

228-646

5/14/2010

1 of 14



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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Ms Mary Beth Endres
Nufarm Americas Inc
150 Harvester Drive, Suite 200
Burr Ridge, IL 60527

MAY 14 2010

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 May 4, 2010 for:

EPA Registration 228-646 Mepiquat E-AG Plant Growth Regulator

The Registration Division (RD) has conducted a review of this request for applicability under PRN 2007-4 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,

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

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Please read instructions on reverse before completing form.

Form Approved. OIP No. 2070-0060. Approval expires 11-30-93

(A) EPA United States Environmental Protection Agency Office of Pesticide Programs (H7505C) Washington, DC 20460 Application for Pesticide:	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number Please Attach An Original Form
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Section I

1. Company/Product Number 228-646	2. EPA Product Manager Tony Kish	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Mepiquat E-AG Plant Growth Regulator	PM# 22	
5. Name and Address of Applicant (Include ZIP Code) Nufarm Americas Inc 150 Harvester Drive, Suite 200 Burr Ridge, IL 60527 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section II

<input type="checkbox"/> Amendment - Explain Below <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input checked="" type="checkbox"/> Notification - Explain below	<input type="checkbox"/> Final printed labels in response to _____ <input type="checkbox"/> "Me Too" Application <input type="checkbox"/> Other - explain below	NOTIFICATION MAY 14 2010
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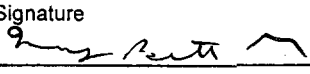
Explanation: Use additional page(s) if necessary. (For Section I and Section II).

Notification of label change per PR Notice 2007-4. This notification is consistent with 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 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.

Section III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No <small>*Certification must be submitted.</small>	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes," Unit Package Wt. No. Per Container	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes," Package Wt. No. Per Container	2. Type of Container <input checked="" type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label or <input checked="" type="checkbox"/> Container	4. Size(s) of Retail Container 1 - 250 gallons and bulk	5. Location of Label Directions <input checked="" type="checkbox"/> On Label or <input checked="" type="checkbox"/> On Labeling accompanying product	
6. Manner In Which Label Is Affixed To Product <input checked="" type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Other (Self-Adhesive Integrated Label/Booklet) <input checked="" type="checkbox"/> Paper Glued <input type="checkbox"/> Stenciled			

Section IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Mary Beth Endres	Title Registration Manager	Telephone (include Area Code) 630-455-2000
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 	3. Title Registration Manager	
4. Typed Name Mary Beth Endres	5. Date 05-04-2010	

30614



Nufarm Americas Inc.
150 Harvester Drive, Suite 200
Burr Ridge, IL 60527
Telephone: (630) 455.2000 Facsimile: (630) 455.2001
www.us.nufarm.com

Overnight Courier

May 4, 2010

Linda Arrington
Notification and Minor Formulations Team Leader
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202-4501

Subject: Container Disposal Statements per PR Notice 2007-4

Product: Mepiquat E-AG Plant Growth Regulator, EPA Reg. No. 228-646

Dear Ms. Arrington:

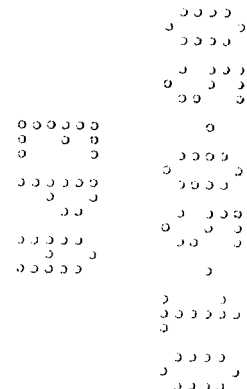
Nufarm Americas Inc. is requesting to update the Container Disposal statements per PR Notice 2007-4. Accordingly the enclosed label reflects this change.

Should you have any questions please contact me at the address and telephone number above or by email listed below.

Sincerely,

Mary Beth Endres
Registration Manager
Nufarm Americas Inc.
Email: maryb.endres@us.nufarm.com

Enclosures



40914

Mepiquat E-AG

Plant Growth Regulator

NOTIFICATION

FOR USE ON COTTON

MAY 14 2010

ACTIVE INGREDIENT :

Mepiquat Chloride: N,N-dimethylpiperidinium chloride 4.2%

OTHER INGREDIENTS: 95.8%

TOTAL: 100.0%

Contains 0.35 lbs. active ingredient per gallon

KEEP OUT OF REACH OF CHILDREN
CAUTION / PRECAUCION

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.)

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300
For Medical Emergencies Only, Call (877) 325-1840

Mepiquat E-AG Plant Growth Regulator
contains mepiquat chloride, the active
ingredient used in Pix®

EPA REG. NO. 228-646
EPA EST. NO.

NET CONTENTS:

000228.00646.20100504.EPA.PRN2007-4

Manufactured For:
NUFARM AMERICAS INC.
150 Harvester Drive
Burr Ridge, IL 60527



5014

**PRECAUTIONARY STATEMENT
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION / PRECAUCION**

Harmful if absorbed through 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 resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves (such as nitrile, butyl, neoprene and/or barrier laminate)
- 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 Statements

When handlers use closed systems or enclosed cabs 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	
Users Should:	
<ul style="list-style-type: none"> • 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. 	

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 5 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 the 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.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.	
NOTE TO PHYSICIAN	
No known antidote, treat symptomatically.	

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 rinsate or equipment washwater. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

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 (WPS), 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 statement of this label about personal protective equipment (PPE) and restricted-entry interval (REI). The requirements in this box only apply to users of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the 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.

SPRAY DRIFT MANAGEMENT

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 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:

- The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- 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 must 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 sections of this label**).

CONTROLLING DROPLET SIZE:

Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Use a minimum of 5 gallons of water per acre, increase water volume to at least 10 gallons of water per acre if grass foliage or crop canopy is dense.

Pressure – Do not exceed 40 psi. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure. Use only diaphragm-type nozzles that produce fan spray patterns.

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. Do not use nozzles producing a mist droplet spray.

BOOM LENGTH: For some use patterns, reducing the effective boom length to less than ¾ 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 droplets, etc.).

WIND: Drift potential is lowest between wind speeds of 2 to 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 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). Do not apply Mepiquat E-AG Plant Growth Regulator by air if sensitive species are within 200 feet downwind.

ADDITIVES

If rain is expected within 8 hours, use a high-quality EPA-exempt surfactant to make Mepiquat E-AG Plant Growth Regulator 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.

- 1) **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.
- 2) **Products in PVA Bags:** Cap the jar and invert 10 cycles.
- 3) **Water-Dispersible Products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions): Cap the jar and invert 10 cycles.
- 4) **Water-Soluble Products** (such as Mepiquat E-AG Plant Growth Regulator): Cap the jar and invert 10 cycles.

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- 5) **Emulsifiable Concentrates** (Oil concentrates): Cap the jar and invert 10 cycles.
- 6) **Water-Soluble Additives:** Cap the jar and invert 10 cycles.
- 7) **Let the solution stand for 15 minutes.**
- 8) **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

- 1. **Water:** Begin by agitating a thoroughly clean sprayer tank half full of clean water.
- 2. **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.
- 3. **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.
- 4. **Water-dispersible products:** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
- 5. **Water-soluble products**
- 6. **Emulsifiable concentrates**
- 7. **Remaining quantity of water**

Only moderate agitation should be used while mixing and transporting.

GENERAL TANK MIXING INFORMATION

Mepiquat E-AG Plant Growth Regulator is an aqueous based formulation and as such is compatible with most insecticides and miticides. Mepiquat E-AG Plant Growth Regulator may be combined with foliar fertilizers if prior experience has shown the original liquid formulation of Mepiquat E-AG Plant Growth Regulator to be compatible and noninjurious under your conditions. Always perform the **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 mixtures.

GENERAL INFORMATION

Mepiquat E-AG Plant Growth Regulator is a foliar applied plant regulator for use on cotton. 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 E-AG Plant Growth Regulator include increased 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.

Spray Coverage

Water is the recommended diluent under most circumstances, 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 the **Air and Ground Application** sections for recommended spray volumes. Thorough coverage of the cotton foliage is required regardless of the application method or gallonage of application used.

Cleaning Application Equipment

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

APPLICATION INSTRUCTIONS

Early Application of Mepiquat E-AG Plant Growth Regulator

On both short-staple and Pima cotton, growers have the option of low-rate multiple applications (see Table 1), or higher, less frequent dosages (see Table 2). These options provide maximum flexibility under a wide range of growing conditions. The multiple application method gives the grower the ability to discontinue using Mepiquat E-AG Plant Growth Regulator if any significant stresses occur after an earlier application. If the stress is relieved, the grower has the option of continuing treatments. In addition, the rate and timing ranges indicated in the **Application Rates and Timings Tables** enable the grower to tailor usage of Mepiquat E-AG Plant Growth Regulator based on the degree of vegetative vigor in a given field. Mepiquat E-AG Plant Growth Regulator may be tank mixed with insecticides, miticides or foliar fertilizers when application timings coincide. (See **GENERAL RESTRICTIONS AND LIMITATIONS section of this label.**)

Fields should be carefully scouted. Mepiquat E-AG Plant Growth Regulator should not be applied if plants are under any form of stress. In the absence of stress, a maximum of 5 low rate applications can be made each season. The first application can be applied at the matchhead square in the absence of stress. The rate and timing of subsequent applications depend on growing conditions and desired benefits. 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 E-AG Plant Growth Regulator can be used.

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 E-AG Plant Growth Regulator is increased – excess vegetative growth is likely because of poor fruit load.

Late Season Application of Mepiquat E-AG Plant Growth Regulator

Late application of Mepiquat E-AG Plant Growth Regulator (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 E-AG Plant Growth Regulator. Late season application can lead to one or more of the following: better defoliation, earlier maturity, reduction in late season vegetative growth or regrowth after cutout or defoliation, more complete and manageable cutout, 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 E-AG Plant Growth Regulator should be applied only if fields are not drought or nutrient stressed. 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

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.

Fields where cotton never completely cuts out: Apply Mepiquat E-AG Plant Growth Regulator 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 during the fourth to sixth week of bloom. During this time period, the NAWF should be decreasing about one node every 5 to 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 to 6, apply Mepiquat E-AG Plant Growth Regulator.

Use Rate for Late Season Application

Apply 8 to 24 fluid ounces of Mepiquat E-AG Plant Growth Regulator 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.

Air Application

Spray Volume

Water as Diluent: Use a minimum of 2 gallons of water 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 E-AG Plant Growth Regulator 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.**

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.

GENERAL RESTRICTIONS AND LIMITATIONS

- Do not apply Mepiquat E-AG Plant Growth Regulator 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 stress is alleviated. Do not apply a single application of 8 to 16 fluid ounces of Mepiquat E-AG Plant Growth Regulator to cotton that is stressed due to a lack of soil moisture.
- Do not apply more than 48 fl. oz. (3 pints) of Mepiquat E-AG Plant Growth Regulator 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 Mepiquat E-AG Plant Growth Regulator within 30 days of harvest.
- Do not graze or feed cotton forage to livestock.
- Do not plant another crop within 75 days after last treatment.
- Do not apply through any type of irrigation system.
- Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Restrictions and Limitations

Crop	Preharvest Interval (PHI)	Maximum Application Rate per Acre	Maximum Rater per Acre per Season	Livestock Grazing or Feeding	Aircraft Application
Cotton	30 days	24 fluid ounces (1.5 pints)	48 fluid ounces (3 pints)	NO	YES

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

Refer to the **General Restrictions and Limitations** section of this label for additional information.

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, LA, MO, MS, NC, NM, OK, SC, TN, TX, VA	First Application: Apply at the matchhead square ¹ stage of growth.	2 fl. oz.	4 fl. oz.
	Second Application: 7-14 days later, or when regrowth occurs.	2 fl. oz.	4 fl. oz.
	Third Application: 7-14 days later, or when regrowth occurs.	2 to 4 fl. oz.*	4 to 8 fl. oz.*
	Fourth Application: 7-14 days later, or when regrowth occurs.	2 to 8 fl. oz.*	4 to 12 fl. oz.*
	Fifth Application (if needed): 7-14 days later, or when regrowth occurs.	4 to 8 fl. oz.*	4 to 12 fl. oz.*
	Late Season Application: Refer to the Late Season Application section of this label.	8 to 16 fl. oz.*	12 to 24 fl. oz.*

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

¹Matchhead square is when the first square of a typical cotton plant is about the size of a match head (about 1/8 inch to 1/4 inch in diameter). Make the first application when 50% of the plants have one or more matchhead squares.

Table 2. Application Rates and Timing

Refer to the **General Restrictions and Limitations** section of this label for additional information.

Geographic Area	Application Timing	Rate per Acre
AL, AR, AZ, CA, FL, GA, LA, MO, MS, NM, NC, SC, TN, VA	First Application: Apply Mepiquat E-AG Plant Growth Regulator to actively growing cotton that is 20 – 30 inches tall, provided cotton is not more than 7 days beyond early bloom stage (5-6 blooms per 25 row feet). If cotton is 24 inches tall and has no blooms, apply Mepiquat E-AG Plant Growth Regulator. Where excessive vegetative growth is not likely to be a problem, use 8-16 fl. oz. per acre. Use 16 fl. oz. per acre in areas tending to have excessive vegetative growth.	8 to 16 fl. oz.
	Second application for control of excessive growth: Make another application in 2 to 3 weeks after the first application if the cotton field has a	8 to 16 fl. oz.

Geographic Area	Application Timing	Rate per Acre
	<p>history of vigorous growth or if conditions after the first application of Mepiquat E-AG Plant Growth Regulator favor vigorous growth.</p> <p>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.</p> <p>Late Season Application: Refer to the Late Season Application section of this label.</p>	<p>8 to 16 fl. oz.</p> <p>8 to 24 fl. oz.</p>
<p>OK, TX</p> <p>(except Rio Grande Valley)</p>	<p>Areas without a history of excessive vegetative growth:</p> <p>First Application: Apply when cotton is in the early bloom stage (5-6 blooms per 25 row feet) and actively growing. Apply Mepiquat E-AG Plant Growth Regulator if no blooms are present and the cotton is 20 inches tall and actively growing.</p> <p>Second Application: Make second application in 2 to 3 weeks after the first application if conditions after the first application favor vigorous growth.</p> <p>Third Application: If conditions after the second application of Mepiquat E-AG Plant Growth Regulator continue to favor vigorous growth apply a third application 1 to 2 weeks after the second application.</p> <p>Late Season Application: Refer to the Late Season Application section of this label.</p>	<p>8 fl. oz.</p> <p>8 fl. oz.</p> <p>8 fl. oz.</p> <p>8 to 24 fl. oz.</p>
<p>OK, TX</p> <p>(including Rio Grande Valley)</p>	<p>Areas with a history of excessive vegetative growth:</p> <p>First Application: Apply Mepiquat E-AG Plant Growth Regulator to actively growing cotton that is 20-30 inches tall, provided cotton is not more than 7 days beyond early bloom state (5-6 blooms per 25 row feet). If cotton is 24 inches tall and has no blooms, apply Mepiquat E-AG Plant Growth Regulator.</p> <p>Second application for control of excessive vegetative growth: For fields with a history of excessive growth, or if conditions favor excessive growth, make a second application 2 to 3 weeks after the first application.</p>	<p>16 fl. oz.</p> <p>8 to 16 fl. oz.</p>

Geographic Area	Application Timing	Rate per Acre
	<p>Third Application: If conditions after the second application of Mepiquat E-AG Plant Growth Regulator continue to favor vigorous growth, apply a third application 1 to 2 weeks after the second application.</p> <p>Late Season Application: Refer to the Late Season Application section of this label.</p>	<p>8 to 16 fl. oz.</p> <p>8 to 24 fl. oz.</p>

STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Store in a locked area in original container only, with lid tightly closed. Do not store below 32°F or above 100°F. Store in a dry place away from heat or open flame. Store separately from other pesticides and fertilizers, food and feed to prevent contamination. Use care to avoid puncturing container during storage and transit. In case of a spill or leaking 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 Containers 5 Gallons or Less:

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable containers larger than 5 gallons:

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. If recycling or reconditioning is not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by 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. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **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.

Refillable containers larger than 5 gallons:

Refillable container. 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

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