

# Diamond<sup>®</sup> 0.83EC

Net  
Contents:

## Insecticide

For use on Cotton, Sorghum and Sugarcane

Active Ingredient: (% by weight)  
 Novaluron: 1-[3-chloro-4-(1,1,2-trifluoro-2-trifluoro-methoxyethoxy) phenyl]- 3-(2,6-difluorobenzoyl)urea\* ....9.3%  
 Inert Ingredients: ..... 90.7%  
 Total: ..... 100.0%

\*Contains 0.83 lbs. novaluron per gallon.

**KEEP OUT OF REACH OF CHILDREN**

## WARNING • AVISO

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

<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR ON CLOTHING</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

**EMERGENCY ASSISTANCE:** Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

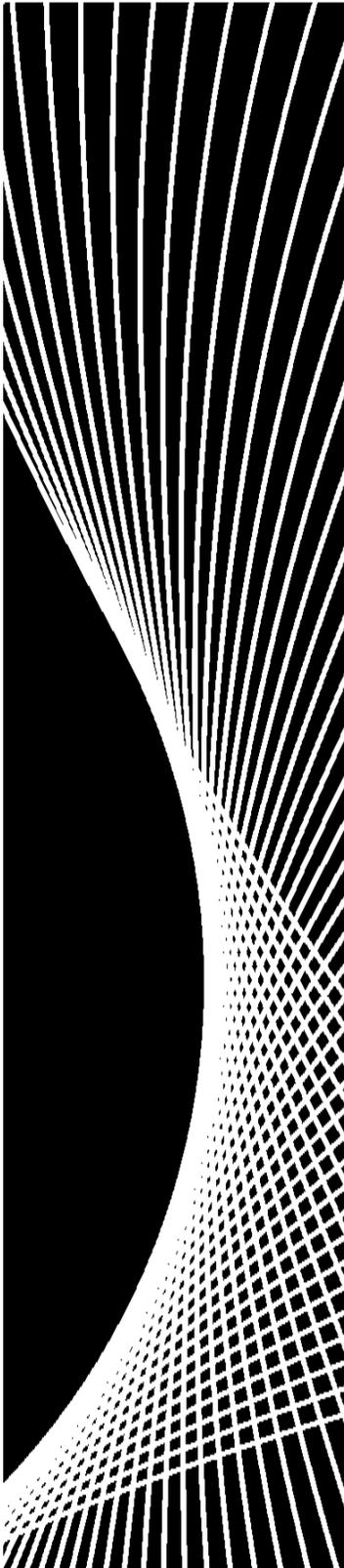
<b>EMERGENCY PHONE</b>	<b>800-292-5898</b>
<b>SAFETY DATA AND INFORMATION</b>	<b>866-430-2775</b>
<b>TRANSPORTATION EMERGENCY (CHEMTREC)</b>	<b>800-424-9300</b>

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 EPA EST. NO.  
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 Product of Israel

Distributed by:  
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**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**WARNING**

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**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 such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, or Viton; shoes plus socks; protective eyewear. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**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.
- 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 pesticide is toxic to freshwater and estuarine/marine invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several days to weeks after application. Poorly draining soil with shallow water tables is more prone to produce runoff. A level, well maintained vegetative (grass) buffer strip between areas to which this product is applied and the surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination. In order to minimize the possibility of developmental effects on pollinator larvae, including honey bee brood, do not use DIAMOND 0.83EC on blooming crops.

**DIRECTIONS FOR USE**

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

Do not apply this product in a way that it 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 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.

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 over long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, or Viton
- Shoes plus socks
- Protective eyewear

**GENERAL INFORMATION**

DIAMOND 0.83EC insecticide must be ingested and/or contacted by insects to be effective. Proper application techniques help ensure thorough spray coverage and correct dosage necessary to obtain optimum control. Apply at the required 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. Apply follow-up treatments of DIAMOND per DIRECTIONS FOR USE, to keep pest populations within threshold limits. Scout fields regularly to determine optimum application timing based on pest levels and stages of growth.

**The primary mode of action is by disrupting cuticle formation and deposition occurring when insects molt, resulting in their death. Due to this mode of action, DIAMOND has no direct effect on adults.**

**Note:** The compatibility of DIAMOND with concurrent releases of insects for biocontrol of plant pests has not been established. When used as directed, DIAMOND affects developing immature stages of insects by disrupting the molting process. Consequently, fully developed adult stages of pest and beneficial species are not affected.

**Rotational Crops:** Only registered crops may be rotated in a treated field within 30 days of the final application.

The use of novaluron on crops grown for food in greenhouses, except tomatoes, is prohibited.

### **SPRAY DRIFT:**

**For ground boom applications,** apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

**For aerial applications,** the following measures must be adhered to:

- a. The distance of the outer-most nozzles on the boom must not exceed  $\frac{3}{4}$  of the length of the wingspan or rotor.
- b. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
- c. Use high flow nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- d. Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- e. Use the minimum number of nozzles that provide uniform coverage.
- f. Orient nozzles so that the spray is released parallel to the air stream. This produces larger droplets and minimizes potential drift. Significant deflection from the horizontal position will reduce droplet size and increase drift potential.
- g. Use a nozzle type that is designed for the intended application. With most nozzle types, such as low-drift nozzles, narrower spray angles produce larger droplets. Solid stream nozzles oriented straight back produce the largest droplets and the least drift.
- h. For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wing span or rotor length may further reduce drift without reducing swath width.
- i. Do not make applications at a height greater than 10 feet above the top of the largest plants, unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
- j. When applications are made with a cross wind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase the swath adjustment distance with increasing drift potential (higher wind, smaller drops, etc.).
- k. Drift potential is lowest with wind speeds between 2 – 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply when wind speed is below 2 mph due to variable wind direction and high inversion potential. Local terrain can influence wind patterns. An applicator's familiarity with local wind patterns can minimize spray drift.
- l. Droplet evaporation is most severe when conditions are both hot and dry, therefore when making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation.
- m. Do not apply during a temperature inversion because drift potential is high. Temperature inversions are characterized

by increasing temperatures with altitude, and are common on nights with limited cloud cover and light to no winds. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to light variable winds common during inversions.

- n. Only apply pesticides when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when the wind is blowing away from the sensitive area).
- o. Ultra Low Volume (ULV) application is not permitted.

**MIXING INSTRUCTIONS:** Prepare solution concentrations in a clean, empty spray tank. Use clean spray filters. Add water to 1/2 level of tank. Add the appropriate amount of DIAMOND to the tank and agitate to ensure proper mixture. Continue filling tank with water until desired dilution is achieved. Shake or re-agitate material in the sprayer before use if application is interrupted. Make up only the amount of application volume as required. Dispose of any unused spray material at the end of each day according to the instructions found in the STORAGE AND DISPOSAL section of this label.

For those crops where an adjuvant can be used, Chemtura Corporation suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

**SPRAY COVERAGE:** All parts of the crop must receive uniform spray coverage or else desired result may not occur. Higher water volumes and increased spray pressure generally provide better coverage. Consult your local agricultural specialist for specific information on the best rates, timings, and spray volumes for your region.

**Pollinator Advisory:** *Because of its mode of action as an insect growth regulator, and since it is not systemic, DIAMOND has no direct effect on fully developed adult stages, such as bees and other beneficial pollinators. However, in order to minimize the possibility of transient effects on honeybee brood development, do not use DIAMOND on blooming crops when bees are actively foraging.*

### **Ground Application**

Apply required dosage by conventional ground sprayer equipment capable of delivering sufficient water to obtain thorough, uniform coverage of the target crop. Orient spray equipment boom and nozzles in a manner to minimize boom height to optimize coverage uniformity, maximize deposition and reduce spray drift. Drop nozzles may be required to obtain uniform coverage against certain pests that develop down in the canopy. Use a minimum spray volume of 5 gallons per acre with ground spray equipment in cotton. Use a minimum of 10 gallons per acre in potatoes and vegetables. Higher gallonages will provide better coverage and performance. Use hollow cone, disc-core hollow cone or twin jet fan nozzles suitable for insecticide spraying.

### **Band Application (in Cotton Only)**

Band applications may be appropriate early in the season when cotton is small. Proper nozzle selection, placement, boom orientation or shielding to compensate for windy conditions is critical to ensure adequate coverage.

When banding, determine the amount of chemical to use per acre by dividing the band width by the row width and multiplying by the appropriate broadcast rate:

Band width in inches	x	Broadcast rate	=	Amount needed per acre of field
Row width in inches				

### **Aerial Application**

For aerial application apply in a total of 2 to 10 gallons per acre using a nozzle configuration that will provide a median droplet size of 200-300 microns. Higher gallonages will provide better coverage and performance. Adhere to the minimum safe application height – not greater than 12 feet above crop canopy. Boom length must be less than 75% of wing span and swath markers. Use flagging or GPS system during application. Make applications when wind speed is between 2 and 10 mph. Do not make applications when wind speed exceeds 10 mph. Under low humidity and high temperatures, adjust spray volume upward to compensate for evaporation of spray droplets.

### **USE RESTRICTIONS**

For ground application (all crops): Do not apply by ground equipment within 75 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. All applications must include a 25 foot vegetative buffer strip within the buffer zone to decrease runoff.

For aerial application (except cotton): Do not apply by air equipment within 150 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. All applications must include a 25 foot vegetative buffer strip within the buffer zone to decrease runoff.

For aerial application to cotton: Do not apply within 250 feet by air equipment of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. All applications must include a 25 foot vegetative buffer strip within the buffer zone to decrease runoff.

**COTTON:**

Target Pests	Application Rates Fl. Ozs./A	Application Instructions
Plant bugs (Tarnished, clouded, and Western tarnished)  Stink bugs (Green, Brown, Southern green)	9 to 12  6 to 9 (If used with a knock- down insecticide)	Begin application when plant bugs, stink bugs or fleahoppers appear and oviposition is initiated.  Repeat at 7 to 14 day intervals as needed to maintain control. DIAMOND will not control adults.  For adult control, tankmix with an adulticide.
Cotton fleahopper	6-9	
Tobacco budworm Cotton bollworm	12-14  6-9 (if used with a knockdown insecticide)	Apply when the majority of eggs are in the blackhead stage and up to 1/8-inch larval length.  Use higher rates and higher spray volumes when larvae are more than ¼ inch long, the target pest population is 2X or more above state threshold level or foliage canopy is tall or dense and larvae are present in the lower part of the canopy.  Reapplication on a 7 to 14 day interval will be required to protect new growth.  Scout fields twice weekly for the most effective control.
Beet armyworm Fall armyworm Other foliar feeding caterpillars such as loopers, cotton leaf perforator and salt- marsh caterpillar	6 - 12	Apply at egg hatch stage or when first signs of feeding occur. Use higher rates and higher spray volumes when larvae are more than ¼ inch long, the target pest population is 2X or more above state threshold level or foliage canopy is tall or dense and larvae are present in the lower part of the canopy.  Under heavy infestations or continuous oviposition, reapplication on a 7 to 14 day interval will be required to protect new growth. Scout fields twice weekly for the most effective control.  Do not apply more than four applications against armyworm or other foliage feeding caterpillars per season.
Whiteflies (suppression)	6 - 12	Begin application when whitefly adults appear and once oviposition is initiated. A second application at 14 days may be necessary to achieve acceptable suppression.  Do not apply more than two applications against whiteflies per season.
Thrips (suppression)	9 - 14	Begin application when thrips adults appear and once oviposition is initiated. Repeat at 14 days later if needed.  DIAMOND will not control adult thrips. For adult control, tankmix with an adulticide.  Do not apply more than two applications against thrips per season.
Do not apply more than four applications per season (see separate restrictions for whiteflies and thrips). Do not apply more than 42 oz. per acre per season. Do not apply within 30 days of harvest.		

## GRAIN SORGHUM:

Target Pests	Application Rates Fl. Ozs./A	Application Instructions
Cutworm Sorghum midge Beet armyworm Armyworms Fall armyworm Falls chinch bug True army worm Webworm	9 to12	Apply when the majority of the population is at egg hatch to the second instar. Use higher rates and higher spray volumes when larvae are large, or foliage canopy is tall or dense. Reapplication on a 7 to 14 day interval will be required to protect new growth. For the most effective control, scout fields twice weekly.
Do not apply more than three applications per crop per season. Do not apply more than two applications against whiteflies per season. Do not apply more than 36 oz. per acre per season. Do not apply within 7 days of harvest for grain sorghum forage, and within 14 days of harvest for grain sorghum and stover. The use of surfactants/adjuvants (including non-ionic surfactants) on this crop is prohibited.		

## SUGARCANE:

Target Pests	Application Rates Fl. Ozs./A	Application Instructions
Sugarcane Borer (Diatrea saccharalis)	9 to12	Begin applications when live larvae infestations in the leaf sheath reach 5 % threshold as defined by the LSU AgCenter or Cooperative Extension Service. Use higher rates and higher spray volumes when infestation levels are high. Make repeat applications when threshold levels are again exceeded.
Mexican rice borer (Eoreuma loftini)	12	Required spray volume is 2-5 gallons per acre for aerial applications and a minimum of 10 gallons per acre for ground applications. Use higher spray volumes when treating Mexican rice borer infestations.  For the most effective control, scout fields.  Reapplication on a 10 to 14 day interval may be required.
Do not apply more than 60 oz. per acre per season. Do not apply more than 5 applications per season. Do not apply within 14 days of harvest. The use of surfactants/adjuvants (including non-ionic surfactants) on this crop is prohibited. Only registered crops may be rotated in a treated field within 30 days of the final application.		

**RESISTANCE MANAGEMENT:** Diamond is effective in controlling insect pests and minimizing the development of resistance when used in rotation with other insecticides in an IPM program. To reduce selection pressure for resistant pests:

- \* Diamond should be used in rotation with classes of insecticides with different modes of action.
- \* For management of pests with short life cycles such as whiteflies, do not use Diamond more than once within each generation cycle.
- \* Always apply Diamond at the recommended rates and according to label directions. Do not use less than recommended label rates alone or in tank mixtures.
- \* Use Diamond as part of an insect management program that includes cultural and biological control where possible.
- \* Scout pest populations and begin Diamond applications before the pest becomes established. Focus treatments on early immature stages for best results. For optimum control, spray applications should thoroughly wet the undersides of leaves when whiteflies and thrips are present.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE STORAGE:** Store in a clean, dry location. Keep above freezing.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

### CONTAINER DISPOSAL:

**Nonrefillable Container (five gallons or less):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container 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  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration if allowed by State and local authorities.

**IMPORTANT NOTICE** - Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product, contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

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