

MAYHEM™

INSECTICIDE

Insecticide for use on Cotton and Sugarcane

ACTIVE INGREDIENT: % BY WT.

Novaluron: 1-[3-chloro-4-(1,1,2-trifluoro-2-trifluoro-methoxyethoxy)phenyl]-3-(2,6-difluorobenzoyl)urea* 9.3%

OTHER 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	
IF IN EYES:	<ul style="list-style-type: none"> • 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:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

(continued)

FIRST AID (continued)	
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
<p>Emergency Assistance: Have the product container or label with you when calling a poison control center or doctor or going for treatment.</p> <p>FOR EMERGENCY MEDICAL HELP, CALL PROSAR AT 1-877-250-9291, 24 HOURS.</p> <p>NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.</p>	

For additional precautionary, handling, and use statements, see inside of this booklet.



Manufactured for:
**Makhteshim Agan
of North America, Inc.**
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Suite 100

M A N A Raleigh, NC 27604

12569

EPA 021210/Notif 012411/Rev A

EPA Reg. No. 66222-35 EPA Est. No. 37429-GA-001^{PT}; 37429-GA-002⁸⁰
Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

Net Contents: 2.5 Gallons

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 washwaters 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.

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

USE INFORMATION

Mayhem™ 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 Mayhem 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, Mayhem has no direct effect on adults.

NOTE: The compatibility of Mayhem with concurrent releases of insects for biocontrol of plant pests has not been established. When used as directed, Mayhem 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:

Do not allow Mayhem to drift on grapes as leaf spotting may occur.

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 outermost nozzles on the boom must not exceed 3/4 of the length of the wingspan or rotor.
- b. Nozzles must always point backward parallel with the airstream 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 airstream. This produces larger droplets and minimizes potential drift. Significant deflection from horizontal 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 3/4 of the wing span or rotor length may further reduce drift without reducing swath width.
- i. Applications should not be made 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. Swath adjustment distance should increase 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 Maythem to the tank and agitate to insure proper mixture. Continue filling tank with water until desired dilution is achieved. Shake or reagate 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, Makhteshim Agan of North America, Inc. 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.

Ground Application

Apply required dosage by conventional ground sprayer equipment capable of delivering sufficient water to obtain thorough, uniform coverage of the target crop. Spray equipment boom and nozzles should be oriented 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. 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:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast rate} = \text{Amount needed per acre of field}$$

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, flagging, or GPS system should be used 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.

CHEMIGATION: Do not apply this product through any type of irrigation system.

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.

RESISTANCE MANAGEMENT: Mayhem 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:

- Use Mayhem 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 Mayhem more than once within each generation cycle.
- Always apply Mayhem at the required rates and according to label directions. Do not use an application rate alone or in tank mixtures that is less than the minimum amount stated on the label.
- Use Mayhem as part of an insect-management program that includes cultural and biological control where possible.
- Scout pest populations and begin Mayhem applications before the pest becomes established. Focus treatments on early immature stages for best results. For optimum control, thoroughly wet the undersides of leaves when whiteflies and thrips are present.

COTTON:

Target Pests	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 knockdown 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. Mayhem will not control adults. For adult control, tank mix with an adulticide.
Cotton fleahopper	6 to 9	
Tobacco budworm Cotton bollworm	12 to 14 6 to 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 1/4 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 foliage-feeding caterpillars such as loopers, cotton leaf perforator and saltmarsh caterpillar	6 to 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 1/4 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 to 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 to 14	Begin application when adult thrips appear and once oviposition is initiated. Repeat at 14 days later if needed. Mayhem will not control adult thrips. For adult control, tank mix with an adulticide. Do not apply more than two applications against thrips per season.
Do not apply more than 4 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.		

SUGARCANE (except California):

Target Pests	Rates (Fl. Ozs./A)	Application Instructions
Sugarcane borer (<i>Diatrea saccharalis</i>)	9 – 12	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. 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.
Mexican rice borer (<i>Eoreuma loftini</i>)	12	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.		

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 HANDLING:

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.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Makhteshim Agan of North America, Inc.'s election, the replacement of product.

Mayhem is a trademark of a Makhteshim Agan Group Company.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Makhteshim Agan of North America, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

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(continued)

EPA Reg. No. 66222-35 EPA Est. No. 37429-GA-001^{BT}; 37429-GA-002^{BO}
Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

FIRST AID (continued)	
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IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
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