

66330-242

02/17/2009

1/18



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Mr. Bill Washburn  
Product Registration  
Arysta Lifescience NA Corporation  
15401 Weston Parkway Suite 150  
Cary, NC 27513

FEB 17 2009

Subject: Notification(s) for Label Revisions under PRN 98-10, and PRN 2007-4  
Storage & Disposal and Other Changes (Warranty Statement)

Dear Registrant:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notices (PRN) 98-10, and 2007-4 Storage & Disposal and Other Changes dated January 27, 2009 for:

**EPA Registration 66330-242 "MEPIQUAT CHLORIDE LIQUID CONCENTRATE"**

The Registration Division (RD) has conducted a review of the request(s) for applicability under PRN 98-10, and PRN 2007-4 and finds that the label changes requested fall within the scope of PRN-98-10 and PRN-2007-4. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on non-refillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs



EPA

United States  
Environmental Protection Agency  
Washington, DC 20460

- Registration
- Amendment
- Other:

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number <b>66330-242</b>	2. EPA Product Manager <b>TONY KISH</b>	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <b>MEPIQUAT CHLORIDE LIQUID CONCENTRATE</b>	PM# <b>22</b>	
5. Name and Address of Applicant (Include ZIP Code) <b>Arysta LifeScience North America, LLC 15401 Weston Parkway, Suite 150 Cary, NC 27513</b>	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or <b>NOTIFICATION</b> to: EPA Reg. No. <b>FEB 17 2009</b> Product Name _____	

Check if this is a new address

Section - II

- Amendment - Explain below.
- Resubmission in response to Agency letter dated \_\_\_\_\_
- Notification - Explain below.
- Final printed labels in response to Agency letter dated \_\_\_\_\_
- "Me Too" Application
- Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

**Notification of label change per PR Notice 2007-4.** This notification is consistent with guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if the amendment is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Notification of label change per PR Notice 98-10.** This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
*Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1.0 gal., 2.5 gal, 5.0 gal		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)					
Name <b>Bill Washburn</b>		Title <b>Regulatory Manager</b>		Telephone No. (Include Area Code) <b>901-432-5118</b>	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.					6. Date Application Received (Stamped)
2. Signature <i>Bill Washburn</i>			3. Title <b>Regulatory Manager</b>		
4. Typed Name <b>Bill Washburn</b>			5. Date <b>01/27/09</b>		



January 27, 2009

Mr. Tony Kish, PM 22  
Document Processing Desk (NOTIF)  
Office of Pesticide Programs – 7504P  
U.S. Environmental Protection Agency  
One Potomac Yard, Room S-4900  
2777 South Crystal Drive  
Arlington, VA 22202

**Subject: MEPIQUAT CHLORIDE LIQUID CONCENTRATE  
EPA Reg. No. 66330-242**

***Notification of Label Change per PR Notice 2007-4  
and PR Notice 98-10***

Dear Mr. Kish:

Please find the following enclosed:

- Application for Pesticide Registration (Other) dated 01/27/09.
- One highlighted copy of subject label, showing all changes.
- One clean copy of the subject label.

Notification of label change per PR Notice 2007-4. This notification is consistent with guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if the amendment is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Also in this submission, we are using PR Notice 98-10 to update the name of the company, emergency telephone numbers and warranty. Arysta LifeScience North America Corporation was changed to Arysta LifeScience North America, LLC.

Please acknowledge acceptance of this notification by stamping the extra copy of this letter and returning in the enclosed self-addressed stamped envelope. Should you have any questions or comments, please do not hesitate to contact me at 901-432-5118 or by e-mail at [bill.washburn@arystalifescience.com](mailto:bill.washburn@arystalifescience.com)

Sincerely,

Bill Washburn  
Regulatory Manager

4/18

PR Notice 2007-4

**MEPIQUAT CHLORIDE LIQUID CONCENTRATE**

**ACTIVE INGREDIENT**

Mepiquat Chloride: N,N-dimethylpiperidinium Chloride.....	23.5%
<b>Inert Ingredients</b> .....	76.5%
<b>TOTAL</b> .....	100.0%

Contains two (2) pounds active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**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 a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING**

- Take off contaminated clothing
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

**IF IN EYES**

- Hold eyes 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 eyes.
- Call a poison control center or doctor for further treatment advice.

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

**FOR 24- HOUR EMERGENCY MEDICAL ASSISTANCE CALL:** 1-866-303-6952

**FOR CHEMICAL EMERGENCY:** Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300

EPA Reg. No. 66330-242  
AD 091900

EPA Est. No. 51036-GA-1

Manufactured For:  
Arysta LifeScience North America, LLC  
15401 Weston Parkway, Suite 150  
Cary, NC 27513

NET CONTENTS: \_\_\_\_\_

**NOTIFICATION**

**FEB 17 2009**

**PRECAUTIONARY STATEMENTS**  
**Hazards to Humans and Domestic Animals**

**CAUTION**

Harmful if swallowed. Harmful if absorbed through the skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. In case of contact immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

**PERSONAL PROTECTIVE EQUIPMENT**

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

Applicators and other handlers must wear:

- 1. Long-sleeved shirt and long pants
- 2. Chemical-resistant gloves made of any waterproof material such as polyethelene or polyvinyl chloride
- 3. Shoes plus socks

Follow manufacturer's instructions for cleaning and 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:

- 1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- 2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 3. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal. STORAGE: Store in original container only, in a cool, dry, locked area. Store separately from other pesticides, fertilizers, food or feed to prevent contamination. In case of a spill or broken

6/18

PR Notice 2007-4

container, call CHEMTREC at 1-800-424-9300.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. 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 DISPOSAL: 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 ¼ 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. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**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 will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment and restricted-entry intervals. 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

7/18

with anything that has been treated such as plants, soil, or water, is:

1. Coveralls
2. Chemical-resistant gloves made of any waterproof material
3. Shoes plus socks

**GENERAL INFORMATION  
CHEMIGATION PROHIBITION**

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

Mepiquat Chloride Liquid Concentrate is a Micro Flo product which is equivalent to PIX CONCENTRATE Plant Regulator produced by BASF Corporation. Mepiquat Chloride Liquid Concentrate is a foliar applied plant regulator. It allows the grower to manage the cotton plant for short-season production leading to reduced risk of yield and quality loss due to delayed and prolonged harvest. Benefits derived from the use of Mepiquat Chloride Liquid Concentrate include increase early boll retention and/or larger bolls, reduced plant height which provides a more open canopy, less boll rot, improved defoliation, less trash and lower ginning costs, better harvest efficiency and a darker leaf color. These benefits can provide for earlier maturity and often result in improved yields.

**Early Application of Mepiquat Chloride Liquid Concentrate**

Growers may use low-rate multiple applications, or higher, less frequent dosages which provide maximum flexibility under a wide range of growing conditions. Mepiquat Chloride Liquid Concentrate should not be applied to plants under stress. If stress is alleviated, plants should be evaluated for vegetative growth before additional applications are made. Mepiquat Chloride Liquid Concentrate may be tank mixed with insecticides/miticides when application timings coincide. (See Restrictions and Limitations.)

Fields should be carefully scouted. Mepiquat Chloride Liquid Concentrate should not be applied if plants are under any form of stress. In the absence of stress, a maximum of five low rate applications can be made each season. The first application can be applied at the matchhead square stage. The rate and timing of subsequent applications depend on growing conditions and desired benefits. Under good growing conditions additional treatments of 1/3 to 2/3 fl. oz./acre can be made at 7-14 day intervals. Higher rates of Mepiquat Chloride Liquid Concentrate (2/3 to 2 fl. oz./acre) should be used if vegetative growth becomes excessive or a greater degree of height control is desired. Do not use more than a total of 8.4 fl. oz./acre of Mepiquat Chloride Liquid Concentrate in a growing season.

If significant loss of squares and/or young bolls has occurred earlier due to insect pressure or other stresses, but now these stresses have been alleviated, the need for Mepiquat Chloride Liquid Concentrate is increased - excess vegetative growth is likely because of poor fruit load.

**Late Season Application of Mepiquat Chloride Liquid Concentrate**

Late application of Mepiquat Chloride Liquid Concentrate (approximately during the fourth to sixth week of blooming) can provide certain benefits to cotton. However, it should not and does not substitute for early season use, the time of the greatest benefit from the use of Mepiquat Chloride Liquid Concentrate. Late season application can lead to one or more of the following: reduction in late season vegetative growth or regrowth after cutout or defoliation, more complete and manageable cutout, better defoliation, earlier maturity and reduction in trash and lower ginning costs. Some of these effects may favorably influence the yield potential and fiber quality. A late season application of Mepiquat Chloride Liquid Concentrate should be applied only if fields are not drought or nutrient stressed; that is, those fields likely to experience additional vegetative growth or regrowth. However, fields that are very rank and extremely vigorous due to a combination of poor boll load and excellent growing conditions may not respond as much as desired to late season applications at the suggested rates.

**Timing for Late Season Applications**

- A. On fields where cotton cuts out and then starts regrowth: apply when regrowth begins, as evidenced by new leaves in the terminal and stem elongation. This would often, but not always, be in the period of 5-6 weeks after the first bloom.
- B. On fields where cotton never completely cuts out, apply Mepiquat Chloride Liquid Concentrate when there are 4-6 nodes above the white flower (NAWF). Measure NAWF by counting the number of mainstem nodes from the first position white bloom (the one closest to the mainstem) to the terminal. Count the node with the first position white bloom as zero and the last node in the terminal, which is counted, should have a leaf at least the size of a quarter. Generally, the NAWF first reaches 4-6 during the fourth to sixth week of bloom. During this time period, the NAWF should be decreasing about one node every 5-6 days - if its rate of decrease is less, this means that the plant is not cutting out soon enough (the crop is too vigorous). If the fifth week of bloom arrives and NAWF is still above 5-6, apply Mepiquat Chloride Liquid Concentrate.



9/10

**Use Rate for Late Season Application**

Mepiquat Chloride Liquid Concentrate should be applied at a rate between 1 1/3 to 4.2 fl. oz. per acre. Use the lower rate range on cotton with only moderate additional growth potential, and the higher rate range on fields likely to continue vigorous growth. Total seasonal use per season (early plus late application) must not exceed 8.4 fl. oz. per acre.

**Spray Volumes: Thorough coverage is required.**

**In Water:**

**Areas other than California**

Ground Application - Use a minimum of 2 gallons of water per acre.  
Aerial Application - Use a minimum of 2 gallons of water per acre.

**California Only:**

Ground application - Use a minimum of 5 gallons/acre  
Aerial application - Use a minimum of 5 gallons/acre

**IN OIL:**

Use a minimum total oil volume of 2 pints/acre for Ultra low volume (ULV) aerial application. Application in oil is permitted only in AL, AR, FL, GA, LA, MO, MS, NC, OK, SC, TN and TX. Use a nonphytotoxic oil concentrate which contains either a petroleum or vegetable oil base, contains only EPA-exempt ingredients, provides good mixing quality in the jar test (see "Compatibility" section), and has been used successfully in your locality. The oil diluent should contain emulsifiers which provide good mixing quality. If the oil does not contain an emulsifier, one must be added during mixing at a volume equal to 3% of the final volume of the mixing tank. Do not apply Mepiquat Chloride Liquid Concentrate as ULV without using emulsifiers. If using a vegetable oil based product, only highly refined concentrates should be used.

Mix under constant agitation. Pour one-half of the required volume of oil into the spray tank, followed by the emulsifier (if the oil does not already contain one) at approximately 3% of the final spray tank volume, and then pour in the Mepiquat Chloride Liquid Concentrate while the remainder of the oil is added. Constant agitation is required during and after mixing and during application.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The

applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

**AERIAL DRIFT REDUCTION ADVISORY INFORMATION**  
**Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

**Controlling Droplet Size**

**Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure** - 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.

**Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**Boom Length**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height**

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.

**Swath Adjustment**

When applications are made with a crosswind, 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.).

**Wind**

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions**

Applications should not occur during a temperature inversion because drift potential is high. 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 the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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 an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas**

The pesticide should only be applied 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 wind is blowing away from the sensitive areas).

**RAIN WASH-OFF PRECAUTION**

The use of a high quality, EPA exempt surfactant will enhance the uptake of Mepiquat Chloride Liquid Concentrate into the plant. Therefore, the use of a surfactant allows applications made as little as four hours prior to rainfall to be effective. Without a surfactant, the product should be used at least 8 hours prior to expected rainfall.

**COMPATIBILITY**

Mepiquat Chloride Liquid Concentrate is water based, and is compatible with most insecticides and miticides. If compatibility is in doubt, perform a jar test to check for compatibility. Mepiquat Chloride Liquid Concentrate can be used with foliar fertilizers if your experience shows the combination is compatible and will not injure cotton under your conditions. Caution should be used when applying with foliar fertilizers under conditions of extreme heat.

**RESTRICTIONS AND LIMITATIONS**

- Insect or mite damage to Mepiquat Chloride Liquid Concentrate treated crops can lead to yield decreases or other undesirable effects.
- Do not apply Mepiquat Chloride Liquid Concentrate to cotton that is under stress. If using the low rate multiple applications, discontinue use until your crop has overcome any stress.
- Do not apply more than 8.4 fl. oz. of Mepiquat Chloride Liquid Concentrate per acre per season. The sum of all products and formulations containing mepiquat chloride must not exceed 0.132 pounds (60 grams) of mepiquat chloride per acre per season.
- Do not apply this product within 30 days of harvest.
- Do not graze or feed cotton forage to livestock.
- Mepiquat Chloride Liquid Concentrate contains a dye and effectiveness is not related to the color of the spray solution.
- Do not tank mix with other products other than those mentioned under "Compatibility".
- Do not plant another crop within 75 days after last treatment.

**TIME AND RATE OF APPLICATION:  
SHORT-STAPLE AND LONG STAPLE (PIMA) COTTON**

Directions for use should be observed as specified below:

**I. HIGH RATE SINGLE OR MULTIPLE APPLICATIONS:**

Use these instructions when you are not able to start growth regulation treatments early, or when you want to make the fewest number of applications.

<u>AREA</u>	<u>TIME OF APPLICATION</u>	<u>RATE PER ACRE</u>
<b>FIRST APPLICATION:</b>		
AL, AR	Apply when cotton is actively	
AZ, CA,	growing and is between 20" and	1 1/3 to 2 2/3
FL, GA,	30" tall, but not more than 7	fl. oz.
LA, MO,	days beyond early bloom (5-6	

MS, NM, blooms per 25 row feet). Also  
NC, SC, apply if cotton is 24" tall and  
TN, VA has no blooms.

Use the 1 1/3 fl. oz. rate on cotton where excessive vegetative growth is not expected and use 2 2/3 fl. oz. where excessive vegetative growth has historically occurred.  
See Restrictions and Limitations.

**SECOND APPLICATION:**

Make a subsequent application in 2 to 3 weeks if additional growth is desired.

1 1/3 to 2 2/3 fl. oz.

**THIRD APPLICATION FOR CONTROL OF EXCESSIVE VEGETATIVE GROWTH:**

If the cotton field has a history of vigorous growth or if conditions continue to favor vigorous growth, apply a third application 1 to 2 weeks after the second application.

1 1/3 to 2 2/3 fl. oz.

**LATE SEASON APPLICATION:**

See section titled "Late Season Application of Mepiquat Chloride Liquid Concentrate".

1 1/3 to 4.2 fl. oz.

**Areas without a history of excessive vegetative growth:**

**FIRST APPLICATION:**

OK, TX Apply when cotton is in the early  
(except bloom stage (5-6 blooms per 25 row  
Rio feet) and actively growing. Also  
Grande apply if no blooms are present and  
Valley) the cotton is 20" tall and  
actively growing.  
See Restrictions and limitations.

1 1/3 fl. oz.

**SECOND APPLICATION:**

Make a second application in 2 to 3 to 4 weeks if additional growth control is desired.

1 1/3 fl. oz.

**THIRD APPLICATION:**

If conditions after the second application of Mepiquat Chloride Liquid Concentrate continue to favor vigorous growth, apply a third application 1 to 2 weeks after the second application. 1 1/3 fl. oz.

**LATE SEASON APPLICATION:**

See section titled "Late Season Application of Mepiquat Chloride Liquid Concentrate". 1 1/3 to 4.2 fl. oz.

**Areas with a history of excessive vegetative growth:**

**FIRST APPLICATION:**

OK, TX For best results, apply when plants are in early bloom stage (5-6 blooms per 25 row feet) and an average of 24" tall. Treatments can also be made when cotton height averages a minimum of 20" and a maximum of 30" provided cotton is not more than 7 days beyond early bloom. If cotton is 24" tall and has no blooms, apply Mepiquat Chloride Liquid Concentrate. See Restrictions and Limitations. 2 2/3 fl. oz.

**SECOND APPLICATION:**

For fields with a history of excessive growth, or if conditions after the first application favor excessive growth, make a second application in 2 to 3 weeks. 1 1/3 to 2 2/3 fl. oz.

**THIRD APPLICATION:**

If conditions after the second application of Mepiquat Chloride Liquid Concentrate continue to favor vigorous growth, apply a third application 1 to 2 weeks after the second application. 1 1/3 to 2 2/3 fl. oz.

**LATE SEASON APPLICATION:**

See section titled "Late Season

Application of Mepiquat Chloride  
Liquid Concentrate".

PR Notice 2007-4  
1 1/3 to 4.2  
fl. oz.

II. LOW RATE MULTIPLE APPLICATIONS:

Use these instructions when you want to maintain maximum flexibility in plant regulation treatments.

AREA	TIME OF APPLICATION	EXCESSIVE Growth Not Expected or Lower Rates Have Worked in the Past.	EXCESSIVE Growth Expected or Higher Rates Have Been Necessary in the Past.
	FIRST APPLICATION:		
AL, AR, AZ, CA, FL, GA, LA, MO,	Apply at the matchhead square <sup>1</sup> stage of growth.	1/3 FL OZ	2/3 FL OZ
	SECOND APPLICATION:		
MS, NC, NM, OK, SC, TN, TX, VA	7-14 days later, or when regrowth occurs.	1/3 TO FL OZ	2/3 TO FL OZ
	THIRD APPLICATION:		
	7-14 days later, or when regrowth occurs.	1/3 TO 2/3 FL OZ*	2/3 TO 1 1/3 FL OZ*
	FOURTH APPLICATION:		
	7-14 days later, or when regrowth occurs.	1/3 TO 1 1/3 FL OZ*	2/3 TO 2 FL OZ*
	FIFTH APPLICATION:		
	(If needed): 7-14 days later, or when regrowth occurs.	2/3 TO 1 1/3 FL OZ*	2/3 TO 2 FL OZ*
	LATE SEASON APPLICATION:		
	See section titled "Late Season Application of Mepiquat Chloride Liquid Concentrate".	1 1/3 TO 2 2/3 FL OZ*	2 TO 4.2 FL OZ*

\* Use the higher rate if previous application was not made or if growing conditions favor excessive growth.



<sup>1</sup> Matchhead square is when the first square of a typical cotton plant is about the size of a matchhead (about 1/8 - 1/4" in diameter). Make the first application when 50% of the plants have one or more matchhead squares.

**CONVERSION CHART**

RATE OF MEPIQUAT CHLORIDE LIQUID 4.2 CONCENTRATE	ACRES TREATED PER			EQUIVALENT RATE OF MEPIQUAT CHLORIDE
	PINT	QUART	GALLON	OR PIX
1/3 fl. oz.	48	96	384	1/8 pint/acre
2/3 fl. oz.	24	48	192	1/4 pint/acre
1 1/3 fl. oz.	12	24	96	1/2 pint/acre
2 fl. oz.	8	16	64	3/4 pint/acre
2 2/3 fl. oz.	6	12	48	1 pint/acre
4.2 fl. oz.	3.8	7.6	30.4	1 1/2 pints/acre

PIX is a trademark of BASF

**Warranty and Disclaimer Statement**

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. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America, LLC ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

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**NOTIFICATION**

**FEB 17 2009**