use.

**DuPont™ STEWARD® EC Rate Per Acre**

<b>Crops</b>	<b>Insects</b>	<b>Lbs. A.I.</b>	<b>Fluid Ounces</b>	<b>Acres Treated per Gal. of STEWARD® EC</b>	<b>Last Application (Days to Harvest)</b>	<b>REI</b>
<b>Alfalfa</b> including alfalfa grown for seed	Cabbage looper (except CA) Grasshoppers	0.045 - 0.11	4.6 - 11.3	11.5 - 27.8	7	12 hrs.
	Alfalfa caterpillar Alfalfa weevil larvae Beet armyworm Cabbage looper (CA only) Egyptian alfalfa weevil larvae Granulate cutworm	0.065 - 0.11	6.7 - 11.3	11.5 - 19	For alfalfa, harvest is defined as when the crop is cut.	
	Potato leafhopper (except California) (suppression only) Lygus Bugs (Western U.S.)* Western yellowstriped armyworm	0.09 - 0.11	9.2 - 11.3	11.5 - 14		

Do not apply more than 45 fl oz STEWARD® EC or 0.44 lbs a.i. of indoxacarb containing products per acre per year.  
 Apply no more than 11.3 fl oz of STEWARD® EC or 0.11 lbs a.i. of indoxacarb containing products per cutting.  
 When STEWARD® EC is used on alfalfa grown for seed, the seed may not be used for sprouts or livestock feed. All seed from treated crop must be tagged, "Not for Human or Animal Use" at the processing plant.  
 Apply lower listed rates for light to moderate infestations. Use intermediate to high rates within the listed rate range on heavier infestations or when later instar larvae exist. Use the highest listed rate for controlling severe infestations or when longer residual control is desired.  
 \*Suppression only.

<b>Bean, Dried (except Soy bean)</b> Including: Dried cultivars of bean (Lupinus) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (Phaseolus) (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean (Vigna) (includes adzuki bean, blackeyed pea, catjang, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lablab bean, lentil	Corn earworm European corn borer	0.065 - 0.11	6.7 - 11.3	11.5 - 19	7	12 hrs.
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Make no more than 4 applications per acre per crop.  
 Do not apply more than 45 fl oz STEWARD® EC or 0.44 lbs a.i. of indoxacarb containing products per acre per crop.  
 Do not apply more than 135 fl oz of STEWARD® EC or 1.32 lbs a.i. of indoxacarb containing products per acre per year.  
 The minimum interval between sprays is 7 days.  
 For ground applications, make a uniform application in approximately 20-100 gallons of water per acre.

**DuPont™ STEWARD® EC Rate Per Acre**

Crops	Insects	Lbs. A.I.	Fluid Ounces	Acres Treated per Gal. of STEWARD® EC	Last Application (Days to Harvest)	REI
Cotton	Cotton Bollworm* Tobacco Budworm*	0.11	11.3	11.5	14	12 hrs.
	Cotton Bollworm in Transgenic Bt Cotton	0.09 - 0.11	9.2 - 11.3	11.5 - 14		
	Beet Armyworm Fall Armyworm Western yellowstriped armyworm	0.09 - 0.11	9.2 - 11.3	11.5 - 14		
	Cabbage Looper Soybean Looper	0.065 - 0.09	6.7 - 9.2	14 - 19		
	Cotton Fleahopper** Lygus Bugs (Western U.S.)*** Tarnished Plant Bug**	0.09 - 0.11	9.2 - 11.3	11.5 - 14		

The minimum interval between treatments is 5 days.  
 Make no more than 4 applications per acre per crop.  
 Do not apply more than 45 fl oz of STEWARD® EC or 0.44 lbs a.i. of indoxacarb containing products per acre per year.  
 Beet armyworm and Western yellowstriped armyworm (AZ & CA only) - STEWARD® EC may be applied to seedling cotton (less than 18 inches high), at rates of 6.7 - 11.3 fluid ounces per acre in sufficient water to obtain thorough coverage (minimum of 5 gallons per acre).  
 \*Cotton Bollworm and Tobacco Budworm - For the most effective control, applications of STEWARD® EC should be made when the majority of the population is within the time of blackhead egg stage to egg hatch.  
 AL & GA only - STEWARD® EC may be applied at 0.09 lbs active ingredient per acre (9.2 fl. oz product per acre) for control of low populations of tobacco budworm and cotton bollworm on conventional cotton varieties that do not contain the transgenic Bt trait. Low populations are defined as less than 30 eggs per 100 terminals and/or less than 10 tobacco budworm/cotton bollworm larvae detected per 100 terminals, blooms, or squares. If tobacco budworm or cotton bollworm populations exceed the egg or larval threshold as described above, then increase the STEWARD® EC use rate to 0.11 lbs active ingredient per acre (11.3 fl. oz product per acre).  
 \*\*Tarnish Plant Bug and Cotton Fleahopper - A single application of STEWARD® EC will provide control of light to moderate populations of tarnished plant bug or cotton fleahopper. Heavy populations of tarnished plant bug or cotton fleahopper may require multiple applications. For the most effective control, fields should be scouted twice per week with application timing based on locally determined economic thresholds. Consult the cooperative extension service, professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area.  
 \*\*\*Suppression only.

Peanut	Corn Earworm	0.065 - 0.11	6.7 - 11.3	11.5 - 19	14	12 hrs.
	Beet armyworm Fall armyworm Granulate cutworm Rednecked peanutworm (except California) Tobacco budworm	0.09 - 0.11	9.2 - 11.3	11.5 - 14		

The minimum interval between treatments is 5 days.  
 Make no more than 4 applications per acre per crop.  
 Do not apply more than 45 fl oz of STEWARD® EC or 0.44 lbs a.i. of indoxacarb containing products per acre per year.

Soybean (except California)	Beet armyworm Cabbage looper* Corn earworm Fall armyworm Green cloverworm Soybean looper* Yellowstriped armyworm	0.045 - 0.11	4.6 - 11.3	11.5 - 27.8	21	12 hrs.
	Velvetbean caterpillar**	0.055 - 0.11	5.6 - 11.3	11.5 - 22.8		
	Tobacco budworm Bean leaf beetle** Brown stink bug** Green stink bug** Southern green stink bug**	0.09 - 0.11	9.2 - 11.3	11.5 - 14		

The minimum interval between treatments is 5 days.  
 Make no more than 4 applications per acre per crop.  
 Do not apply more than 45 fl oz of STEWARD® EC or 0.44 lbs a.i. of indoxacarb containing products per acre per year.  
 NOTE: Do not feed or graze livestock on treated fields.  
 \* use lower rate (4.6 fl oz/A) for low to moderate populations of cabbage and soybean loopers. Use higher rates (5.6 fl oz/A to 11.3 fl oz/A) for higher populations or when crop canopy is dense.  
 \*\*Suppression only

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Do not subject to temperatures below 32 degrees F. Store product in original container only in a location inaccessible to children and pets. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Not for use or storage in or around the home.

**PESTICIDE DISPOSAL:** Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes are acutely hazardous. 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 at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING: Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.**

**Nonrefillable Rigid Plastic and Metal Containers (Capacity 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. 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, for Plastic Containers, 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. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Rigid Plastic and Metal Containers (Capacity Greater 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. 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 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 or disposal. Repeat this procedure two more times. Then, for Plastic Containers, 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. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Rigid Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down):** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**All Refillable Containers:** Refillable container. *Refilling Container:* Refill this container with DuPont™ STEWARD® EC containing indoxacarb only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use container, contact DuPont at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact DuPont at the number below for instructions. *Disposing of Container:* Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, 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. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Do not transport if container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

**NOTICE TO BUYER--**Purchase of this material does not confer any rights under patents of countries outside of the United States.

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NOTICE: Read this Limitation of Warranty and Liability before buying or using this Product. DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by DuPont. User assumes all risks associated with such non-directed use. If the terms are not acceptable; return the product at once; unopened and the purchase price will be refunded.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. **WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.**

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

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To the extent consistent with applicable law that allows such requirement, DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made. Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise, or be barred from any remedy.

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

**For product information call: 1-888-6-DUPONT [1-888-638-7668]**

**Internet address: <http://cropprotection.dupont.com/>**

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