

PM22 51036-189 10F11
United States Environmental Protection Agency
Washington, D.C. 20460

Office of
Prevention, Pesticides and
Toxic Substances

OCT 1 1993

Morris Gaskins
MICRO-FLO CO.
BOX 5948
LAKELAND FL 33807

Subject: Label Amendment Submission of 06/03/93
in Compliance with WPS Labeling Requirements
EPA Reg No. 51036-189
MEPIQUAT CHLORIDE LIQUID CONCENTRATE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is accepted subject to the comments listed below.

Based on your certification, the Agency has accepted only those changes to your labeling which are necessary to comply with PR Notices 93-7 and 93-11, which reflect the WPS labeling requirements of 40 CFR part 156, subpart K. Any other labeling changes submitted in connection with this amendment application and not directly related to compliance with PR Notice 93-7 or 93-11 have neither been reviewed nor accepted by the Agency. If you wish to make any such changes, you must submit a separate amendment application proposing them. If your product registration is currently suspended, acceptance of this labeling amendment does not affect the suspension in any way.

A copy of your proposed labeling stamped "Accepted with comments" is attached. Make any required changes described in the attached and send three copies of final labeling as soon as it is available to:

Document Processing Desk (FIN-LABEL)

Office of Pesticide Programs (H-7504C)
U.S. Environmental Protection Agency
401 M Street SW
Washington, DC 20460-0001

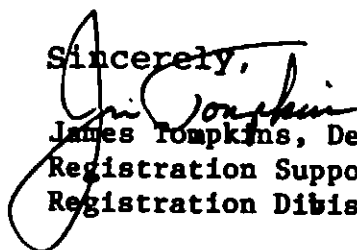
Hand or courier deliveries of final labels may be made to:

Document Processing Desk (FIN-LABEL)
Room 266A Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Please correct the typographical errors circled on the draft before printing final labeling.

In your final labeling the "Agricultural Use Requirements" text must be contained in a clearly separate box. This box may be set apart by a line, by another graphical device, by a different color background, or in any other way that clearly distinguishes it from surrounding text.

Sincerely,


James Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

MICRO-FLO CO.

MEPIQUAT CHLORIDE LIQUID CONCENTRATE

51036-189 06/03/93

Original Submission

User Safety Recommendations must either be placed in a box or printed on the label in a contrasting color from surrounding text.

The Agricultural Use Requirements section must either be placed in a box or printed on the label in a contrasting color from the surrounding text.

There is a typographical error(s) in the User Safety Recommendations section.

Draft labeling for WPS language in response to PR 93-7

MEPICHLOR CONCENTRATE

ACTIVE INGREDIENT

Mepiquat Chloride: N,N-dimethylpiperidinium Chloride	23.5%
Inert Ingredients	76.5%
TOTAL	100.0%

Contains two (2) pounds active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

If in eyes: Flush with plenty of water. Get medical attention if irritation persists.

In case of medical emergency regarding this product, call your local doctor for immediate treatment, or your local poison control center (hospital).

ACCEPTED
with COMMENTS
in EPA Letter Dated

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
51036-189

EPA Reg. No. 51036-189

EPA Est. No. 51036-GA-001

MICRO FLO COMPANY
P.O. Box 5948
Lakeland, Florida 33807

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals

CAUTION

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

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants
2. Waterproof gloves
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 RECOMENDATIONS

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

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 wastewaters.

IN CASE OF EMERGENCY:

In case of large-scale spillage regarding this product, call CHEMTREC at 1-800-424-9300.

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 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: Triple rinse container (or equivalent). Then offer for recycling or reconditioning, 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.

CHEMIGATION PROHIBITION

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

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

1. Coveralls
2. Waterproof gloves
3. Shoes plus socks

GENERAL INFORMATION

Mepiquat Chloride Liquid Concentrate is a Mirco Flo product which is equivalent to PIX CONCENTRATE Plant Regulator produced by BASF

Corporation. Mepiquat Chloride is a foliar applied plant regulator. Benefits derived from the use of Mepiquat Chloride include increase boll retention, reduced plant height which provides a more open canopy, less boll rot, improved defoliation, less trash, and a darker leaf color. These benefits can provide for earlier maturity and often result in improved yields.

Growers may use single or multiple applications. Application rates are dependent on the number of applications to be made and growing conditions. Multiple applications of low rates provide maximum flexibility under a wide range of growing conditions. Mepiquat Chloride should not be applied to plants under stress. If stress is alleviated, plants should be evaluated for vegetative growth before additional applications are made. Mepiquate Chloride 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 four low rate applications can be made each season, generally using 1/3 to 2/3 fl. oz/acre each time. 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 oz/acre can be made at 7-14 day intervals. Higher rates of Mepiquat Chloride Liquid Concentrate (2/3 to 1 1/3 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 4.2 fl. oz/acre of Mepiquat Chloride Liquid Concentrate in a growing season.

Spray Volumes: Thorough coverage is required.

In Water:

Areas other than California

Ground Application - Use a minimum of 10 gallons of water per acre.

Aerial Application - Use a minimum of 3 gallons of water per acre.

California Only:

Ground application - Use a minimum of 20 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 and has been used successfully in your locality. The oil diluent should contain emulsifiers which provide good mixing quality. 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, 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.

RAIN WASH-OFF PRECAUTION

The use of a high quality, EPA exempt surfactant will enhance the uptake of Mepiquat Chloride 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 treated crops can lead to yield decreases or other undesirable effects.
- Do not apply Mepiquat Chloride to cotton that is under stress. If using the low rate multiple applications, discontinue use until your crop has overcome any stress.
- Do not use Mepiquat Chloride Liquid Concentrate on the short-staple variety Delta and Pineland 70.
- Do not apply more than 4.2 fl. oz. of Mepiquat Chloride Liquid Concentrate per acre per season.
- Do not apply this product within 30 days of harvest.
- Do not graze or feed cotton forage to livestock within 30 days of application.
- Do not graze or feed cotton forage to livestock at all if applied in oil as a ULV application by air.
- 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".

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

Directions for use should be observed as specified below:

I. SINGLE OR DUAL 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.

AREA	TIME OF APPLICATION	RATE PER ACRE
FIRST APPLICATION:		
AL, AR	Apply when cotton is actively growing and is between 20" and 30" tall, but not more than 7 days beyond early bloom (5-6 blooms per 25 row feet). Also apply if cotton is 24" tall and has no blooms.	1 1/3 to 2 2/3 fl. oz.
AZ, CA,		
FL, GA,		
LA, MO,		
MS, NM,		
NC, SC,		
TN, VA		

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 3 to 4 weeks if additional growth control is desired. 1 1/3 fl.oz.

Areas without a history of excessive vegetative growth:

FIRST APPLICATION:		
OK, TX (except Rio Grande Valley)	Apply when cotton is in the early bloom stage (5-6 blooms per 25 row feet) and actively growing. Also apply if no blooms are present and the cotton is 24" tall and actively growing.	1 1/3 fl. oz.
See Restrictions and limitations.		

SECOND APPLICATION:

Make a second application in 3-4 weeks if additional growth control is desired. 1 1/3 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 28", provided cotton is not more than 7 days beyond early bloom. 2 2/3 fl. oz.
See Restrictions and Limitaitons.

SECOND APPLICATION:

For fields with a history of excessive growth, or if conditions after the first application favor excessive growth, 1 1/3 fl. oz. make a second application in 3-4 weeks.

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 ¹ 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 2/3 FL OZ*	2/3 TO 1 1/3 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 2/3 FL OZ*	2/3 TO 1 1/3 FL OZ*

- * Use the higher rate if previous application was not made or if growing conditions favor excessive growth.
- 1 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 CONCENTRATE	ACRES TREATED PER			EQUIVALENT RATE OF MEPIQUAT CHLORIDE 4.2 OR PIX
	PINT	QUART	GALLON	
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 2/3 fl. oz.	6	12	48	1 pint/acre

PIX is a trademark of BASF AG

CONDITIONS OF SALE AND WARRANTY

The Directions for use of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of MICRO FLO COMPANY ("MICRO FLO") or the Seller. All such risks shall be assumed by the Buyer.

MICRO FLO warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Directions for use when it is used in accordance with such directions, subject to the inherent risks mentioned above. MICRO FLO NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE,