

34704 -974

07/10/2009

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Mr. Scott Baker
Loveland Products, Inc.
P.O. Box 1286
Greeley, Colorado 80632-1286

JUL 10 2009

Subject: Label Notification(s) for Pesticide Registration Notice 2007-4

Dear Registrant:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 dated June 23, 2009 for:

EPA Registration 34704-974

Mepiquat Extra

The Registration Division (RD) has conducted a review of this request for applicability under PRN 2007-4 and 98-10 and finds that the label change(s) requested falls within the scope of 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 nonrefillable 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 Banza Djapao of my staff at 703-305-7269.

Sincerely,

A handwritten signature in black ink, appearing to be "Linda Arrington".

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



United States
Environmental Protection Agency
 Washington, DC 20460

Registration
 Amendment
 Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 34704-974	2. EPA Product Manager Cynthia Giles-Parker	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Mepiquat Extra	PM# 22	
5. Name and Address of Applicant (Include ZIP Code) Loveland Products, Inc. P.O. Box 1286 Greeley, Colorado 80632-1286 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 2(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

NOTIFICATION
 JUL 10 2009

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

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

This is a notification under PR Notice 2007-4 to update the container disposal information. "Notification of label change per PR Notice 2007-4. This notification is consistent with the 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 U.S.c. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40CFR §§ 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."

Section - III

1. Material This Product Will Be Packaged In:

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	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input checked="" type="checkbox"/> Other (Specify) <u>HDPE</u>
* 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
 Label Container

4. Size(s) Retail Container
1 gal

5. Location of Label Directions
 attached to bottle

6. Manner in Which Label is Affixed to Product
 Lithograph Paper glued Stenciled Other self adhesive booklet

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)

Name Scott Baker	Title Registration Manager	Telephone No. (Include Area Code) 970-534-3403
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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.

2. Signature 	3. Title Registration Manager	6. Date Application Received (Stamped)
4. Typed Name Scott Baker	5. Date June 23, 2009	



Performance

Quality

June 23, 2009

Document Processing Desk (7504P) (NOTIF)
U.S. Environmental Protection Agency
Room S4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

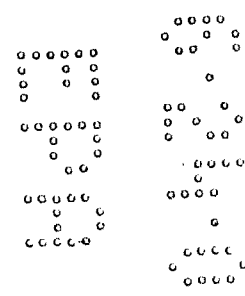
Subject: Mepiquat Extra - EPA Reg. No. 34704-974 Container Disposal Notification

Loveland Products, Inc., is submitting 2 copies of the revised label to include container disposal language for larger package sizes in accordance with PR Notice 2007-4.

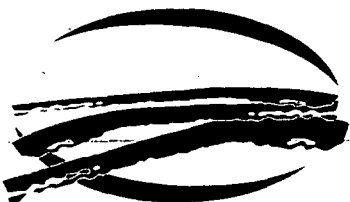
Please contact me at 970-534-3403 or by e-mail: scott.baker@cpsagu.com if there are any questions or comments concerning this submission.

Sincerely,

Scott Baker
Registration Manager
Enclosures



JUL 10 2009



MEPIQUAT EXTRA

ACTIVE INGREDIENTS*

Mepiquat Chloride:	
N,N-dimethylpiperidinium chloride*	4.2000%
Indolebutyric acid	0.064%
Kinetin	0.003%
INERT INGREDIENTS	95.733%
	TOTAL 100.0000%

*Equivalent to 0.35 Pounds Mepiquat Chloride Per Gallon

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
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 ON SKIN OR CLOTHING	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
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 by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL 1-866-944-8565.**

See label for Additional Precautions and Directions for Use

EPA REG. NO. 34704-974

EPA EST. NO. 34704-MS-1

NET CONTENTS 1 GAL. (3.78 L)

IHT

040307 V3D 06P09

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing.

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 A on an EPA chemical-resistant category selection chart.

Applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material (such as nitrile, butyl, neoprene and/or barrier laminate), and shoes plus socks.

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.

Engineering Control Statement:

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.

USER SAFETY RECOMMENDATIONS

User 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

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 cleaning equipment or disposing of equipment washwaters.

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 (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, chemical-resistant gloves made of any waterproof material (such as nitrile, butyl, neoprene and/or barrier laminate), and shoes plus socks.

GENERAL INFORMATION

Mepiquat Extra is a foliar applied plant regulator that modifies the cotton plant in several beneficial ways. This compound 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. The use of Mepiquat Extra will also result in several or all of the following:

- Height reduction and more open canopy
- Better early boll retention and/or larger bolls
- Less boll rot
- Improved defoliation
- Reduced trash and lower ginning costs
- Better harvest efficiency
- Darker green leaf color

Most of these effects often favorably influence the yield potential of the cotton plant. The purple color of Mepiquat Extra may fade under some conditions; however, effectiveness is not related to color of spray solution or the color of Mepiquat Extra.

Spray Coverage

Under most circumstances, water is the recommended diluent, however, oil is permitted in the following states for ultra low volume (ULV) aerial applications: Alabama, Arkansas, Florida, Georgia, Louisiana, Missouri, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee and Texas. Refer to Air and Ground Application sections for spray volumes. Regardless of method or gallonage of application, thorough coverage of the cotton foliage is required.

Cleaning Application Equipment

Clean application equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions before and after applying this product, particularly if a product with the potential to injure crops was used.

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MEPIQUAT EXTRA EPA REG. NO. 34704-974

APPLICATION INSTRUCTIONS

Early Application

On both short-staple and Pima cotton, the grower has the option of low-rate multiple applications, (see Table 1) or higher, less frequent dosages (see Table 2); which greatly facilitates his management flexibility. The multiple application option gives the grower the ability to discontinue usage of Mepiquat Extra if any significant stresses occur after an earlier application. In such a case, the total quantity of Mepiquat Extra used over a season may be reduced. If stress is relieved, the grower has the option of continuing treatments with Mepiquat Extra. In addition, the rate and timing ranges indicated in the **Application Rates and Timing Tables** allow the grower to tailor his usage of Mepiquat Extra to the degree of vegetative vigor in a given field. In areas where insecticides, miticides or foliar fertilizers are frequently applied, the timings are such that tank mixing is often possible (See section **General Restrictions and Limitations**).

Fields should be carefully scouted and Mepiquat Extra should not be applied if plants are under severe stress from weather factors, mite, insect or nematode damage, disease stress, herbicide injury, or fertility stress. In the absence of these stresses, up to five low rate multiple applications can be made each season.

After the first application (at matchhead square in the absence of stress), the rate and timing of subsequent applications will depend on vegetative vigor. Under good growing conditions, additional treatments should be made at 7 to 14 day intervals. However, if new growth at any time is excessive, higher rates of Mepiquat Extra can be used. If significant loss of squares or young bolls has occurred earlier due to insect pressure or other stresses, but now these stresses have been alleviated, the need for Mepiquat Extra is increased - excess vegetative growth is likely because of poor fruit load.

Late Season Application

Late application of Mepiquat Extra (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 Extra.

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
- Reduction in trash
- Lower ginning costs

Some of these effects may favorably influence the yield potential and fiber quality. A late season application of Mepiquat Extra 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

- **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 application time is often, but not always, 5 to 6 weeks after the first bloom.
- **On fields where cotton never completely cuts out:** Apply Mepiquat Extra when there are 4 to 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 to 6 nodes during the fourth to sixth week of bloom. During this time, the NAWF should be decreasing about one node every 5 to 6 days - if its rate of decrease is less, 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 to 6, apply Mepiquat Extra.

Use Rate for Late Season Application

Apply 8 to 24 fluid ounces of Mepiquat Extra per acre. Use the lower rate on cotton with only moderate additional growth potential, and the higher rate on fields likely to continue vigorous growth.

Air Application

Spray Volume

- **Water as Diluent:** Use 2 gallons of spray solution per acre in all states except California. In California use a minimum of 5 gallons per acre.
- **Oil as Diluent:** Use a minimum of 1 quart of oil per acre. When using oil as a diluent, the oil concentrate must contain either a petroleum or vegetable oil base and must meet all of the following criteria:
 - Be nonphytotoxic
 - Contain only EPA-exempt ingredients
 - Provide good mixing quality in the jar test
 - Be successful in local experience

The exact composition of suitable products will vary, however, vegetable and petroleum oil concentrates should contain emulsifiers to 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 Extra in a ULV without using emulsifiers. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. For additional information, see **Compatibility Test for Mix Components**.

Aerial Application Methods and Equipment

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.

A. 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).

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets (>150-200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. 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!** See **Wind, Temperature and Humidity**, and **Temperature Inversions** sections of this label.

Controlling Droplet Size - General Techniques

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

Pressure: Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**

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.

Controlling Droplet Size - Aircraft

Number of Nozzles: Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.

Nozzle Orientation: Orienting nozzles so that the spray is emitted backwards, parallel to the airstream, will produce larger droplets than other orientations.

Nozzle Type: Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

Boom Length: The boom length should not exceed 3/4 of the wing or rotor length - longer booms increase drift potential.

Application Height: Applications more than 10 feet above the canopy increases the potential for spray drift.

Boom Height: Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

Wind: Drift potential increases at wind speeds of less than 3 mph (due to 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 GUSTY OR WINDLESS CONDITIONS.**

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

Temperature Inversions

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. 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.

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.

Ground Application

Spray Volume

- **Water as Diluent:** Use 2 gallons of spray solution per acre in all states except California. In California use a minimum of 5 gallons per acre.

Table 1. Application Rates and Timing: Low Rate Multiple Applications

The times and rates of application have been carefully researched and the **Directions For Use** should be observed as specified below:

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MEPIQUAT EXTRA

EPA REG. NO. 34704-974

See section **General Restrictions and Limitations**.

Geographic Area	Time of Application	Fields with Moderate Vegetative Vigor: Rate Per Acre	Fields with High Vegetative Vigor: Rate Per Acre
AL, AR, AZ, CA, FL, GA, IL, KS, LA, MO, MS, NC, NM, OK, SC, TN, TX, VA	First application: Optimal results will be achieved when plants are in the match head square** stage of growth.	2 fluid ounces	4 fluid ounces
	Second application: 7 to 14 days later, or when regrowth occurs.	2 fluid ounces	4 fluid ounces
	Third application: 7 to 14 days later, or when regrowth occurs.	2-4 fluid ounces*	4-8 fluid ounces*
	Fourth application: 7 to 14 days later, or when regrowth occurs.	2-8 fluid ounces*	4-12 fluid ounces*
	Fifth application (if needed): 7 to 14 days later, or when regrowth occurs.	4-8 fluid ounces*	4-12 fluid ounces*
	Late season: Refer to Late Season Application of Mepiquat Extra	8-16 fluid ounces*	12-24 fluid ounces*

* Use higher rates if previous application was not made or if growing conditions are conducive to vigorous growth.
 ** Matchhead square is when the first square of a typical cotton plant is 1/8 to 1/4 inch in diameter. The first application should be made when 50% of the plants have one or more matchhead squares.

Table 2. Application Rates and Timing

The times and rates of application have been carefully researched and the section **Application Instructions** should be observed as specified below. See the section **General Restrictions and Limitations**.

Geographic Area	Time of Application	Rate Per Acre
AL, AR, AZ, CA, FL, GA, IL, KS, LA, MO, MS, NM, NC, SC, TN, VA	First application: Apply Mepiquat Extra to actively growing cotton that is 20 to 30 inches tall, provided cotton is not more than 7 days beyond early bloom stage (5 to 6 blooms per 25 row feet). If cotton is 24 inches tall and has no blooms, apply Mepiquat Extra. Use 8 to 16 fluid ounces per acre on cotton where excessive vegetative growth is not likely to be a problem, and 16 fluid ounces per acre in areas tending to have excessive vegetative growth.	8-16 fluid ounces
	Second application for control of excessive vegetative growth: If the cotton field has a history of vigorous growth or if conditions after the first application of Mepiquat Extra favor vigorous growth, make a second application 2 to 3 weeks after the first application.	8-16 fluid ounces
	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, make a third application 1 to 2 weeks after the second application.	8-16 fluid ounces
	Late season application: Refer to Late Season Application in section Application Instructions	8-24 fluid ounces
	Areas where excessive vegetative growth is not a problem	
OK, TX (except Rio Grande Valley)	First application: Apply Mepiquat Extra to actively growing cotton in the early bloom stage (5 to 6 blooms per 25 row feet). If no blooms are present and the cotton is 20 inches tall and actively growing, apply Mepiquat Extra.	8 fluid ounces
	Second application: If conditions after the first application of Mepiquat Extra favor vigorous growth, make a second application 2 to 3 weeks after the first application.	8 fluid ounces
	Third application: If conditions after the second application of Mepiquat Extra continue to favor vigorous growth, make a third application 1 to 2 weeks after the second application.	8 fluid ounces
	Late season application: Refer to Late Season Application in section Application Instructions	8-24 fluid ounces

Geographic Area	Time of Application	Rate Per Acre
OK, TX (including Rio Grande Valley)	Areas where excessive vegetative growth is a problem	
	First application: Apply Mepiquat Extra to actively growing cotton that is 20 to 30 inches tall, provided cotton is not more than 7 days beyond early bloom stage (5 to 6 blooms per 25 row feet). If cotton is 24 inches tall and has no blooms, apply Mepiquat Extra.	16 fluid ounces
	Second application for control of excessive vegetative growth: If cotton field has a history of vigorous growth, or conditions after the first application of Mepiquat Extra favor vigorous growth, make a second application 2 to 3 weeks after the first application.	8-16 fluid ounces
	Third application: If conditions after the second application of Mepiquat Extra continue to favor vigorous growth, make a third application 1 to 2 weeks after the second application.	8-16 fluid ounces
	Late season application: Refer to Late Season Application in section Application Instructions	8-24 fluid ounces

ADDITIVES

If rain is expected within 8 hours, use a high-quality EPA-exempt surfactant to make Mepiquat Extra rain-safe after 4 hours.

Compatibility Test for Mix Components

Add components in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of recommended label rate per acre.

- Water:** For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.
- Products in PVA Bags:** Cap the jar and invert 10 cycles.
- Water-Dispersible Products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions): Cap the jar and invert 10 cycles.
- Water-Soluble Products** (Such as Mepiquat Extra): Cap the jar and invert 10 cycles.
- Emulsifiable Concentrates** (Oil concentrates): Cap the jar and invert 10 cycles.
- Water-Soluble Additives:** Cap the jar and invert 10 cycles. Let the solution stand for 15 minutes. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clabbered) texture. Do not use any spray solution that could clog spray nozzles.

MIXING ORDER

- Water:** Begin by agitating a thoroughly clean sprayer tank half full of clean water.
 - Products in PVA Bags:** Rinse the tank thoroughly before adding any material in PVA bags as boron residue will prevent adequate mixing. Place the water-soluble PVA bag into the mixing tank. The water-soluble PVA bag will dissolve in water to allow the contents to disperse. Wait until all water-soluble PVA bags have fully dissolved and the plant regulator is evenly mixed in the spray tank before continuing. To prepare spray solution for aerial application, use a mixing tank or mixing vat first to get the product into suspension before transferring suspension to air application equipment.
 - Water-Dispersible Products:** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
 - Water-Soluble Products**
 - Emulsifiable Concentrates**
 - Remaining quantity of water
- Only moderate agitation should be used while mixing and transporting.

GENERAL TANK MIXING INFORMATION

Mepiquat Extra has an aqueous base, and as such, is compatible with most insecticides and miticides. You may combine Mepiquat Extra with foliar fertilizers if prior experience has shown the original liquid formulation of Mepiquat Extra to be compatible and noninjurious under your conditions. Always perform a **Compatibility Test for Mix Components** before preparing a tank mix application.

Read and follow the applicable **Restrictions and Limitations and Directions For Use** on all products involved in tank mixing. The most restrictive labeling applies to tank mixes.

GENERAL RESTRICTIONS AND LIMITATIONS

- Maximum Seasonal Use Rate:** Do not apply more than a total of **48 fluid ounces (3 pints)** of Mepiquat Extra (0.132 mepiquat chloride) per acre per season.
- The sum of all products and formulations containing mepiquat chloride must not exceed **0.132 pounds** of mepiquat chloride per acre per season. This maximum equals **48 fluid ounces (3 pints)** of Mepiquat Extra (0.35 pounds mepiquat chloride per gallon).
- Preharvest Interval (PHI):** Do not apply within **30 days** of harvest.
- Restricted-Entry Interval (REI): 12 hours.**
- Do not plant another crop within 75 days of last treatment.
- Stress:** Do not apply to cotton plants under severe stress due to adverse weather conditions, mite, insect, or nematode damage, disease, herbicide injury, or fertility stress. If using the low-rate multiple option, discontinue use until the stress is alleviated. Do not apply a single application of 8 to 16 fluid ounces of Mepiquat Extra to cotton that is stressed due to a lack of soil moisture.
- Do not graze or feed cotton forage to livestock.
- Do not apply through any type of irrigation equipment.

Table 3. Restrictions and Limitations

Crop	Minimum Time from Application to Harvest (PHI)	Maximum Rate Per Acre Per Application	Maximum Rate Per Acre Pre Season	Livestock Grazing or Feeding	Aircraft Application
Cotton	30 days	24 fluid ounces (1.5 pints)	48 fluid ounces (3 pints)	No	Yes

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store below 32°F or above 100°F. Store in a dry place away from heat or open flame.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact the State Agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container: Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org. If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

For packages up to 5 gallons. 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. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For packages greater than 5 gallons or 50 pounds: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For refillable containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

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